Lazy Investors, Lazy Fund Managers, Lousy Performance: National Culture and Mutual Fund Management[*]

Aneel Keswani[†]
Cass Business School - London

Antonio F. Miguel[‡]
ISCTE –Lisbon University Institute

Sofia B. Ramos[§]
ISCTE –Lisbon University Institute

This version: January 10, 2014

Lazy Investors, Lazy Fund Managers, Lousy Performance: National Culture and Mutual Fund Management

Abstract

In this paper, we use a comprehensive dataset of equity mutual funds covering 31 countries to study the effects of national culture on mutual fund management. Measuring culture using Hofstede's cultural dimensions, we show that in countries where investors are culturally less active that investors are much less sensitive to past performance. We show that this results in less risk-taking by fund managers and worse fund performance. Our results also demonstrate that in countries with less active investors mutual fund companies take advantage of investor's passiveness and charge higher fees.

1. Introduction

International studies of the fund industry are important as they allow us to understand why differences in fund industry behavior arise. In addition, such studies are also important because the size of the global fund industry outside the U.S. has been growing at a much faster rate than within the U.S. itself. Between 1996 and 2010 the growth of assets under management in the U.S. was about 200%, while outside the U.S. was approximately doubled that.[1] While international studies clearly enhance our understanding of fund management issues greatly they are relatively few and far between. For example, Khorana, Servaes, and Tufano (2005) explain the size of the mutual fund industry around the world while in their follow-up paper in 2009 they study the determinants of fees across countries. Ferreira, Keswani, Miguel, and Ramos (2012 and 2013) examine what determines mutual fund performance across countries and the shape of the flow performance relationship around the world.

In this paper we aim to enhance our knowledge in this area by using data from 31 countries to study the impact of differences in national culture on the fund management industry in each country. In particular we examine how the cultural variables developed by the social psychologist Geert Hofstede impact flows, risk-taking by fund managers, performance and fees charged by funds across countries.

---

[1] According to the European Fund and Asset Management Association (EFAMA) 2011 and the Investment Company Institute (ICI) (2011), the world mutual fund industry managed financial assets exceeding $24.7 trillion at the end of 2010, more than four times the $6.1 trillion of assets managed at the end of 1996. The number of mutual funds has also grown dramatically to more than 69,000 funds worldwide at the end of 2010. Over the same period, the assets under management in the U.S, grew from $3.5 trillion (representing 6,248 funds) to $11.8 trillion (7,555 funds) while, outside the U.S., increased from $2.6 trillion (25,534 funds) to $12.9 trillion (61,938 funds). This explains why, since 2006, the U.S. is no longer the country with the majority of assets under management. At the end of 2010, 52% of the world total assets under management were outside the U.S.: 32% in Europe; 12% in Asia-Pacific; 7% in Americas, including South-American countries and Canada; and 1% in Africa (South-Africa).

Despite Hofstede's measures of national culture being widely accepted and used by researchers in different business disciplines since their first publication in 1980, their use is rather limited in the finance literature.[2] Exceptions include Chui, Titman, and Wei (2010) that use a Hofstede variable to explain trading volume, volatility as well as momentum profits[3], and Li, Griffin, Yue, and Zhao (2013) and Mihet (2013) that explain firm risk taking with Hofstede measures.

Hofstede's theory of cultural dimensions describes the effects of a society's culture on the values of its members (see Hofstede, 1980 and 2001, and Hofstede, Hofstede, and Minkov, 2010)). The first dimension, *power distance* is a measure of "the extent to which the less powerful members of a society accept and expect that power is distributed unequally" (Hofstede, 2001, page 98). Countries with high *power distance index* are characterized by centralized decision structures, authority and the use of formal rules. *Uncertainty avoidance*, the second dimension, is related to the level of stress and anxiety in the face of an unknown situation. In countries with higher *uncertainty avoidance* people try to minimize ambiguity by complying with established laws and rules and follow strict behavioral codes. In contrast, in societies with weak *uncertainty avoidance*, people are more willing to take both known and unknown risks as they anticipate a higher probability of success. *Masculinity* is the third cultural dimension and is associated with more ambitious, assertive and competitive societies. Finally, the fourth dimension is *individualism*. Individualism opposes collectivism and, while collectivistic cultures are characterized by compromise and consensus between members, individualistic cultures expect individuals to pursue their own objectives and therefore make their own choices.

---

[2] For example: Weber Shenkar and Raveh (1996) apply Hofstede's dimensions of national culture to economics; Tan, Wei, Watson, Clapper, and McLean (1998) to management; Kachelmeier and Shehata (1997) to accounting; and Aaker and Williams (1998) to marketing.
[3] See Odean (1998), Gervais and Odean (2001), and Scheinkman and Xiong (2003) for models in which overconfident investors trade more and generate excess volatility.

In this paper we argue that Hofstede's cultural variables have important implications for how active investors are. Why might this be the case? When investors are more passive, they take less risk (have high *uncertainty avoidance*), do not differ from the collective (have low *individualism*), they are less ambitious (have less *masculinity*) and are more accepting of the status quo and following the herd (have high *power distance*). We would expect more active investors to be less willing to accept the current situation. If investors are in a fund that is performing poorly, more active investors will sell that fund more quickly. If active investors see that there are better funds than the fund they are currently invested in, then they will move rapidly to purchase those better funds. Overall therefore we should see more intense buying of winners and more intense selling of losers in more active fund management industries. This is our first hypothesis.

If investors are more active in certain countries then this puts more pressure on fund managers to perform well or else fund investors will sell their positions. More pressure on fund managers will give them the incentive to pursue more risky and innovative strategies as they know that they will be penalized if they do not perform well. Del Guercio and Reuter (2012) show that direct-sold U.S. equity mutual funds are more performance-sensitive (when compared to funds sold through brokers) which creates greater incentives for fund managers to engage in more active investment strategies. This leads to our second hypothesis. In countries with more active investors mutual fund managers will undertake more risk-taking and pursue more active and innovative investment strategies. Furthermore, the literature has shown that more risk-taking and active management is associated with better performance (see, e.g., Kacperczyk, Sialm, and Zheng (2005), Cremers and Petajisto (2009), and Amihud and Goyenko (2012)). So, our third hypothesis stems from the second hypothesis: in countries with more active investors mutual

funds are expected to perform better when compared to countries where investors are less active. If investors are more active we would also expect them to be less tolerant of higher fees. Gil-Bazo and Ruiz-Verdú (2009) and Evans and Fahlenbrach (2012) discuss the fact that more performance-sensitive investors are also more fee-sensitive. This leads to our fourth hypothesis that in countries where investors are more active, that in equilibrium, due to the greater sensitivity of investors to fees, that the fees charged by funds are lower.

We start by examining how changes in Hofstede variables in the direction of increased shareholder activism (lower *power distance*, lower *uncertainty avoidance*, higher *masculinity* and higher *individualism*) influence the flow performance relationship. We find that in countries with more (less) active investors, investors buy more (less) winners and, particularly, sell more (less) funds at the bottom of the performance scale. Ferreira et al. (2012) show that economic, financial industry, and mutual fund industry development explain the flow performance relationship across countries. We check that culture remains a significant determinant of the flow performance relationship even if we include the development proxies used by Ferreira et al. (2012) in our regressions. This confirms our first hypothesis.

Next, we look at our second hypothesis and test whether mutual fund managers take more risk and engage in more active investment strategies in countries with more active investors. We measure active or idiosyncratic risk-taking in two ways. First, we use the standard deviation of the residuals from the four factor model (tracking error) and second we use the R-squared from the four factor model in the manner of Amhiud and Goyenko (2012). We find that tracking error rises and R-squared falls in countries where investors are more active which indicates that risk-taking goes up as the activeness of investors rises.

We then test whether differences in investor activeness explains differences in performance. We find that on average mutual funds perform much better in countries with more active investors. This shows that our third hypothesis is correct. These results are consistent with the findings in Kacperczyk, Sialm, and Zheng (2005), Cremers and Petajisto (2009), and Amihud and Goyenko (2012)), that show that more active mutual fund managers perform better. The differences in fund performance are not only statistically but also economically significant as the average four-factor alpha in countries with more active (above median country level of activeness) investors exceeds the average four-factor alpha in countries with less active investors by a minimum of 38 basis per quarter (when we use the *masculinity index*) and a maximum of 83 basis points per quarter (when we use the *power distance index*).

If in countries with less active investors, investors are less sensitive to past performance, we would also expect this lack of sensitivity to prevail in the way investors react to mutual fund fees. To test our hypothesis we regress mutual fund fees (total expense ratio, management fees, and total shareholder charges) on our four dimension of national culture. The results show that our fourth hypothesis is correct. In countries with less active investors mutual funds charge more fees. If we take the results for the individualism index as an example, in countries with less individualistic investors mutual fund's expense ratio is on average about 11% higher compared to countries with more individualistic investors and management fees and total shareholder charges are higher by 13% and 16%, respectively.

Finally, we test whether differences in national culture explain differences in mutual fund performance during the 2007-2008 financial crisis. We would expect more conservative investment strategies to protect investors more from the effects of the recent financial crisis. We would also expect mutual fund managers to suffer the impact of heavy withdrawals less during

market downturns in countries where investors are less active which should mean fund performance is less hurt by the huge losses arising from fire sales.[4] Our results show that mutual fund performance decreases significantly during the financial crisis period, but we also find that in countries where investors are less active, mutual fund performance decreases less, meaning that less pressure on fund management actually produces a positive impact on fund performance during the crisis period.

Our paper makes a number of contributions to the literature. We believe we are the first study to use Hofstede variables to explain the behaviour of mutual fund investors. Second, our paper shows that cultural variables have a significant bearing on the flow-performance relationship. Third, our tests demonstrate that culture may also explain the degree of risk-taking by fund managers and hence the levels of performance of the mutual fund industry across countries. Fourth, the paper shows that fees charged may also be influenced by how willing investors are to accept high fees which stems from their cultural background. Overall, our paper shows that, despite the growing integration of societies and economies around the world and the increasing sophistication of investors, that national culture influences many of the key relationships in the fund management industry.

The remainder of the paper is structured as follows. The next section describes the dataset and methodology we use. Section 3 studies whether national culture determines investor's flow sensitivity to past performance. Section 4 tests whether risk-taking depends on the culture of the investors in particular their degree of activeness. We test the effect of national culture on mutual fund performance in Section 5 and on the level of mutual fund fees charged in Section 6. Section 7 analyzes the impact of the financial crisis on mutual fund performance. Section 8 contains robustness tests, and Section 9 concludes.

---

[4] Coval and Stafford (2007) document forced selling (*fire sales*) by funds that experience large outflows.

2. Data and Variables Construction

2.1. Sample

Data on equity mutual funds are from the Lipper Hindsight database, which is survivorship-bias free.[5] The Lipper Hindsight database lists multiple share classes as separate funds. Because multiple share classes have the same holdings, the same manager, and the same returns before expenses and loads, we follow Cremers, Ferreira, Matos, and Starks (2013), and Ferreira, Massa, and Matos (2013), and calculate our fund-level variables by aggregating (size weighting) across share classes and eliminate multiple share classes of the same fund. The initial sample contains 47,961 equity funds that invest both domestically and internationally.

The comprehensive nature of the Lipper Hindsight dataset is demonstrated by comparing its contents with Investment Company Institute (ICI) aggregate statistics from 46 countries. At the end of 2010, Lipper Hindsight database reports 26,861 equity funds which represent 97% of the total of 27,754 funds included in ICI statistics. At the same date, Lipper Hindsight and ICI report total net assets (TNA) of equity funds, represented by the sum of all share classes, of $9 trillion and $10.2 trillion respectively. This means that our initial sample of equity funds covers 88% of the total net assets of worldwide equity funds.

We impose a few filters on our final sample. First, the final sample is restricted to actively managed equity funds and excludes closed-end, funds-of-funds, and funds registered for sale in offshore centers such as Luxembourg, Dublin, and the Cayman Islands. Second, in order to ensure that we have sufficient time series observations to calculate risk-adjusted performance

---

[5] This database has been used by Ferreira et al.(2012) and (2013), Banegas, Gillen, Timmermann and Wermers (2013), Cremers et al. (2013), and by Ferreira, Massa, and Matos (2013).

.

measures we impose a minimum of 24 continuous monthly observations. Third, to make our results more meaningful, we also require a minimum of 10 funds at the beginning of each year in each country. Finally, we require funds to have data on size (TNA), family size, age, and loads (front-end and back-end loads). This leads to a final sample of 21,452 open-ended actively managed equity funds from 31 countries spanning the period 1998 to 2010. The timeframe we consider includes the stock market run-up observed across countries in 2003 and 2009 as well as the global financial crisis, and therefore is a representative time window as it includes both bull and bear market episodes.

