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THE FLOW-PERFORMANCE RELATIONSHIP OF ETHICAL MUTUAL FUNDS: INTERNATIONAL EVIDENCE

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Dissertation submitted as partial requirement for the conferral of

Master in Finance

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October 2017

Abstract

In this dissertation we use a worldwide sample, including twelve countries, to study whether ethical funds with diverse characteristics have an influence on the flow-performance relationship. In our analysis, we start by looking at whether ethical and non-ethical funds have different sensitivities to four-factor alpha. Main findings suggest that the relationship of fund flows, and performance is convex, confirming former research using an international sample. The results indicate that ethical fund investors are less sophisticated investors.

Main findings suggest that flows into ethical funds are significantly lower than flows into non-ethical funds. Fund performance is not the leading criteria for investments in ethical funds. Moreover, results show that ethical funds have lower raw returns and four-factor alpha than non-ethical funds. Since investors in ethical funds derive different non-monetary benefits from their investments, they are willing to give off additional return to satisfy their needs. Because ethical fund investors are motivated by other incentives and care less about performance they react less to four-factor alpha. We also see that ethical fund investors react less to bottom and more to top performers, behaving more like unsophisticated investors (Ferreira, et al. 2012). Finally, when we split our sample into different categories of ethical funds, we find different reactions to past performance, and that the flow-performance relationship is even negative for social, opportunity and ecological funds.

Keywords: Mutual funds, Flow-performance relationship, Convexity, Ethical funds, Investor sophistication, Social Responsibility
JEL code: G12, G20, G23, M14

Sumário

Nesta dissertação usamos uma amostra mundial, incluindo doze países, para estudar se os fundos éticos com características diversas influenciam a relação fluxo monetário-performance. Começamos por analisar se os fundos éticos e não éticos têm diferentes sensibilidades para ao alfa de quatro fatores. Os principais resultados sugerem que a relação fluxo-performance é convexa, confirmando a literatura anterior que utiliza uma amostra internacional. Os resultados indicam que os investidores em fundos éticos são investidores menos sofisticados. Os fluxos monetários investidos em fundos éticos são significativamente menores do que os fluxos investidos em fundos não éticos. O desempenho do fundo não é o principal critério para os investimentos em fundos éticos. Além disso, os fundos éticos têm retornos brutos e alfas mais baixos do que fundos não éticos. Uma vez que os investidores em fundos éticos obtêm diferentes benefícios não monetários de seus investimentos, eles estão dispostos a abdicar de retorno adicional para satisfazer suas necessidades. Como os investidores de fundos éticos são motivados por outros incentivos e se preocupam menos com o desempenho, eles reagem menos ao alfa de quatro fatores. Os investidores em fundos éticos reagem menos aos fundos com pior desempenho e mais aos fundos com melhor desempenho, comportando-se como investidores não sofisticados (Ferreira, et al., 2012). Finalmente, quando dividimos nossa amostra em diferentes categorias de fundos éticos, encontramos reações diferentes ao desempenho passado, e a relação fluxo-desempenho é mesmo negativa para fundos sociais, de oportunidade e ecológicos.

Palavras-chave: Fundos de investimento, Relação Fluxo-performance, Convexidade, Fundos éticos, Sofisticação do investidor

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1 Introduction

Our environment is changing day by day. Digitalization, globalization and increasing regulation of the financial markets have the objective of increasing the transparency of the investments and the protection of investors. The mutual fund industry has developed over the last decades in an inconceivable speed. Well-informed investors are aware of their investments and how mutual funds allocate their money in the financial markets and in which asset classes they invest. The increasing need for specialized mutual funds and products lead the investment industry to an innovative change. We can find a wide variety of mutual funds offering products with diverse investment goals. Investors are allocating their wealth according to personal investment criteria and horizon.

This dissertation is facing the increasing differences between ethical and conventional funds. Ethical mutual funds allocate their money according to some ethically conform criteria. This can be done by avoiding investments in companies that do not follow ethical principles such as harming the environment or well known for not respecting their employees. On the other hand, investments can also bear a positive character by investing in companies with a special focus on ecological and social sustainability.

In this paper, we follow previous research by Del Guercio (2014) and Ferreira et. al (2012) analyzing the flow-performance relationship, using a linear and a three-piecewise approach. Our aim is to analyze the flow-performance relationship of ethical funds around the world. We first test if there are general differences in the flow-performance relationship of ethical to non-ethical funds. Second, we study the type of ethical fund and its influence on the flow-performance relationship. This dissertation provides more detailed information about ethical funds and therefore extends the rare ethical mutual fund literature. The contribute of this paper is that we use an international database to study the flow-performance relationship of ethical funds, as there are not many paper considering many countries in the literature. Main findings on ethical mutual funds suggest that, ethical fund investors are less sophisticated compared to non-ethical investors, since they derive additional non-financial attributes from their investments. Moreover, results indicate lower flows and raw returns for ethical funds compared to non-ethical funds. Furthermore, findings suggest that the TNA in ethical funds are lower and total expense ratios are higher. Ethical fund investors mainly invest in older funds.

The rest of the paper is structured as follows. The next section presents the literature review. Section 3 describes the dataset. Section 4 addresses methodology. Section 5 present empirical results. Section 7 concludes.

2 Industry Overview and Literature Review

2.1 Industry Overview

In order to understand the market size of the ethical fund industry, we start by showing representative numbers presented in several studies across the world. In 2016, the assets under management (AuM) in socially responsible assets in the US market account for $8.73 trillion. According to US SIF (Forum for Sustainable and Responsible Investment), this represents roughly 21 % of the total assets under professional management ($40.3 trillion). Moreover, it shows a remarkable increase of 33% since 2014.[1] As reported by the Global Sustainable Investment Review in 2014, more than 60% ($13.6 trillion) of the total SRI (Socially Responsible Investment) market accounted for the European market. The third largest market for SR investments in 2014 was Canada with $958 billion and represented 5% of the global SRI market. At the end of 2014 the global SRI-market represented total assets under management of $21.358 trillion. This expressed around 30% of the total professional managed assets.[2] As stated by the Principles of Responsible Investment initiative, there is an increasing demand for responsible investments. The signatories in this initiative are responsible for implementing several sustainable principles in their investment process. The number of signatories increased from 73 to 1500 within ten years and reached a total AuM of $62 trillion