Table 1 presents the number of funds and TNA in each country at the end of our sample period. Columns two and three show aggregate statistics by domicile country, i.e. domestic and international funds. We can see that there are significant differences in the number of funds and their associated TNA across countries. The U.S. is the country with the highest number of funds and by far the largest assets under management. Based on 2010 figures, the U.S. accounts for 19% of the number of funds in our sample and 64% of the total TNA, confirming the much smaller average size of mutual funds outside the U.S. in Ferreira et al. (2013). Australia, Canada, the U.K., and France represent 13%, 10%, and 7% of the number of funds, but only 3%, 6%, 8%, and 3% of the total TNA, respectively. The last four columns of Table 1 split the sample into domestic and international funds which is done using Lipper data on the fund domicile country and fund geographic investment style. According to Lipper, funds are classified as domestic funds if they invest exclusively in their own country. Lipper classifies funds geographic investment styles into four categories namely domestic; foreign country; regional; or global funds. We classify funds as being international if they invest in countries or regions different from the one where they are located (foreign or regional funds) or if they invest

worldwide (global funds). Table 1 shows that, across our sample, domestic funds represent about 45% of both the total number of funds and the sum of TNA. This is because in the majority of the countries in our sample the number of funds and the TNA represented by international funds is larger. This is not the case of the U.S. where domestic funds are dominant, representing 75% of the number of funds and 73% of the TNA included in our sample.

2.2 Measuring national culture: Hofstede's Cultural Dimensions

We use four dimensions of national culture developed by the social psychologist Geert Hofstede, including *power distance*, *uncertainty avoidance*, *masculinity*, and *individualism*.[6] Geert Hofstede's theory of cultural dimensions aims to explain the effects of a society's culture on the values of its members. According to Hofstede, *"Culture is the collective programming of the mind distinguishing the members of one group or category of people from others."*[7]

The first dimension of national culture used in this study is *power distance* which is a measure of "the extent to which the less powerful members of a society accept and expect that power is distributed unequally" (Hofstede, 2001, p.98). A high *power distance index* indicates that subordinates expect to be told what to with no need of further justification. Countries with high *power distance index* are characterized by centralized decision structures, authority and the use of formal rules. We would expect high levels of centralization, authority and formalization to lead people to be less encouraged to think by themselves, to wait to be told what to do, and

---

[6] Geert Hofstede defines dimension as "an aspect of culture that can be measured relative to other cultures" (Hofstede, 1997, p.14). The cultural dimensions derive from a psychological survey conducted to 117,000 IBM local employees in 66 countries across different regions, covering a large set of questions on national and organizational culture collected between 1967 and 1973. The original theory consisted of four dimensions of national culture and was initially presented in 1980 (Hofstede, 1980) and revised in 2001 (Hofstede, 2001), and in 2010 (Hofstede, Hofstede, and Minkov, 2010).
[7] http://geert-hofstede.com/national-culture.html.

11

therefore to be less active in pursuing their individual objectives and to be more passive overall. This is consistent with investors with high power distance being less active.

The second dimension *uncertainty avoidance* is related to the level of stress, emotionality, and anxiety in a society in the face of an unknown future. This dimension deals with the society's tolerance for ambiguity (Hofstede, 2001). Higher *uncertainty avoidance* is associated with greater intolerance for different situations and ideas, and *uncertainty avoidance* cultures try to minimize the possibility of such situations by following strict behavioral codes, laws and rules. We would expect that investors from countries with greater *uncertainty avoidance* to be less active as investors as they do not wish to increase uncertainty by deviating from the investment path that the majority are following.

The third dimension is *masculinity*. Greater *masculinity index* is associated with more assertive, competitive, and more ambitious societies, where work prevails over family. In these countries "*men should be and women may be assertive and ambitious*", and "*fathers deal with facts, mothers with feelings*" (Hofstede (2011), p.12). We would expect more assertive and more competitive investors to be more active and therefore we would expect greater *masculinity* be associated with more active investors.

Finally, the fourth dimension is *individualism*, individualism versus collectivism. It describes the relationship between the individual and the society. While collectivistic cultures are characterized by compromise and consensus between members, which may delay the decision process, in individualistic countries the individual is expect to make their own choices and pursue their own ideas. *Individualism* has been consistently related in the psychology literature (see, e.g., Markus and Kitayama (1991), and Heine, Lehman, Markus, and Kitayama

(1999)), to overconfidence and overoptimism. This suggests that people, and therefore investors, are expected to be more active in countries with a higher individualism index.

Overall, our intuition is that investor's activeness should be negatively associated with countries with lower *power distance* and *uncertainty avoidance* indexes, and positively associated with countries with higher *masculinity* and *individualism*. Additionally, we would expect as well investor's behavior to have a bearing on how mutual fund managers manage their portfolios and ultimately on how funds perform.

Table 3 contains average scores of Hofstede's dimensions of national culture by country. We can see that there is substantial variation in Hofstede's scores across the different dimensions. Austria and Denmark with scores of 11 and 18, respectively, are the countries with the lowest *power distance* scores, while Malaysia, with a score of 104, is by far the country with the highest *power distance*. Singapore, with a score of 8, is at the bottom when it comes to *uncertainty avoidance*, and Portugal, with a score of 104, is at the top. The countries with the lowest *masculinity* scores are Sweden and Norway (5 and 8, respectively), while the country with highest *masculinity* score of 95 is Japan. Finally, Indonesia, Taiwan, and South Korea, lead the Asian countries with the least individualistic citizens, with scores of 14, 17, and 18, respectively. This is in contrast to the U.S., Australia, and the U.K., the countries with higher scores for *individualism* of 91, 90, and 89, respectively.

2.3. Measuring fund performance

Fund performance is measured using raw returns, benchmark-adjusted returns, one-factor alpha, and four-factor alpha. The calculation of total returns assumes that dividends are immediately reinvested. Our raw returns are gross of taxes and net of total expenses (annual fees and other expenses). Benchmark-adjusted return is calculated as the fund return exceeding the

return of its benchmark.[8] Risk-adjusted performance is calculated using the one-factor market model and the four-factor Cahart (1997) model. Following Bekaert, Hodrick, and Zhang (2009) and Ferreira, Massa, and Matos (2013), we estimate alpha using regional factors (for domestic, foreign and regional funds), and world factors (for global funds). Regional factors include Africa, Asia-Pacific, Europe, North America, and Emerging Markets, and the classification is based on the fund´s investment region using data on fund's domicile country and fund's geographic investment style provided by the Lipper database.

We estimate monthly factors loadings for each fund by running equation (1) for one-factor alpha and equation (2) for four-factor alpha:

$$R_{i,t} = \alpha_i + \beta_{1,i} MKT_t + \varepsilon_{i,t} \tag{1}$$

$$R_{i,t} = \alpha_i + \beta_{1,i} MKT_t + \beta_{2,i} SMB_t + \beta_{3,i} HML_t + \beta_{4,i} MOM_t + \varepsilon_{i,t} \tag{2}$$

where R_t is the return in U.S. dollars of fund i in excess of the one-month U.S. Treasury bill rate in month t; MKT_t is the excess return in U.S. dollars on the fund's investment region in month t; SMB_t (small minus big) is the average return on the small-capitalization portfolio minus the average return on the large-capitalization portfolio on the fund's investment region; HML_t (high minus low) is the difference in return between the portfolio with high book-to-market stocks and the portfolio with low book-to-market stocks on the fund's investment region; MOM_t (momentum) is the difference in return between the portfolio with the past 12-month winners and the portfolio with the past 12-month losers on the fund's investment region. The country-level factors *MKT*, *SMB*, *HML*, and *MOM* use individual stock returns in U.S. dollars obtained from Datastream, following Fama and French (1992) methodology. The regional and world factors

---

[8] Lipper determines the benchmark of a fund from the fund prospectus.

are value-weighted averages of countries' factors.[9]

We use monthly fund returns (net of expenses) denominated in U.S. dollars. We estimate the time series regressions in equations (1) and (2) using the monthly fund excess returns and the risk factors using the previous 36 months of data (imposing a minimum of 24 months). Our unit of observation in all the tests is defined at the fund-quarter frequency. We then measure a fund's risk-adjusted performance (or alpha) by subtracting the expected return from the realized fund return per quarter.

Table 2 presents averages of our performance measures by country.[10] Italy and France are the countries with the lowest average raw return, while India and Indonesia are the countries with the highest. The benchmark-adjust return are higher in Thailand and Taiwan and lower in Poland and Indonesia. South Korea and Taiwan are the countries with the lowest one-factor alpha and Thailand and India present the highest. Four-factor alpha are higher in India and Brazil and lower in Japan and Spain.

2.4 Fund-level control variables

Fund-level control variables include fund size, family size, flows, fund age, expense ratio, and loads.[11] Table 2 present summary statistics of fund-level control variables by country averaged across fund quarters.[12] The table shows that there is substantial variation in average fund-level control variables across countries. Fund and family size are much larger in the U.S.

---

[9] See Ferreira et al. (2013) for details about how we construct our factors.

[10] To ensure that extreme values do not drive our results, performance measures are winsorized by country at the bottom and top 1% level of the distribution.

[11] To make sure that multicollinearity among these variables is not driving our results, we have run a pairwise correlation matrix (not reported). We find that correlation coefficients are low, suggesting that this variables may be included together.

[12] To ensure that extreme values do not drive our results, flows, expense ratios and loads are winsorized by country at the bottom and top 1% level of the distribution.

than elsewhere, and the U.K and the U.S. are the countries with oldest funds. Poland has the highest expense ratio and Canada is the country where funds charge more loads on average.

To calculate quarterly fund flows, we follow Chevalier and Ellison (1997) and Sirri and Tufano (1998). Fund flows are the new money growth rate as the net growth in total net assets (TNA), not due to dividends and capital gains on the assets under management but to new external money. Fund flow for fund i in country c at quarter t is calculated as:

$$Flow_{i,c,t} = \frac{TNA_{i,c,t} - TNA_{i,c,t-1}(1 + R_{i,c,t})}{TNA_{i,c,t-1}}, \qquad (3)$$

where $TNA_{i,c,t}$ is the total net asset value in local currency of fund i in country c at the end of quarter t, and $R_{i,c,t}$ is fund i's raw return from country c in quarter t. Equation (3) assumes that flows occur at the end of each quarter, as we have no information regarding the timing of new investment.[13] Poland and Indonesia present by far the highest average quarterly flows during the period, while South Korea has the lowest average quarterly flows averaged across funds.

Across our regression tests we include quarterly dummies, to control for time fixed effects, fund type fixed effects (domestic, foreign, regional, and global), and investment region fixed effects. Region fixed effects include Africa, Asia-Pacific, Europe, North America, and Emerging Markets. This classification is based on the fund´s investment region using data on fund's geographic investment style provided by Lipper database.

3. The effect of culture on the flow performance relationship

In this section we measure how flows respond to past performance in countries with more active and less active investors. Our first hypothesis is that in countries with less active

---

[13] Sirri and Tufano (1998) show that results are not sensitive to this assumption. Our results do not change whether flows are assumed to occur at the beginning or middle or continuously throughout the period.

investors, investors are expected to be less sensitive to funds' performance. Additionally, we also hypothesize that this lack of sensitivity will remain across the performance scale. This means that in countries where investors are less active investors will sell less funds that perform poorly and will also buy less funds that perform well.

We start by estimating the flow-performance relationship. To do so, we regress quarterly fund flows on the fund's performance rank at the end of the previous quarter. In each quarter and for each country fractional fund performance, ranks ranging from zero (poorest performance) to one (best performance) are assigned to funds according to their past performance in the past year. In a recent paper, Spiegel and Zhang (2013) argue that the flow-performance relationship is linear.[14] Therefore, we start by using a linear regression approach and we go on using a piecewise-linear specification, allowing for different flow-performance sensitivities at different levels of the performance range in the manner of, e.g., Chevalier and Ellison (1997), Sirri and Tufano (1998), and Huang, Wei, and Yan (2007). To begin with, the slopes are estimated separately using a two-piece specification for the bottom half (Low), and the top half (High):

$$Low_{i,c,t-1} = \min(0.5, Rank_{i,c,t-1}) ;$$

$$High_{i,c,t-1} = Rank - Low_{i,c,t-1}. \qquad (4)$$

We also use a three-piece specification for the bottom quintile (*Low*), the three middle quintiles (*Mid*), and the top quintile (*High*) of the fractional fund performance ranks:

$$Low_{i,c,t-1} = \min(0.2, Rank_{i,c,t-1}) ;$$

$$Mid_{i,c,t-1} = \min(0.6, Rank - Low_{i,c,t-1}) ;$$

---

[14] Spiegel and Zhang (2013) argue that the traditional fractional flow model is misspecified and that this misspecification accounts for the documented convexity in the flow-performance relationship (see, e.g., Chevalier and Ellison (1997), Sirri and Tufano (1998), and Huang, Wei, and Yan (2007)).

$$High_{i,c,t-1} = Rank - (Low_{i,c,t-1} + Mid_{i,c,t-1}). \qquad (5)$$

The coefficients on these piecewise decompositions of fractional ranks represent the marginal fund-flow response to performance.

We pool the data across countries and regress quarterly fund flows on piecewise past performance measured as the fund's performance rank at the end of the previous quarter. In each quarter and for each country's fractional fund performance, ranks ranging from zero (poorest performance) to one (best performance) are assigned to funds according to their past performance in the past year (measured by four-factor alpha). We include lagged fund-level control variables such as fund and family size, fund age, expense ratio, and loads in the manner of Chevalier and Ellison (1997) and Sirri and Tufano (1998). Finally, to control for autocorrelation in fund flows, we also include lagged flows in the manner of Cashman, Deli, Nardari, and Villupuram (2007), and Ferreira et al. (2012).

In addition, we split up our sample into above and below the median countries based on Hofstede's four dimensions of national culture. We assign the value of one if the country is above the median and zero if it is below the median. We then interact each dummy variable with piecewise past fund performance. These regressions include time, investment region, and fund type fixed effects and the standard errors are clustered at the fund level to control for autocorrelation in fund flows. The results of doing this, using raw returns as our performance measure, are presented in Table 4, Panel A.[15]

Our results show that the performance rank is positively associated with flows, meaning that investors direct more flows to the best performing funds, but when we interact our dummy variables proxying for investors' activeness with the performance rank, we find that investors'

---

[15] In untabulated results we find similar results when measuring mutual fund performance using benchmark-adjusted returns, one-factor alpha, and four-factor alpha.

sensitivity to past performance declines significantly for countries with less active investors. When we use a two-piecewise linear specification, allowing slopes to differ for bottom half and top half performance, we find that the coefficient on the interaction of our dummy variables with bottom and top performance is negative and statistically significantly, showing that in countries where investors are less active investors react less to both bottom and top performance. This means that in these countries investors buy fewer good performers and sell fewer funds that perform poorly. Finally, when we allow slopes to differ for the lowest quintile, the middle three quintiles, and the top quintile and interact these three performance levels with our dummy variables the results remain similar although stronger for the bottom quintile of the performance rankings. Figure 1 plots average fund flow by performance (raw returns) quintile for our four proxies for investors' activeness and, from the graphs it is clear that countries with less active investors display lower flow-performance sensitivity than countries with more active investors.

Ferreira et al. (2012) find that the flow-performance relationship can be explained by economic, financial and mutual fund industry development variables and Mihet (2013) finds that high-income countries tend to have lower power distance and higher *masculinity* scores than low-income countries. She also finds that emerging countries are more uncertainty averse and less individualistic than developed countries. Pryor (2005), however, suggests that cultural variables are not related to the level of economic development. Despite the mixed evidence, these results suggest that differences in country's development may also explain why culture influences the investor reaction to past performance. To test whether this is the case, we include in our regressions proxies for economic development (using GDP per capita), financial market development (Emerging), and mutual fund industry development (mutual fund industry age). The results are presented in Panel B of Table 4 and show that our initial results remain

19

unchanged, showing that national culture variables have explanatory power beyond country development variables.

Overall, our results confirm our initial hypothesis. In countries where investors are less active flows are much less sensitivity to past performance. The results are not only statistically significant but are also economically significant. For example, using results for the *power distance* variable for the three-piecewise linear specification (Panel A of Table 4, Column (9)), a decrease in the performance rank from the 20th percentile to the 10th percentile leads to a decrease in fund flows of more than 0.88% (= 8.842 x 0.1) for countries below median (countries were investors are more active), while, for the same countries, an improvement in performance ranking in a given quarter from the 80th percentile to the 90th percentile is associated with an increase in fund flows of approximately 1.88% (= 18.785 x 0.1). For countries with less active investors (countries with above median power distance) however, the impact of the performance change on flows is considerably different: a decrease in the performance rank from the 20th percentile to the 10th percentile leads to an increase (not decrease) in fund flows of 0.11% [= -(8.842-9.978) x 0.1)] for countries below median, and an improvement in the performance ranking in a given quarter from the 80th percentile to the 90th percentile is associated with an increase in fund flows of 1.52% [= (18.785-3.633) x 0.1)].

The coefficients on the remaining fund characteristics are in line with those found in the previous literature using a worldwide sample of mutual funds (see Ferreira et al. 2012, and Ferreira, Massa, and Matos 2013).

4. Mutual fund risk-taking and trading strategies

In the previous section we show that investors react less to past performance in countries with less active investors. Del Guercio and Reuter (2012) show that direct-sold U.S. equity

mutual funds are more performance-sensitive (when compared to funds sold through brokers) which creates greater incentives for fund managers to engage in more active investment strategies and generate alpha. We would expect investor's performance sensitivity to have a significant impact on the level of risk portfolio managers are willing to take because the greater the pressure mutual fund managers face and the more penalized they are if they do not perform, the greater the incentive they have to pursue innovative and active investment strategies in order to deliver abnormal performance.

To examine whether our intuition is correct, we look at differences in idiosyncratic risk-taking between countries that have more active investors as compared to those countries that have less active investors.

As in previous regressions, we split up our sample into above and below the median countries based on our four dimensions of national culture, and we then assign the value of one if the country is above the median and zero if it is below the median. We precede estimating panel regressions where we regress our measures of risk-taking and our proxies for mutual fund manager's trading strategies on our cultural variables and control variables.

We start by testing whether there are differences in risk-taking between countries with less active investors and countries with more active investors. Fund idiosyncratic risk is measured in two ways. The first method involves calculating the standard deviation of the residuals from the four factor model (tracking error) and the second method based on Amihud and Goyenko (2012) uses the R-squared from a regression of the fund excess return on the four factors. The results are presented in Table 5.

Overall, we find a positive and significant relation between risk-taking and investors' activeness. The results hold for our four proxies of investors' activeness, and across our different

measures of risk-taking. In countries with less active investors mutual fund managers take less risk and follow more closely the index to which the fund is benchmarked. These results are consistent with the findings in Mihet (2013), and in Li et al. (2013) who find similar results when explaining corporate risk-taking.

5. Mutual fund performance

In this section we show whether investors' activeness has a direct impact on mutual fund performance, i.e., we test how differently mutual funds perform in countries with less active investors as compared to more active investors. In Section 3, we show that investors react less to past performance in countries with less active investors and this explains why mutual fund managers are less willing to take more idiosyncratic risk in these countries (see Section 4).

The literature has shown that fund managers that are more active tend to perform better. For example Cremers and Petajisto (2009) show that the more different the holdings of funds are to the market the better those funds perform. Amihud and Goyenko (2012) show that if funds returns are less well explained by fund factors and funds have a lower R squared then funds tend to perform better. We know (from Section 4) that where investors are more culturally active that fund managers also take more active risk. The literature would suggest that in these countries funds will perform better as they are taking more active risk.

To test this hypothesis, we pool the data across countries and regress quarterly performance on our four dummy variables proxing for the different dimensions of national culture and a set of fund-level control variables used by the literature (see e.g. Ferreira et al. 2013, and Ferreira, Massa, and Matos 2013) and defined as before. The results are presented in Table 7. We start by reporting the results of tests using net performance. Panel A of Table 7

shows the results for net four-factor alpha. The results using net raw returns, net benchmark-adjusted returns, and net one-factor alpha are presented in Panel B of Table 7. [16]

We find a statistically significant association between performance and investors' activeness. Mutual funds perform much worse in countries with less active investors. The differences in performance are also economically significant as four-factor alpha differences between countries with less and more active investors range from 38 basis points per quarter (when we use *masculinity* as proxy for investors' activeness in Column (3) of Panel A) to 83 basis points per quarter (when the proxy is power distance in Column (1) of Panel A).

Ferreira et al. (2013) find that country characteristics explain differences in mutual fund performance. Their results show that funds located in countries with high economic development, liquid stock markets and strong legal institutions display better performance. To check whether our results remain after controlling for these country characteristics, we include in our regressions GDP per capita, stock market trading costs, the antidirector rights index from Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008), mutual fund industry age, and mutual fund industry Herfindahl index (see Columns (5)-(8) of Panel A). The results confirm that the explanatory power of the national culture variables remain highly significant. Additionally, Panel B of Table 7 shows that the results for the additional net performance measures including, raw returns, benchmark-adjusted returns, and one-factor alpha are consistent with the discussed results using four-factor alpha.[17]

Khorana, Servaes, and Tufano (2009) show that expense ratios vary significantly across countries. Because this variation might help explaining differences in the observed net

---

[16] Cremers, Petajisto, and Zitzewitz (2012) find that standard factor models produce nonzero alphas even for passive portfolios and therefore tradable benchmarks indices should be used instead.
[17] Our results (untabulated) remain similar when we also add country characteristics to these regressions, like in columns (5)-(8) of Table 7, Panel A.

performance across countries, we also report the results of tests using before-fee performance (gross performance) in Panels C and D.[18] The results using gross performance are consistent with our primary findings.

Overall, our results confirm our third hypothesis. Investors' activeness has a direct impact on how mutual funds perform. In countries with more active investors mutual funds perform much better when compared to countries where investors are less active. When fund managers suffer less pressure from investors they do not have the incentive to act in order to deliver abnormal performance and overcome their peers.

6. Mutual fund fees

In this section we look at the relation between our four dimensions of national culture and fees charged by mutual funds. Khorana, Servaes, and Tufano (2008) remark the "increasing public attention" paid to mutual fund fees not only in the U.S. but around the world. However, these authors also refer that, although the mutual fund structure is comparable across countries, the level of fees charged vary substantially from country to country. Gil-Bazo and Ruiz-Verdú (2009), and Evans and Fahlenbrach (2012) show that more performance-sensitive investors are also more fee-sensitive. We therefore would expect national culture to help explaining differences in mutual fund fees across countries because, if less active investors do not react to poor performance, as our results show in Section 3, we anticipate that these investors will too not react, or at least react less, to increasing expenses as well. Therefore, if our intuition is correct, mutual fund companies are more likely to charge higher fees to their investors in countries with less active investors than in countries with more active investors.

---

[18] Our quarterly gross returns are calculated by adding back expenses to net fund returns. We take the annual expense ratio and divide it by four and add it to the quarterly returns during the year.

To test whether this is the case, we split up our sample into above and below the median countries based on our four dimensions of national culture, and we assign the value of one if the country is above the median and zero if it is below the median. We then estimate panel regressions where we regress mutual fund fees on our cultural variables and fund level control variables, including fund and family size and fund age, like in Khorana, Servaes, and Tufano (2009). Following their study, we also include three different types of fees: total expense ratio, management fees, and total shareholder charges (TSC) that include the expense ratio plus annualized loads.[19]

The results are presented in Panel A of Table 8 and confirm our initial hypothesis. In countries with less active investors mutual fund companies charge significantly more fees, whether in the form of annual operating costs (expense ratio) directly subtracted to investor's return, or in the form of charges levied to investors, including management fees and loads. The results are statistically significant across our proxies for investor's activeness and also economically significant. For example, in countries with less individualistic investors mutual fund's expense ratio is on average about 11% higher when compared to countries with more individualistic investors (see Column (3)). Similarly, in these countries, mutual funds charge on average more 13% (Column (6)) of management fees to their investors and the TSC levied is higher in about 16% (Column (9)).

Khorana, Servaes, and Tufano (2009) show that country's characteristics explain differences in mutual fund fees across countries. They find that mutual fund fees are lower in countries with stronger investor protection and in more developed countries and countries with more developed financial markets. To test if our cultural variables remain significant when

---

[19] To annualize loads, we assume a five-year holding period as in Khorana, Servaes, and Tufano (2009): TSC = Expense ratio + (front-end load)/5 + (back-end load at 5 years)/5. We find similar results if we add one-seventh of the loads charged to investors in the manner of Sirri and Tufano (1998) and Gil-Bazo and Ruiz-Verdu (2009).

explaining differences in mutual fund fees across countries after controlling for these factors, we include in our regressions three additional country level variables used by the referred study: Approvals; GDP per capita; and Bank Concentration. The results are presented in Panel B of Table 8 and confirm the significant explanatory power of the national culture variables when explaining the level of mutual fund fees. The results on country variables confirm those of Khorana, Servaes, and Tufano (2009), as fees are lower in countries with stronger investor protection, higher GDP per capita and with lower concentration in the banking industry.

7. The effect of the financial crisis on mutual fund performance

In this section, we examine whether differences in national culture help explaining the effect of the 2007-2008 financial crisis on mutual fund performance. In section 3, we show that in countries with more active investors, investors are more performance-sensitive, responding with particular intensity to bad performers by heavily withdrawing their money. We also show in Section 4 that more pressure on fund management leads to greater risk-taking. Our intuition is that, during financial crises, mutual funds domiciled in these countries will be more penalized. This is not only because more risky investment strategies are expected to be more exposed to the effects of market downturns, but also because more active investors will react more to poor performance, conducting to greater outflows. In response to large withdrawals, mutual fund managers are forced to rebalance their portfolios selling assets at distressed or *fire sale* prices and therefore experiencing severe losses. Coval and Stafford (2007) show that *fire sales* in mutual funds that experience large outflows lead to a negative stock price pressure. *Fire sales* are therefore expected to affect more funds' net asset values in countries with more active investors. As a result, we anticipate the effect of the financial crisis on funds' performance to be

even greater in these countries, i.e., we would expect more negative performance during this period.

To test our intuition, we rerun our performance regressions in Panel A of Table 7 including a financial crisis dummy that takes the value of one in the period from the fourth quarter of 2007 through the end of 2008 and zero otherwise.[20] We therefore regress performance on the crisis dummy, the crisis dummy interacted with each of our four dimensions of national culture, the national culture variables by itself, and fund-level control variables. The results are presented in Table 9. As we would expect, our results show that mutual fund performance decreases significantly over the financial crisis period. Additionally, our results also show that, on average, outside of the financial crisis period, mutual funds perform much better in countries with more active investors (the coefficient is positive and significant for *masculinity* and *individualism*, and negative and significant for *power distance* and *uncertainty avoidance*). But, when looking at the results of the interaction variables, we find that the coefficient is negative and significant for the interaction *power distance* x *crisis dummy* and *uncertainty avoidance* x *crisis dummy* negative and significant for the interaction *masculinity* x *crisis dummy* and *individualism* x *crisis dummy*. These results provide evidence for our intuition that the negative effect of the financial crisis on mutual fund performance is much greater in countries where investors are more active.

8. Robustness

In this section we discuss some additional tests to check the robustness of our main findings. Our results show that national culture determines how active investors are and that

---

[20] Results (untabulated) remain similar when rerunning Table 8 using raw returns, benchmark-adjusted returns, or one-factor alpha as performance measures, like in Panel B of Table 7, or when we use gross performance, like in Panels C and D of Table 7.

investor's activeness determines how mutual fund managers manage their portfolios. However, it can be argued that, in the case of mutual funds managed by foreign companies, the cultural norms of their origin countries may, if not overlap the fund's domicile cultural norms, at least exert some influence in how fund managers act. To address this issue we re-estimate our main specifications for different subsamples. We start by using a subsample that includes only mutual funds managed by international fund companies that invest both in countries with national culture indexes below and above median. Next, because national cultural differences are greater between these groups of countries, we also restrict our sample to funds managed by mutual fund companies that invest both in the U.S. and in Asian countries, or both in European countries and in Asian countries. We go on and do likewise for the subsamples of funds managed by mutual fund companies that invest both in the U.S. and in emerging countries, or both in Europe and in emerging countries. In untabulated results, we show that our main findings are robust across all these different subsamples, i.e., it is the investor's national culture that determines how mutual fund managers manage their portfolios even in the case of international fund companies.

Additionally, to address the concern that residuals may be correlated within a country, we re-estimate all the main specifications with t-statistics clustered by country. We find that our results (untabulated) remain largely unchanged.

Finally, because the U.S is by far the country with the highest number of funds in the dataset, we remove the U.S. from our sample and rerun our regressions. We find in untabulated results that this does not affect our main findings.

9. Conclusion

Despite the large volume of studies concerning the U.S. fund management industry there are relatively few studies of the fund industry around the world. In this study we contribute to our understanding of this area by testing how differences in national culture influence fund industry behavior across an international sample of 31 countries. We measure culture using the four cultural dimensions of Hofstede namely *power distance*, *uncertainty avoidance*, *masculinity* and *individualism*. We argue that when investors have higher power distance and uncertainty avoidance and lower *masculinity* and lower *individualism* that they will be more passive investors. In contrast when investors have lower power distance, lower *uncertainty avoidance*, higher *masculinity* and higher *individualism* we would expect them to be more active investors. We show that when investors are more active this affects the flow-performance relationship for mutual funds and more activeness is associated with a greater propensity to chase winner funds and a greater propensity to sell loser funds. We also show that these differences in culture explain the cross-section of flow-performance relationships even controlling for the role of development which has been shown in previous work to explain differences in the shape of the flow performance relationship across countries (see Ferreira et al. 2012). We then demonstrate that in countries with more active investors fund managers take more active risk. In particular we show that in more active countries that fund managers have larger tracking error and lower R squared when fund performance is regressed on the standard Carhart four factors. It has been shown in Cremers and Petajisto (2009) and Amihud and Goyenko (2012) that funds with more active risk perform better. We find that funds from countries where investors are more active exerting more pressure on fund managers to take more active risk perform better than funds drawn from countries with less active investors allowing fund managers to pursue less risky and

more conservative investment strategies. We also demonstrate that in countries where investors are more active funds are able to charge greater fees. Finally, look at the 2007-2008 financial crisis period. We find that less pressure on fund management actually has a positive impact on fund performance, suggesting that in countries with less active investors the losses arising from "*fire sales*" are much smaller. Overall, our paper shows that national culture influences many of the key relationships in the fund management industry.

References

Aaker, J., and P. Williams, 1998, Empathy versus pride: The influence of emotional appeals across cultures, *Journal of Consumer Research* 25, 241-261.

Amihud, Y., and R. Goyenko, 2013, Mutual fund's R2 as predictor of performance, *Review of Financial Studies* 26, 667-694.

Banegas, A., B. Gillen, A. Timmermann, and R. Wermers, 2013, The cross section of conditional mutual fund performance in European stock markets, *Journal Financial Economics* 108, 699-726.

Beck, T., A. Demirgüç-Kunt, and R. Levine, 2000, A new database on financial development and structure, *World Bank Economic Review* 14, 597-605.

Bekaert, G, R. Hodrick, and X. Zhang, 2009, International stock return comovements, *Journal of Finance* 64, 2591-2626.

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

Cashman, G., D. Deli, F. Nardari, and S. Villupuram, 2007, Investor behavior in the murual fund industry: Evidence from gross flows, Working paper, Arizona State University.

Chevalier, J., and G. Ellison, 1997, Risk taking by mutual funds as a response to incentives, *Journal of Political Economy* 105, 1167-1200.

Chui, A., S. Titman, and K. Wei, Individualism and momentum around the world, 2010, *Journal of Finance* 65, 361-392.

Coval, J., and E. Stafford, 2007, Asset fire sales (and purchases) in equity markets, *Journal of Financial Economics* 86, 479-512.

Cremers, M., M. Ferreira, P. Matos, and L. Starks, 2013, The mutual fund industry worldwide: explicit and closet indexing, fees, and performance, Working paper, University of Texas at Austin.

Cremers, M., and A. Petajisto, 2009, How active is your fund manager? A new measure that predicts performance, *Review of Financial Studies* 22, 3329-3365.

Cremers, M., Petajisto, and E. Zitzewitz, 2012, Should benchmark indices have alpha? Revisiting performance evaluation, *Critical Finance Review* 2, 1-48.

Del Guercio, D., and J. Reuter, Mutual fund performance and the incentive to generate alpha, *Journal of Finance*, forthcoming.

Djankov, S., R. La Porta, F. Lopez-de-Silanes, and A. Shleifer, 2008, The law and economics of self-dealing, *Journal of Financial Economics* 88, 430-465.

Evans R., and R. Fahlenbrach, 2012, Institutional investors and mutual fund governance: Evidence from retail-institutional fund twins, *Review of Financial Studies* 25, 3530-3571.

Fama, E., and K. French, 1992, The cross-section of expected stock returns, *Journal of Finance* 47, 427-465.

Ferreira, M., A. Keswani, A. Miguel, and S. Ramos, 2013, The determinants of mutual fund performance *Review of Finance,* 17, 483-525.

Ferreira M., A. Keswani, A. Miguel, and S. Ramos, 2012, The flow-performance relationship around the world, *Journal of Banking and Finance*, 36, 1759-1780.

Ferreira, M., M. Massa, P. Matos, 2013, Investor-stock decoupling in mutual funds, Working paper, University of Virginia.

Gervais, S., and T. Odean, 2001, Learning to be overconfident, *Review of Financial Studies* 14, 1-27.

Gil-Bazo, J., and P. Ruiz-Verdú, 2009, The relation between price and performance in the mutual fund industry, *Journal of Finance* 64, 2153-2183.

Heine, S., D. Lehman, H. Markus, and S. Kitayama, 1999, Is there a universal need for positive self-regard? *Psychological Review* 106, 766-794.

Hofstede, G., 1980, Culture¨s consequences: International differences in work related values. Beverly Hills, CA: Sage Publications.

Hofstede, G., 1997, Cultures and organizations: Software of the mind (1st edition), McGraw-Hill.

Hofstede, G., 2001, Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations (2nd edition), Thousand Oaks, CA: Sage.

Hofstede, G., G. J. Hofstede, and M. Minkov, 2010, Cultures and organizations: Software of the mind (3rd edition), McGraw-Hill.

Hofstede, G., 2011, Dimensionalizing cultures: The Hofstede model in context, Online Readings in Psychology and Culture 2. (http://dx.doi.org/10.9707/2307-0919.1014)

Huang, J., K.D. Wei, and H. Yan, 2007, 'Participation costs and the sensitivity of fund flows to past performance' *Journal of Finance*, 62, 2007, 1273-1311

Investment Company Institute, 2011, Mutual Fund Fact Book.

Kachelmeier, S., and M. Shehata, 1997, Internal auditing and voluntary cooperation in firms: A cross-cultural experiment, *The Accounting Review* 72, 407-431.

Kacperczyk, M., C. Sialm, and L. Zheng, 2005, On industry concentration of actively managed equity mutual funds, *Journal of Finance* 60, 1983-2011.

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

Khorana, A., H. Servaes, and P. Tufano, 2009, Mutual fund fees around the world, *Review of Financial Studies* 22, 1279-1310.

Koski, J., and J. Pontiff, 1999, How are derivatives used? Evidence from the mutual fund industry, *Journal of Finance* 54, 791-816.

Li, K., D. Griffin, H. Yue, and L. Zhao, 2013, How does culture influence corporate risk taking, *Journal of Corporate Finance*, 23, 1-22.

Markus, H., and S. Kitayama, 1991, Culture and the self: Implications for cognition, emotion, and motivation, *Psychological Review* 98, 224-253.

Mihet, R., 2013, Effects of culture on firm risk-taking: a cross-country, *Journal of Cultural Economics* 37, 109-151.

Mooij, M. and G. Hofstede, 2010, The Hofstede model: Applications to global branding and advertising strategy and research, *International Journal of Advertising* 29, 85-110.

Odean, T., 1998, Volume, volatility, price, and profit when all traders are above average, *Journal of Finance* 53, 1887-1934.

Pryor, F., 2005, National values and economic growth, *American Journal of Economics and Sociology* 64, 451-483.

Scheinkman, J. and W. Xiong, 2003, Overconfidence and speculative bubbles, *Journal of Political Economy* 111, 1183-1219.

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

Spiegel, M., and H. Zhang, 2013, Mutual fund risk and market share-adjusted fund flows, *Journal of Financial Economics* 108, 506-528.

Tan, B., K. Wei, R. Watson, D. Clapper, and E. McLean, 1998, Computer-mediated communication and majority influence: Assessing the impact in an individualistic and a collectivistic culture. *Management Science* 44, 1263-1278.

Weber, Y., O. Shenkar, and A. Raveh, 1996, National and corporate cultural fit in mergers/acquisitions: An exploratory study, *Management Science* 42, 1215-1227.

Figure 1 – The Flow-Performance Relationship Based on Sorts by National Culture Variables

The figures below present quarterly net flows (in percentage points) by prior year raw return quintile averaged across countries based on country' national culture variables. Our graphs depict the flow-performance relationship for above and below median countries ranked on these variables. See Appendix for variables definitions.

FPS - Power distance

FPS - Uncertainty avoidance

FPS - Masculinity

Above median countries — Below median countries

FPS - Individualism

Above median countries — Below median countries
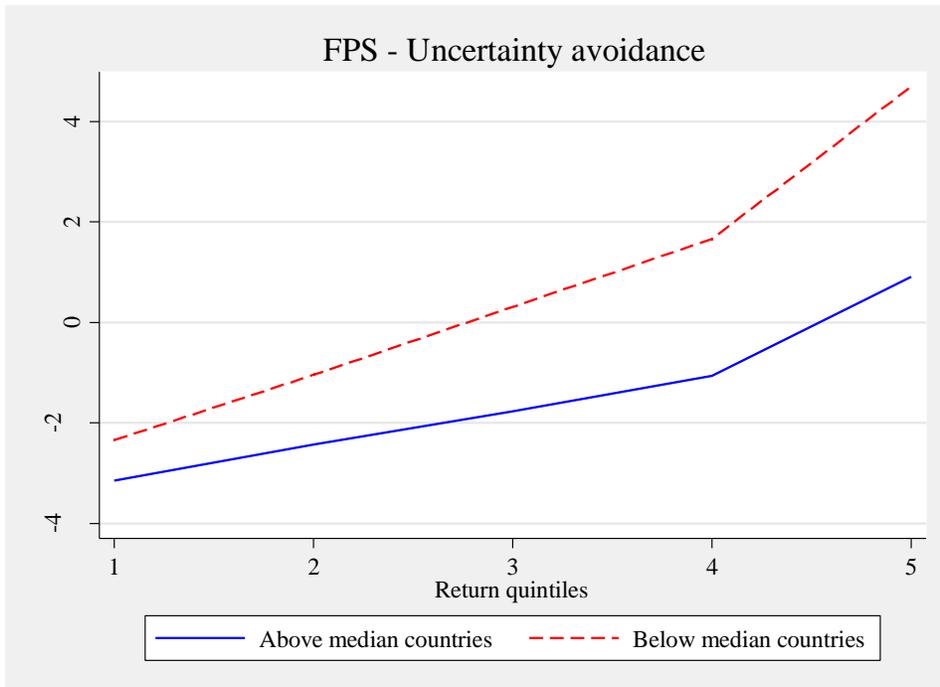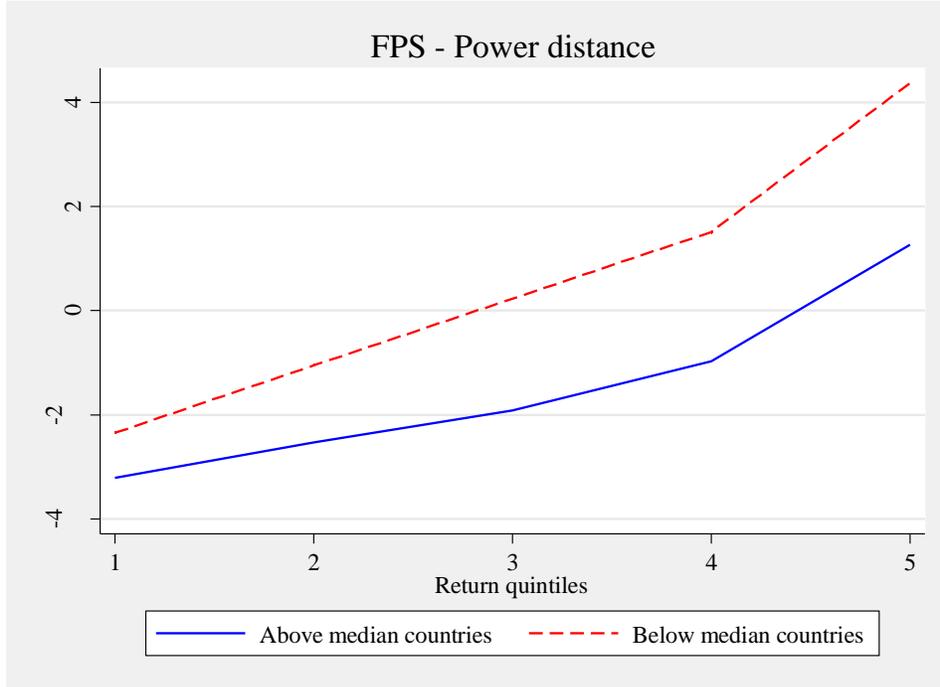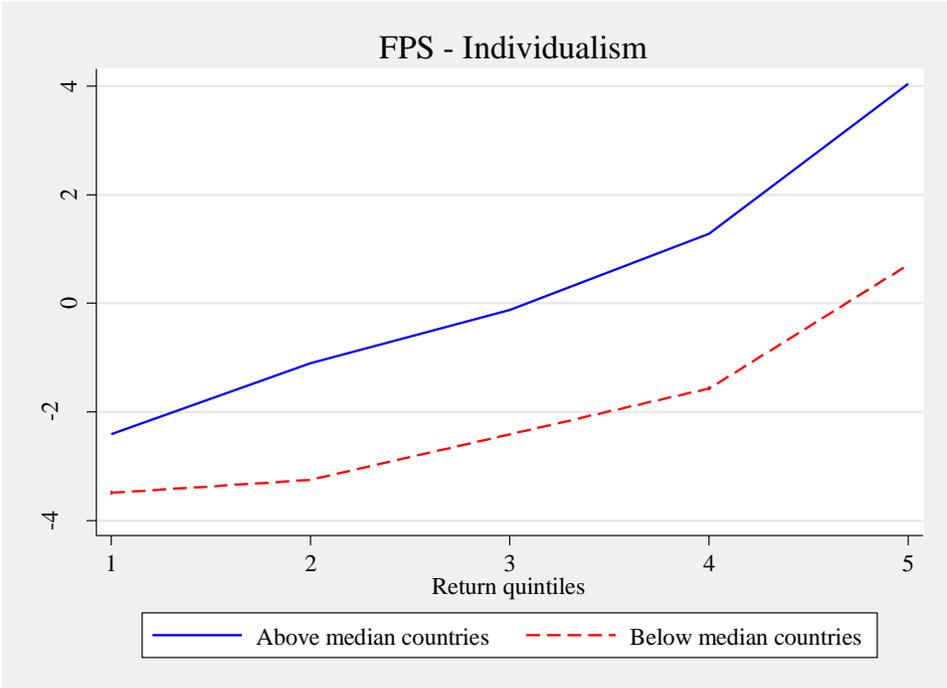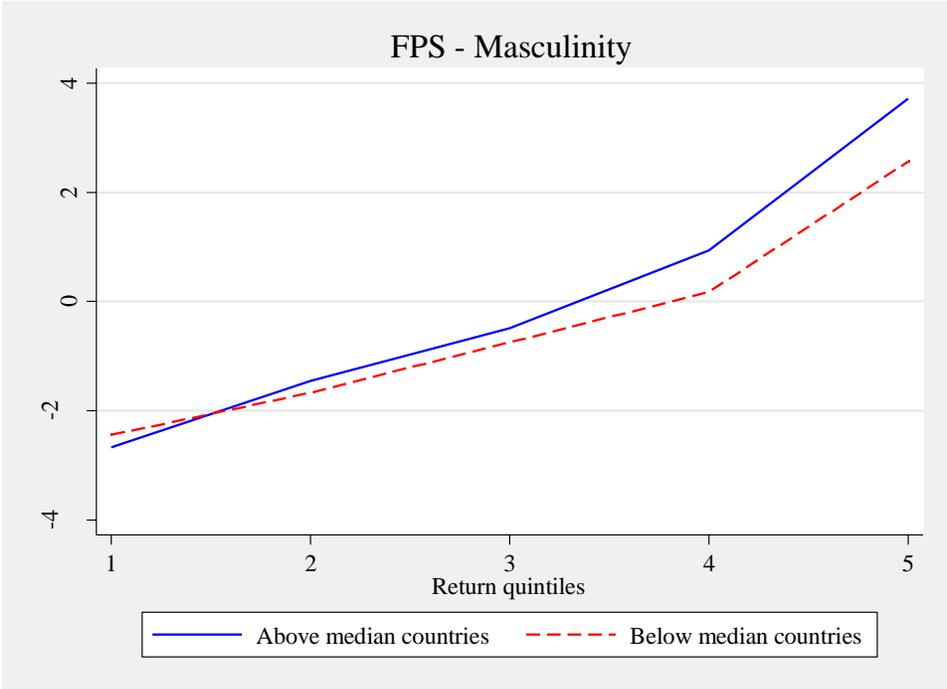
Table 1 – Number and Size of Mutual Funds by Country

This table presents the number of funds and total net assets (TNA) under management (sum of all share classes in U.S. dollars millions) of the sample of funds by country where the funds are legally domiciled at the end of 2010. Funds are classified as domestic or international if the geographical focus of the investment is equal or not to the fund domicile country, respectively. The sample is restricted to open-end and actively managed equity funds drawn from the Lipper database. Off-shore funds are excluded.

Country	All Funds		Domestic Funds		International Funds	
	Number of Funds	TNA ($ million)	Number of Funds	TNA ($ million)	Number of Funds	TNA ($ million)
Argentina	53	400	21	215	32	186
Australia	2,199	195,451	1,228	109,119	971	86,333
Austria	155	14,277	13	1,430	142	12,847
Belgium	423	24,565	14	1,406	409	23,159
Brazil	458	66,429	409	58,572	49	7,857
Canada	1,393	348,410	564	211,830	829	136,580
Denmark	195	30,152	21	3,115	174	27,037
Finland	169	27,156	30	5,556	139	21,601
France	975	192,593	199	41,766	776	150,827
Germany	300	119,641	46	34,568	254	85,073
Hong_Kong	76	22,151	10	5,089	66	17,062
India	212	35,735	212	35,735		
Indonesia	40	4,332	40	4,332		
Ireland	491	155,682	1	5	490	155,676
Italy	142	32,897	31	4,510	111	28,387
Japan	772	73,772	470	35,511	302	38,261
Malaysia	217	12,516	149	9,463	68	3,053
Netherlands	97	33,482	22	6,035	75	27,448
Norway	152	41,818	58	15,746	94	26,072
Poland	56	7,308	38	6,351	18	957
Portugal	63	2,337	18	506	45	1,831
Singapore	211	20,789	15	2,215	196	18,574
South_Africa	131	23,277	112	21,643	19	1,635
South_Korea	462	37,365	324	21,167	138	16,198
Spain	269	13,328	71	2,447	198	10,881
Sweden	255	112,178	105	63,329	150	48,850
Switzerland	241	46,726	72	20,340	169	26,386
Taiwan	228	17,189	155	10,615	73	6,574
Thailand	176	6,607	157	6,297	19	310
UK	934	450,873	384	208,971	550	241,902
US	2,632	3,832,315	1,962	2,621,205	670	1,211,110
Non-U.S.	11,545	2,169,436	4,989	947,881	6,556	1,221,554
All countries	14,177	6,001,751	6,951	3,569,086	7,226	2,432,664

Table 2 – Mutual fund characteristics

This table reports means of fund characteristics by country. The sample includes open-end actively managed equity funds from the Lipper database for the 1998-2010 period. Standard deviations across all funds are in parenthesis. See Appendix for variables definitions.

Country	Number of observations	Raw returns (% quarter)	Benchmark-adjusted return (% quarter)	One-factor alpha (% quarter)	Four-factor alpha (% quarter)	TNA ($ million)	TNA family ($ million)	Flows (% quarter)	Age (years)	Expense ratio (%)	Loads (%)	Tracking error (% quarter)	R-squared
Argentina	687	4.21	-0.50	-0.63	-0.17	10	58	0.41	8.02	2.91	0.43	7.74	0.68
Australia	38,574	2.56	0.16	0.58	0.77	87	5,898	0.18	7.60	1.69	2.15	5.08	0.77
Austria	4,787	2.19	-0.21	-0.45	-0.34	88	1,503	0.08	9.73	1.73	4.46	4.67	0.78
Belgium	10,293	1.93	-0.38	-0.61	-0.52	73	13,209	-2.41	7.37	1.27	3.74	4.16	0.70
Brazil	4,772	6.68	0.21	1.43	2.04	140	3,935	0.23	7.80	1.95	0.32	11.01	0.69
Canada	36,652	2.43	-0.45	0.16	0.10	216	11,551	0.60	10.56	2.27	6.02	4.04	0.80
Denmark	5,377	2.93	-0.04	0.07	0.64	120	1,794	1.42	10.56	1.51	2.77	4.55	0.80
Finland	4,222	3.08	0.18	0.30	0.82	120	2,462	2.98	7.61	1.61	2.10	4.98	0.80
France	37,028	1.43	-0.19	-0.69	-0.65	171	6,132	0.60	11.57	1.61	3.17	3.97	0.83
Germany	13,192	1.56	-0.23	-0.93	-0.55	318	12,368	-1.94	13.35	1.46	4.23	3.91	0.85
Hong Kong	1,713	2.63	0.04	0.92	1.62	177	3,009	1.55	13.70	1.57	4.51	6.42	0.67
India	4,080	6.95	0.34	2.10	2.11	110	1,504	0.92	7.50	1.30	0.91	10.28	0.61
Indonesia	536	6.78	-0.71	1.64	1.25	83	196	4.93	8.10	1.83	2.64	11.84	0.51
Ireland	15,839	1.64	-0.29	-0.42	-0.13	246	2,865	0.20	7.58	1.75	4.07	4.50	0.80
Italy	10,193	1.00	-0.56	-0.97	-0.33	275	4,649	-1.92	9.51	2.01	3.14	2.93	0.86
Japan	23,366	2.13	-0.03	-0.76	-0.91	74	8,103	-3.06	8.43	1.55	2.43	4.59	0.80
Malaysia	4,381	3.69	-0.25	0.88	-0.32	42	608	-1.04	9.95	1.61	5.73	6.04	0.55
Netherlands	3,947	2.19	-0.16	-0.73	-0.15	287	3,052	-0.29	12.13	1.19	1.44	4.56	0.79
Norway	5,003	4.20	0.19	0.82	0.86	138	2,158	0.96	9.98	1.56	2.84	4.96	0.81
Poland	970	3.86	-1.26	-0.38	-0.56	144	438	5.89	6.91	3.42	4.50	9.47	0.56
Portugal	1,751	1.79	-0.19	-0.64	-0.44	52	379	-0.04	9.38	1.90	2.27	4.26	0.80
Singapore	6,267	3.04	-0.12	0.25	0.76	52	734	-0.42	8.41	1.79	4.62	5.33	0.72
South Africa	1,858	4.79	0.30	1.02	1.25	138	1,348	1.33	9.10	1.49	2.75	8.32	0.66
South Korea	8,227	5.57	0.24	-1.24	0.24	54	2,306	-9.31	5.67	1.59	0.09	9.53	0.62
Spain	10,065	2.09	-0.24	-1.00	-0.72	65	1,512	-0.45	8.70	2.04	1.00	3.65	0.84
Sweden	8,494	3.27	0.02	0.26	1.69	311	10,542	1.43	12.03	1.43	0.72	4.74	0.83
Switzerland	6,373	2.26	-0.18	-0.09	-0.13	199	8,799	-0.63	13.63	1.39	4.75	4.24	0.81
Taiwan	6,019	3.55	0.34	-1.02	-0.51	56	739	-0.78	9.15	2.61	2.93	9.44	0.53
Thailand	3,442	6.29	0.86	1.99	1.02	18	282	-1.87	8.09	1.42	1.17	10.35	0.49
U.K.	32,765	1.97	0.00	-0.14	-0.16	400	9,143	0.44	15.43	1.46	4.23	3.84	0.83
U.S.	119,739	1.77	0.07	-0.01	-0.17	1,268	51,246	0.68	12.57	1.38	1.90	4.56	0.76
Non-U.S.	310,873	2.49	-0.11	-0.16	-0.03	178	6,546	-0.39	10.15	1.71	3.29	4.87	0.78
		(12.93)	(4.00)	(5.90)	(6.26)	(526)	(9,507)	(17.48)	(7.35)	(0.73)	(2.64)	(2.95)	(0.18)
All Countries	430,612	2.29	-0.06	-0.12	-0.07	481	18,976	-0.09	10.83	1.62	2.90	4.78	0.77
		(12.56)	(4.15)	(6.04)	(6.27)	(2,693)	(69,492)	(17.07)	(8.76)	(0.69)	(2.54)	(0.06)	(0.19)

Table 3 – Country characteristics

This table reports means of country characteristics by country. The sample period is from 1998 to 2010. See Appendix for variables definitions. Standard deviations across all countries are in parenthesis.

Country	Power distance	Uncertainty avoidance	Masculinity	Individualism	GDP per Capita ($)	Education (years)	Trading costs (bp)	Antidirector	Mutual fund industry Herfindahl	Mutual fund industry age (years)	Emerging market dummy	Approval	Bank concentration (%)
Argentina	49	86	56	46	7,831	9.35	63.72	2.0	0.16	48	0	1	40.92
Australia	36	51	61	90	42,279	12.12	32.29	4.0	0.04	43	0	2	60.88
Austria	11	70	79	55	40,008	9.59	30.68	2.5	0.13	50	0	2	63.11
Belgium	65	94	54	75	38,781	10.55	29.77	3.0	0.32	59	0	2	90.24
Brazil	69	76	49	38	9,016	7.54	50.22	5.0	0.11	52	1	2	90.96
Canada	39	48	52	80	39,904	11.37	32.43	4.0	0.05	75	0	1	56.33
Denmark	18	23	16	74	51,470	10.07	33.94	4.0	0.10	45	0	1	79.81
Finland	33	59	26	63	41,364	9.99	41.60	3.5	0.16	20	0	1	98.43
France	68	86	43	71	33,962	10.53	27.69	3.5	0.06	41	0	2	55.87
Germany	35	65	66	67	34,882	11.83	25.90	3.5	0.16	57	0	.	71.17
Hong Kong	68	29	57	25	28,186	10.37	42.63	5.0	0.26	46	0	2	79.33
India	77	40	56	48	1,032	5.12	66.85	5.0	0.10	43	1	2	33.71
Indonesia	78	48	46	14	2,130	6.11	72.09	4.0	0.26	12	1	2	61.46
Ireland	28	35	68	70	47,152	11.65	84.44	5.0	0.04	33	0	1	60.06
Italy	50	75	70	76	29,356	9.88	31.83	2.0	0.09	22	0	2	45.00
Japan	54	92	95	46	36,226	11.59	21.00	4.5	0.11	41	0	2	47.26
Malaysia	104	36	50	26	6,556	10.14	54.64	5.0	0.22	48	1	2	46.31
Netherlands	38	53	14	80	41,464	11.02	27.48	2.5	0.13	77	0	2	69.41
Norway	31	50	8	69	70,215	12.30	32.10	3.5	0.17	13	0	1	96.44
Poland	68	93	64	60	9,952	9.87	72.86	2.0	0.12	15	1	1	72.49
Portugal	63	104	31	27	19,674	8.26	32.56	2.5	0.19	20	0	1	90.84
Singapore	74	8	48	20	33,340	9.14	40.51	5.0	0.07	47	0	1	95.48
South Africa	49	49	63	65	6,110	8.59	51.30	5.0	0.10	43	1	1	79.86
South Korea	60	85	39	18	17,744	11.85	55.22	4.5	0.13	37	1	2	51.04
Spain	57	86	42	51	27,455	10.38	30.60	5.0	0.10	48	0	2	83.06
Sweden	31	29	5	71	42,484	11.57	30.51	3.5	0.17	48	0	2	96.95
Switzerland	34	58	70	68	54,517	9.89	30.11	3.0	0.22	68	0	1	87.00
Taiwan	58	69	45	17	16,486	.	49.35	3.0	0.06	23	1	1	28.25
Thailand	64	64	34	20	3,407	7.50	59.21	4.0	0.12	12	1	.	49.22
U.K.	35	35	66	89	36,370	9.75	50.55	5.0	0.03	72	0	1	65.30
U.S.	40	46	62	91	41,089	12.20	23.95	3.0	0.05	81	0	2	28.82
Non-U.S.	46.84	59.72	55.06	67.37	35,671	10.75	37.92	4.00	0.09	49.16	0.11	1.58	0.64
	(16.80)	(22.73)	(19.45)	(20.93)	(13,052)	(1.26)	(15.28)	(0.80)	(0.07)	(17.15)	(0.31)	(0.49)	(0.18)
All Countries	44.94	55.91	56.99	73.94	37,178	11.16	34.04	3.73	0.08	57.88	0.08	1.70	0.54
	(14.60)	(20.27)	(16.82)	(20.69)	(11,667)	(1.25)	(14.62)	(0.82)	(0.06)	(20.33)	(0.27)	(0.46)	(0.22)

40

Table 4 – Flow-Performance Relationship and National Culture

This table presents the results of panel regressions of examining the aggregate mutual fund flow-performance relationship with funds pooled across 31 countries. The dependent variable is fund *flows* and the independent variables are: past performance; past performance interacted with national culture variables, in Panel A; past performance interacted with national culture variables and with proxies for economic development, financial market development, and mutual fund industry development variables, in Panel B. We also include fund level control variables in our regressions (not reported in Panel B), all lagged by one quarter. In each quarter, a rank is assigned to each fund based on past four quarters raw return relative to funds in the same domicile country in Columns (1)-(4) of Panel A. In Columns (5)-(8) of Panel A, a piecewise linear regression is used to define two linear segments in the flow-performance relationship. In each quarter, by country, fractional performance ranks ranging from zero to one are assigned to funds according to their average raw returns in the past four quarters. This procedure designates two performance variables: $Low_{i,c,t-1}=min(0.5,Rank_{i,c,t-1})$, and $High_{i,c,t-1}=Rank-Low_{i,c,t-1}$ (refer to equation (3) for variable definitions). In Columns (9)-(12) of Panel A and in Panel B, a piecewise linear regression is used to define three linear segments in the flow-performance relationship. In each quarter, by country, fractional performance ranks ranging from zero to one are assigned to funds according to their average raw returns in the past four quarters. This procedure designates three performance variables: $Low_{i,c,t-1}=min(0.2,Rank_{i,c,t-1})$, $Mid_{i,c,t-1}=min(0.6,Rank-Low_{i,c,t-1})$, and $High_{i,c,t-1}=Rank-(Low_{i,c,t-1}+Mid_{i,c,t-1})$ (refer to equation (4) for variable definitions). See Appendix for variable definitions. Regressions include time, investment region, and fund type (domestic, foreign, regional, and global) fixed effects. Robust t-statistics clustered by fund are reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Panel A – National Culture Variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Rank	7.653***	7.655***	4.679***	4.689***								
	(59.945)	(58.484)	(31.026)	(17.407)								
Rank x Power distance	-3.702***											
	(-19.871)											
Rank x Uncertainty avoidance		-3.378***										
		(-19.039)										
Rank x Masculinity			2.675***									
			(17.169)									
Rank x Individualism				2.208***								
				(7.425)								
Low					5.245***	4.759***	3.824***	3.611***	8.842***	6.801***	3.924***	1.593
					(23.988)	(21.793)	(16.335)	(11.937)	(12.067)	(9.254)	(4.812)	(1.032)
Low x Power distance					-12.840***				-9.978***			
					(-20.207)				(-12.114)			
Low x Uncertainty avoidance						-8.480***				-3.674***		
						(-14.220)				(-4.722)		
Low x Masculinity							5.648***				2.780***	
							(12.184)				(4.139)	
Low x Individualism								5.532***				5.344***
								(5.867)				(3.120)
Mid									5.657***	6.089***	3.603***	3.542***
									(28.082)	(29.277)	(12.917)	(9.137)
Mid x Power distance									-1.794***			
									(-5.214)			
Mid x Uncertainty avoidance										-2.885***		
										(-8.692)		
Mid x Masculinity											2.171***	
											(6.386)	
Mid x Individualism												1.917***
												(4.486)
High					8.632***	9.261***	6.383***	6.662***	18.785***	20.265***	12.958***	16.308***
					(31.930)	(33.516)	(20.617)	(19.100)	(18.381)	(19.001)	(8.644)	(7.614)
High x Power distance					-3.713**				-3.633*			
					(-2.419)				(-1.940)			
High x Uncertainty avoidance						-6.476***				-6.712***		
						(-4.482)				(-3.771)		
High x Masculinity							14.055***				7.242***	
							(11.727)				(3.979)	
High x Individualism								10.278***				1.401
								(8.634)				(0.599)
Power distance	0.895***				1.428***				1.502***			
	(6.872)				(9.252)				(9.542)			
Uncertainty avoidance		-0.231**				-0.265**				-0.264**		
		(-2.297)				(-2.297)				(-2.260)		
Masculinity			-1.308***				-1.298***				-1.292***	
			(-21.206)				(-20.544)				(-20.240)	
Individualism				0.782***				0.633***				0.266
				(4.775)				(3.303)				(0.929)
TNA (log)	-0.299***	-0.317***	-0.298***	-0.297***	-0.294***	-0.308***	-0.295***	-0.295***	-0.300***	-0.317***	-0.297***	-0.296***
	(-13.394)	(-14.134)	(-13.288)	(-13.308)	(-13.178)	(-13.781)	(-13.180)	(-13.229)	(-13.453)	(-14.160)	(-13.256)	(-13.294)
TNA family (log)	0.050***	0.073***	0.064***	0.039**	0.044**	0.072***	0.062***	0.038**	0.041**	0.071***	0.062***	0.038**
	(2.640)	(3.830)	(3.362)	(2.074)	(2.310)	(3.801)	(3.255)	(2.012)	(2.176)	(3.753)	(3.283)	(2.018)
Age (log)	-0.830***	-0.818***	-0.826***	-0.837***	-0.832***	-0.819***	-0.825***	-0.836***	-0.830***	-0.813***	-0.822***	-0.830***
	(-16.353)	(-16.126)	(-16.259)	(-16.539)	(-16.394)	(-16.155)	(-16.252)	(-16.515)	(-16.362)	(-16.040)	(-16.191)	(-16.404)
Expense ratio	-0.045	-0.027	-0.068	-0.030	-0.045	-0.043	-0.098*	-0.056	-0.058	-0.059	-0.102*	-0.057
	(-0.800)	(-0.483)	(-1.212)	(-0.521)	(-0.796)	(-0.750)	(-1.748)	(-0.990)	(-1.031)	(-1.047)	(-1.804)	(-1.012)
Loads	0.020	0.011	0.042***	0.017	0.016	0.011	0.045***	0.020	0.016	0.013	0.045***	0.020
	(1.364)	(0.738)	(2.839)	(1.194)	(1.095)	(0.787)	(3.071)	(1.397)	(1.144)	(0.888)	(3.050)	(1.370)
Flow	0.162***	0.161***	0.162***	0.162***	0.162***	0.161***	0.161***	0.161***	0.160***	0.160***	0.161***	0.161***
	(38.555)	(38.408)	(38.568)	(38.596)	(38.468)	(38.351)	(38.378)	(38.412)	(38.316)	(38.183)	(38.359)	(38.400)
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Investment region fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund type fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.053	0.054	0.053	0.053	0.054	0.054	0.054	0.053	0.054	0.055	0.054	0.054
Number of observations	430,612	430,612	430,612	430,612	430,612	430,612	430,612	430,612	430,612	430,612	430,612	430,612

Panel B – National Culture Variables and Country's Development (Economic Development, Financial Markets Development, and Mutual Fund Industry Development)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Low	7.169***	4.453***	2.085*	2.143	8.558***	6.565***	5.091***	1.088	7.264***	6.329***	2.836***	0.563
	(7.141)	(4.514)	(1.920)	(1.399)	(11.565)	(8.812)	(6.112)	(0.655)	(8.611)	(7.470)	(2.752)	(0.318)
Low x Power distance	-9.793***				-8.792***				-11.327***			
	(-11.983)				(-10.739)				(-12.253)			
Low x Uncertainty avoidance		-3.930***				-2.977***				-4.623***		
		(-5.022)				(-3.836)				(-5.526)		
Low x Masculinity			3.461***				1.441**				3.447***	
			(5.135)				(2.111)				(4.647)	
Low x Individualism				4.955***				5.888***				6.177***
				(2.986)				(3.246)				(3.488)
Low x GDP per Capita	2.047**	3.040***	1.725**	-0.060								
	(2.541)	(3.791)	(2.102)	(-0.075)								
Low x Emerging					-1.324	-0.395	-3.557	1.766				
					(-0.497)	(-0.150)	(-1.350)	(0.679)				
Low x Mutual fund industry age									5.483***	2.238	1.878	1.489
									(3.660)	(1.518)	(1.295)	(1.023)
Mid	5.424***	5.673***	3.136***	3.276***	5.638***	6.043***	3.288***	2.704***	6.023***	6.326***	4.623***	4.704***
	(13.092)	(14.108)	(7.171)	(7.295)	(27.971)	(28.896)	(11.092)	(6.424)	(29.073)	(29.860)	(12.019)	(10.773)
Mid x Power distance	-1.656***				-2.218***				-1.052**			
	(-4.882)				(-6.441)				(-2.524)			
Mid x Uncertainty avoidance		-2.768***				-3.050***				-2.411***		
		(-8.451)				(-9.216)				(-6.181)		
Mid x Masculinity			2.006***				2.448***				1.500***	
			(5.969)				(6.901)				(3.796)	
Mid x Individualism				1.733***				2.760***				1.318***
				(4.148)				(6.061)				(2.996)
Mid x GDP per Capita	0.302	0.519	0.779*	0.569								
	(0.724)	(1.260)	(1.878)	(1.368)								
Mid x Emerging					1.551**	0.918	1.115	1.767**				
					(2.036)	(1.250)	(1.453)	(2.253)				
Mid x Mutual fund industry age									-1.632***	-1.092***	-1.538***	-1.958***
									(-3.869)	(-2.677)	(-3.802)	(-5.397)
High	26.674***	27.237***	18.241***	20.534***	18.226***	19.274***	8.615***	8.080***	19.630***	20.826***	14.585***	19.122***
	(12.452)	(12.933)	(7.888)	(8.260)	(17.772)	(17.951)	(5.436)	(3.320)	(17.661)	(18.220)	(7.535)	(8.344)
High x Power distance	-6.223***				-7.775***				-4.146**			
	(-3.379)				(-4.156)				(-2.252)			
High x Uncertainty avoidance		-7.810***				-8.799***				-5.647***		
		(-4.448)				(-4.953)				(-2.912)		
High x Masculinity			7.943***				10.603***				6.152***	
			(4.417)				(5.643)				(3.101)	
High x Individualism				4.659**				9.565***				-0.088
				(1.979)				(3.698)				(-0.038)
High x GDP per Capita	-8.287***	-7.880***	-6.823***	-7.972***								
	(-3.782)	(-3.613)	(-3.145)	(-3.548)								
High x Emerging					17.155***	15.280***	17.463***	20.841***				
					(4.275)	(3.937)	(4.420)	(4.827)				
High x Mutual fund industry age									-4.039**	-2.516	-2.407	-4.642***
									(-2.051)	(-1.289)	(-1.236)	(-2.601)
Power distance	0.890***				1.652***				1.521***			
	(5.541)				(10.262)				(9.524)			
Uncertainty avoidance		-0.334***				-0.246**				-0.202		
		(-2.785)				(-2.111)				(-1.614)		
Masculinity			-1.350***				-1.269***				-1.233***	
			(-20.649)				(-19.831)				(-18.620)	
Individualism				0.689**				-0.410				0.376
				(2.459)				(-1.370)				(1.280)
GDP per Capita	-1.161***	-0.921***	-0.867***	-1.065***								
	(-10.110)	(-8.853)	(-8.170)	(-9.945)								
Emerging					-1.631***	-1.560***	-1.452***	-1.754***				
					(-3.672)	(-3.565)	(-3.320)	(-4.166)				
Mutual fund industry age									-0.585**	-0.160	-0.137	-0.369
									(-2.468)	(-0.661)	(-0.585)	(-1.537)
Fund level control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Investment region fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund type fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.055	0.055	0.054	0.056	0.054	0.055	0.054	0.055	0.054	0.055	0.054	0.054
Number of observations	430,612	430,612	430,612	430,612	430,612	430,612	430,612	430,612	430,612	430,612	430,612	430,612

Table 5- Risk-taking and National Culture

This table presents the results of panel regressions of examining measures of idiosyncratic risk-taking fund risk-taking with funds pooled across 31 countries. In Columns (1)-(4), the dependent variable is the tracking error, measured as the standard deviation of the residuals from the four factor model, while in Columns (5)-(8), the dependent variable is the R-squared from the four factor model at the quarterly frequency. The independent variables are proxies for national culture. We also include fund level control variables in our regressions (all lagged by one quarter). See Appendix for variable definitions. Regressions include time, investment region, and fund type (domestic, foreign, regional, and global) fixed effects. Robust t-statistics clustered by fund are reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

	Tracking Error				R-squared			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Power distance	-0.004***				0.010***			
	(-5.128)				(3.524)			
Uncertainty avoidance		-0.002**				0.014***		
		(-2.329)				(5.250)		
Masculinity			0.007***				-0.027***	
			(7.523)				(-9.233)	
Individualism				0.005***				-0.019***
				(4.892)				(-5.341)
TNA (log)	-0.002***	-0.002***	-0.002***	-0.002***	0.011***	0.011***	0.011***	0.011***
	(-11.633)	(-11.351)	(-10.885)	(-10.725)	(19.013)	(19.105)	(18.248)	(18.973)
TNA family (log)	-0.001***	-0.001***	-0.000**	-0.001***	0.003***	0.003***	0.002***	0.003***
	(-3.675)	(-3.401)	(-2.260)	(-2.817)	(4.832)	(4.726)	(3.345)	(5.175)
Age (log)	-0.002***	-0.002***	-0.002***	-0.002***	0.006***	0.006***	0.007***	0.006***
	(-4.126)	(-4.073)	(-4.371)	(-3.987)	(3.437)	(3.414)	(3.844)	(3.499)
Expense ratio	0.008***	0.008***	0.007***	0.008***	-0.014***	-0.014***	-0.014***	-0.015***
	(16.343)	(16.253)	(15.784)	(15.871)	(-8.862)	(-8.948)	(-8.433)	(-9.020)
Loads	-0.001***	-0.001***	-0.001***	-0.001***	-0.005***	-0.005***	-0.006***	-0.005***
	(-8.591)	(-8.344)	(-6.958)	(-7.625)	(-11.050)	(-10.905)	(-12.831)	(-10.840)
Flow	0.000***	0.000***	0.000***	0.000***	-0.000**	-0.000**	-0.000**	-0.000**
	(4.047)	(4.298)	(4.366)	(5.207)	(-2.286)	(-2.026)	(-2.417)	(-2.121)
Return	0.001***	0.001***	0.001***	0.001***	-0.002***	-0.002***	-0.002***	-0.002***
	(30.824)	(31.211)	(31.465)	(31.630)	(-27.794)	(-27.901)	(-27.834)	(-27.567)
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Investment region fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund type fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.455	0.454	0.456	0.455	0.332	0.332	0.334	0.332
Number of observations	430,612	430,612	430,612	430,612	430,612	430,612	430,612	430,612

Table 7 - Performance and National Culture

This table presents the results of panel regressions of examining mutual fund performance with funds pooled across 31 countries. The dependent variables are net performance (in Panels A and B), and gross performance (in Panels C and D) calculated as: the alpha from the four-factor model (in Panels A and C); and raw returns, benchmark-adjusted returns, or one-factor alpha (in Panels B and D). The independent variables are proxies for national culture, and proxies for country's economic and financial development, financial markets development, mutual fund industry development, and investor protection and quality of legal institutions. We also include fund level control variables in our regressions (coefficients not shown in Panels B and D), all lagged by one quarter. The factor models are calculated using the past 36 months returns. See Appendix for variable definitions. Regressions include time, investment region, and fund type (domestic, foreign, regional, and global) fixed effects. Robust t-statistics clustered by fund are reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Panel A – Net Performance: Four-factor Alpha

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Power distance	-0.8299***				-1.1555***			
	(-26.25)				(-28.28)			
Uncertainty avoidance		-0.8244***				-1.0935***		
		(-27.43)				(-26.60)		
Masculinity			0.3776***				0.3223***	
			(11.66)				(7.81)	
Individualism				0.7012***				1.0292***
				(16.29)				(19.97)
GDP per Capita					-0.4075***	-0.1609***	-0.0174	-0.2554***
					(-12.32)	(-5.19)	(-0.52)	(-7.70)
Trading costs					-0.0414	0.0954*	0.4782***	0.2749***
					(-0.72)	(1.69)	(7.41)	(4.90)
Antidirector					0.1591***	0.0062	0.0812***	0.2255***
					(7.50)	(0.30)	(3.35)	(9.65)
Mutual fund industry age					3.0122***	3.8488***	2.0335***	3.0696***
					(13.05)	(16.00)	(8.97)	(12.70)
Mutual fund industry Herfindahl					-0.2761***	-0.2350***	0.0339	0.0164
					(-6.66)	(-5.87)	(0.71)	(0.41)
Return	0.0327***	0.0323***	0.0348***	0.0341***	0.0306***	0.0305***	0.0337***	0.0320***
	(13.42)	(13.29)	(14.22)	(14.01)	(12.50)	(12.53)	(13.75)	(13.09)
TNA (log)	0.0101	0.0099	0.0186***	0.0166**	0.0263***	0.0192***	0.0254***	0.0305***
	(1.54)	(1.51)	(2.77)	(2.50)	(3.94)	(2.90)	(3.72)	(4.53)
TNA family (log)	0.0234***	0.0318***	0.0271***	0.0221***	0.0390***	0.0451***	0.0406***	0.0325***
	(3.70)	(5.07)	(4.20)	(3.43)	(6.13)	(7.16)	(6.26)	(5.01)
Age (log)	-0.1499***	-0.1452***	-0.1352***	-0.1508***	-0.1383***	-0.1256***	-0.1230***	-0.1444***
	(-8.11)	(-7.86)	(-7.25)	(-8.05)	(-7.53)	(-6.87)	(-6.64)	(-7.77)
Expense ratio	0.0544***	0.0575***	0.0442**	0.0553***	0.1061***	0.1060***	0.0727***	0.1198***
	(2.96)	(3.14)	(2.39)	(2.99)	(5.68)	(5.68)	(3.87)	(6.33)
Loads	-0.0090*	-0.0103**	-0.0086*	-0.0065	-0.0168***	-0.0155***	-0.0219***	-0.0277***
	(-1.84)	(-2.08)	(-1.74)	(-1.31)	(-3.41)	(-3.10)	(-4.39)	(-5.49)
Flow	0.0007	0.0005	0.0013**	0.0009	0.0007	0.0007	0.0014**	0.0009
	(1.19)	(0.92)	(2.17)	(1.55)	(1.16)	(1.13)	(2.38)	(1.51)
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Investment region fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund type fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.120	0.120	0.118	0.118	0.122	0.122	0.119	0.120
Number of observations	430,612	430,612	430,612	430,612	430,612	430,612	430,612	430,612

Panel B – Net Performance: Raw Returns; Benchmark-adjusted returns; and One-factor Alpha

	Raw returns				Benchmark-adjusted returns				One-factor Alpha			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Power distance	-0.7495***				-0.1493***				-0.6156***			
	(-27.40)				(-8.62)				(-21.36)			
Uncertainty avoidance		-0.7765***				-0.1562***				-0.8056***		
		(-28.53)				(-9.31)				(-29.09)		
Masculinity			0.4052***				0.0350**				0.4322***	
			(14.04)				(1.97)				(14.39)	
Individualism				0.5367***				0.0611***				0.4970***
				(14.63)				(2.83)				(12.49)
Fund level control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Investment region fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund type fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.747	0.747	0.746	0.747	0.027	0.027	0.027	0.027	0.116	0.114	0.114	0.114
Number of observations	430,612	430,612	430,612	430,612	416,365	416,365	416,365	416,365	430,612	430,612	430,612	430,612

Panel C – Gross Performance: Four-factor Alpha

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Power distance	-0.8457***				-1.1649***			
	(-26.37)				(-28.40)			
Uncertainty avoidance		-0.8340***				-1.1000***		
		(-27.48)				(-26.65)		
Masculinity			0.3948***				0.3326***	
			(12.00)				(8.01)	
Individualism				0.7200***				1.0423***
				(16.56)				(20.14)
GDP per Capita					-0.4038***	-0.1549***	-0.0106	-0.2516***
					(-12.15)	(-4.96)	(-0.32)	(-7.54)
Trading costs					-0.0365	0.1028*	0.4809***	0.2802***
					(-0.63)	(1.83)	(7.45)	(5.00)
Antidirector					0.1538***	-0.0003	0.0774***	0.2219***
					(7.24)	(-0.02)	(3.19)	(9.49)
Mutual fund industry age					3.0651***	3.9041***	2.0828***	3.1285***
					(13.22)	(16.14)	(9.15)	(12.89)
Mutual fund industry Herfindahl					-0.2513***	-0.2088***	0.0566	0.0426
					(-5.93)	(-5.10)	(1.16)	(1.03)
Return	0.0309***	0.0305***	0.0331***	0.0324***	0.0288***	0.0287***	0.0320***	0.0303***
	(11.73)	(11.62)	(12.50)	(12.30)	(10.92)	(10.94)	(12.09)	(11.46)
TNA (log)	0.0050	0.0049	0.0134*	0.0115*	0.0209***	0.0137**	0.0199***	0.0252***
	(0.74)	(0.72)	(1.94)	(1.69)	(3.03)	(2.01)	(2.84)	(3.63)
TNA family (log)	0.0144**	0.0230***	0.0180**	0.0130*	0.0294***	0.0355***	0.0309***	0.0228***
	(2.05)	(3.30)	(2.50)	(1.81)	(4.09)	(4.98)	(4.20)	(3.11)
Age (log)	-0.1318***	-0.1270***	-0.1167***	-0.1328***	-0.1209***	-0.1081***	-0.1052***	-0.1271***
	(-7.17)	(-6.91)	(-6.27)	(-7.12)	(-6.61)	(-5.94)	(-5.70)	(-6.88)
Expense ratio	0.3318***	0.3348***	0.3210***	0.3324***	0.3852***	0.3851***	0.3508***	0.3988***
	(16.14)	(16.30)	(15.47)	(16.04)	(18.26)	(18.25)	(16.54)	(18.67)
Loads	-0.0126**	-0.0138***	-0.0124**	-0.0101**	-0.0206***	-0.0193***	-0.0259***	-0.0316***
	(-2.48)	(-2.70)	(-2.42)	(-1.97)	(-4.01)	(-3.71)	(-4.96)	(-6.02)
Flow	0.0011*	0.0010	0.0017***	0.0014**	0.0011*	0.0011*	0.0019***	0.0013**
	(1.77)	(1.53)	(2.68)	(2.10)	(1.75)	(1.73)	(2.88)	(2.07)
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Investment region fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund type fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.120	0.120	0.118	0.119	0.122	0.122	0.119	0.120
Number of observations	430,612	430,612	430,612	430,612	430,612	430,612	430,612	430,612

Panel D – Gross Performance: Raw Returns; Benchmark-adjusted returns; and One-factor Alpha

	Raw returns				Benchmark-adjusted returns				One-factor Alpha			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Power distance	-0.7654***				-0.1580***				-0.6312***			
	(-27.65)				(-9.17)				(-21.59)			
Uncertainty avoidance		-0.7862***				-0.1604***				-0.8152***		
		(-28.67)				(-9.58)				(-29.16)		
Masculinity			0.4228***				0.0309*				0.4496***	
			(14.47)				(1.73)				(14.74)	
Individualism				0.5552***				0.0510**				0.5154***
				(15.05)				(2.37)				(12.85)
Fund level control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Investment region fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund type fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.746	0.746	0.745	0.746	0.027	0.027	0.026	0.026	0.115	0.113	0.113	0.113
Number of observations	430,612	430,612	430,612	430,612	416,365	416,365	416,365	416,365	430,612	430,612	430,612	430,612

Table 8 - Expenses and National Culture

This table presents the results of panel regressions of measures of mutual fund expenses with funds pooled across 31 countries. The dependent variable is the fund's total expense ratio, in Columns (1)-(4), the fund's management fee, in Columns (5)-(8), and the fund's total shareholder charges, in Columns (9)-(12), calculated as the sum of the expense ratio and annualized loads (front-end and back-end loads). Independent variables are proxies for national culture and fund level control variables all lagged by one quarter). In Panel B we also control for other country level variables, including proxies for Economic Development, Financial Markets Development, and Investor Protection. See Appendix for variable definitions. Regressions include time, investment region, and fund type (domestic, foreign, regional, and global) fixed effects. Robust t-statistics clustered by fund are reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Panel A – National Culture Variables

	Expense ratio				Management Fee				Total shareholder charges			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Power distance	0.037***				0.179***				0.089***			
	(3.311)				(15.444)				(6.017)			
Uncertainty avoidance		0.024**				0.230***				0.137***		
		(2.153)				(21.870)				(9.609)		
Masculinity			-0.022*				-0.158***				-0.122***	
			(-1.827)				(-11.950)				(-7.699)	
Individualism				-0.106***				-0.129***				-0.156***
				(-7.687)				(-9.677)				(-9.609)
TNA (log)	-0.063***	-0.063***	-0.067***	-0.061***	-0.057***	-0.056***	-0.060***	-0.059***	-0.073***	-0.072***	-0.083***	-0.079***
	(-23.202)	(-23.502)	(-24.963)	(-22.493)	(-20.703)	(-20.371)	(-21.714)	(-21.289)	(-18.265)	(-18.004)	(-22.120)	(-20.726)
TNA family (log)	-0.019***	-0.020***	-0.017***	-0.017***	-0.017***	-0.018***	-0.014***	-0.017***	-0.002	-0.003	-0.012***	-0.013***
	(-7.233)	(-7.566)	(-6.070)	(-6.574)	(-6.092)	(-6.779)	(-5.100)	(-6.147)	(-0.614)	(-0.791)	(-2.900)	(-3.349)
Age (log)	0.008	0.007	0.002	0.011	0.022***	0.021***	0.018**	0.022***	0.084***	0.084***	0.082***	0.089***
	(1.158)	(1.055)	(0.294)	(1.585)	(3.151)	(3.034)	(2.468)	(3.114)	(8.084)	(8.065)	(7.572)	(8.282)
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Investment region fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund type fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.073	0.073	0.064	0.076	0.231	0.238	0.228	0.224	0.173	0.175	0.140	0.141
Number of observations	430,567	430,567	430,567	430,567	430,567	430,567	430,567	430,567	430,567	430,567	430,567	430,567

Panel B – National Culture Variables and Country's Characteristics (Economic Development, Financial Markets Development, and Investor Protection)

	Expense ratio				Management Fee				Total shareholder charges			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Power distance	0.202***				0.299***				0.457***			
	(15.020)				(21.213)				(25.822)			
Uncertainty avoidance		0.203***				0.364***				0.427***		
		(16.295)				(30.297)				(26.524)		
Masculinity			-0.082***				-0.141***				-0.034*	
			(-5.928)				(-10.017)				(-1.863)	
Individualism				-0.139***				-0.103***				-0.066***
				(-9.707)				(-7.161)				(-3.678)
Approval	-0.420***	-0.416***	-0.344***	-0.356***	-0.321***	-0.340***	-0.240***	-0.215***	-0.839***	-0.820***	-0.669***	-0.668***
	(-28.229)	(-27.911)	(-25.800)	(-25.920)	(-23.685)	(-25.289)	(-19.160)	(-16.945)	(-42.383)	(-41.973)	(-36.375)	(-36.368)
GDP per Capita	-0.060***	-0.005	-0.010	-0.033***	-0.073***	-0.152***	-0.164***	-0.142***	-0.050***	-0.176***	-0.195***	-0.179***
	(-4.917)	(-0.465)	(-0.862)	(-2.636)	(-6.191)	(-14.383)	(-13.436)	(-11.110)	(-3.290)	(-11.805)	(-11.542)	(-10.288)
Bank Concentration	0.403***	0.423***	0.409***	0.374***	0.467***	0.415***	0.428***	0.528***	0.249***	0.217***	0.342***	0.359***
	(13.084)	(13.656)	(13.359)	(12.315)	(16.074)	(14.284)	(14.713)	(18.239)	(6.932)	(6.075)	(9.088)	(9.813)
TNA (log)	-0.073***	-0.073***	-0.076***	-0.074***	-0.058***	-0.057***	-0.062***	-0.060***	-0.077***	-0.077***	-0.082***	-0.081***
	(-26.419)	(-26.465)	(-27.362)	(-26.678)	(-21.106)	(-21.008)	(-22.433)	(-21.899)	(-20.643)	(-20.734)	(-21.970)	(-21.723)
TNA family (log)	-0.007***	-0.008***	-0.009***	-0.008***	-0.006**	-0.006**	-0.006**	-0.008***	-0.020***	-0.019***	-0.016***	-0.016***
	(-2.886)	(-3.007)	(-3.389)	(-3.071)	(-2.314)	(-2.249)	(-2.028)	(-3.080)	(-5.690)	(-5.472)	(-4.255)	(-4.305)
Age (log)	0.009	0.011	0.011	0.012*	0.015**	0.017**	0.013*	0.018***	0.055***	0.059***	0.058***	0.060***
	(1.353)	(1.614)	(1.517)	(1.757)	(2.139)	(2.547)	(1.849)	(2.602)	(5.580)	(6.002)	(5.779)	(5.953)
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Investment region fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund type fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.139	0.141	0.129	0.133	0.290	0.306	0.275	0.273	0.291	0.293	0.267	0.268
Number of observations	413,933	413,933	413,933	413,933	413,933	413,933	413,933	413,933	413,933	413,933	413,933	413,933

Table 9 - Performance and National Culture – The Effect of the Financial Crisis

This table presents the results of panel regressions of examining mutual fund performance with funds pooled across 31 countries. The dependent variable is the alpha from the four-factor model. Independent variables include proxies for national culture and proxies for national culture interacted with the Crisis dummy. We also include, and fund level variables (all lagged by one quarter). The factor models are calculated using the past 36 months returns. The Crisis dummy takes the value of one in the period in the period from the fourth quarter of 2007 through the end of 2008 and zero otherwise. See Appendix for variable definitions. Regressions include time, investment region, and fund type (domestic, foreign, regional, and global) fixed effects. Robust t-statistics clustered by fund are reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

	(1)	(2)	(3)	(4)
Crisis dummy	-6.9837***	-7.0376***	-6.0218***	-6.3783***
	(-49.94)	(-50.25)	(-41.47)	(-42.01)
Power distance x Crisis dummy	1.2686***			
	(20.90)			
Uncertainty avoidance x Crisis dummy		1.3646***		
		(23.26)		
Masculinity x Crisis dummy			-0.8473***	
			(-13.92)	
Individualism x Crisis dummy				-0.3466***
				(-4.64)
Power distance	-1.0552***			
	(-30.23)			
Uncertainty avoidance		-1.0522***		
		(-31.71)		
Masculinity			0.5070***	
			(14.62)	
Individualism				0.7786***
				(16.39)
Return	0.0351***	0.0349***	0.0372***	0.0368***
	(14.81)	(14.73)	(15.58)	(15.52)
TNA (log)	0.0076	0.0076	0.0149**	0.0157**
	(1.16)	(1.16)	(2.23)	(2.36)
TNA family (log)	0.0242***	0.0331***	0.0292***	0.0220***
	(3.80)	(5.24)	(4.51)	(3.39)
Age (log)	-0.1541***	-0.1517***	-0.1369***	-0.1510***
	(-8.25)	(-8.12)	(-7.30)	(-8.00)
Expense ratio	0.0634***	0.0634***	0.0503***	0.0606***
	(3.47)	(3.47)	(2.74)	(3.30)
Loads	-0.0061	-0.0063	-0.0057	-0.0042
	(-1.23)	(-1.26)	(-1.15)	(-0.85)
Flow	0.0008	0.0008	0.0015**	0.0010*
	(1.40)	(1.35)	(2.51)	(1.73)
Time fixed effects	Yes	Yes	Yes	Yes
Investment region fixed effects	Yes	Yes	Yes	Yes
Fund type fixed effects	Yes	Yes	Yes	Yes
Adjusted R-squared	0.124	0.124	0.121	0.121
Number of observations	430,612	430,612	430,612	430,612

Appendix: Variables definitions

Variable	Definition
Panel A: fund characteristics	
Raw return	Fund net return in U.S. dollars (percentage per quarter).
Benchmark-adjusted return	Difference between the fund net return and its benchmark return in U.S. dollars (percentage per quarter).
One-factor alpha	One-factor alpha (percentage per quarter) estimated with three years of past monthly fund excess returns in U.S. dollars and regional factors (Asia, Europe and North America) or world factors in the case of global funds.
Four-factor alpha	Four-factor alpha (percentage per quarter) estimated with three years of past monthly fund excess returns in U.S. dollars and regional factors (Asia, Europe and North America) or world factors in the case of global funds.
TNA	Total net assets in millions of U.S. dollars (Lipper).
TNA family	Family total net assets in millions of U.S. dollars of other equity funds in the same management company excluding the own fund TNA (Lipper).
Age	Number of years since the fund launch date (Lipper).
Expense ratio	Total annual expenses as a fraction of TNA (Lipper).
Loads	Sum of front-end and back-end loads (Lipper).
Flow	Percentage growth in TNA (in local currency) in a quarter, net of internal growth (assuming reinvestment of dividends and distributions)
Tracking error	Standard deviation (percentage per quarter) of the residuals from the four-factor model estimated with three years of past monthly fund excess returns in U.S. dollars and regional factors (Asia, Europe and North America) or world factors in the case of global funds.
R-squared	R-squared from the four-factor model estimated with three years of past monthly fund excess returns in U.S. dollars and regional factors (Asia, Europe and North America) or world factors in the case of global funds.
Panel B: country characteristics	
Power distance	Hofstede's *power distance index* (http://geert-hofstede.com/dimensions.html)
Uncertainty avoidance	Hofstede's *uncertainty avoidance index* (http://geert-hofstede.com/dimensions.html)
Masculinity	Hofstede's *masculinity index* (http://geert-hofstede.com/dimensions.html)
Individualism	Hofstede's *individualism index* (http://geert-hofstede.com/dimensions.html)
Antidirector rights	Index of minority shareholder protection (Djankov et al., 2008)
GDP per Capita	Gross domestic product per capita in U.S. dollars (WDI)
Education	Average years of total schooling (WDI)
Trading costs	The annual average stock market transaction costs in basis points (Global Universe Data-ElkinsMcSherry).
Antidirector	Index of minority shareholder protection (Djankov et al., 2008).
Mutual fund industry Herfindahl	Sum of the squared marked shares of parent management companies for equity funds in each country (Lipper).
Mutual fund industry age	The age of the mutual fund industry calculated as the number of years since the start year (Khorana, Servaes, and Tufano, 2005).
Emerging market dummy	Dummy variable that equals one if the country is an emerging market as defined by MSCI Barra
Approval	Sum of two variables that take the value of 1 if: The fund startup requires regulatory approval; and the fund's prospectus requires regulatory approval (Khorana, Servaes, and Tufano, 2009).
Bank concentration	The market share of the five largest banks (Beck, Demirgüç-Kunt, and Levine, 2000).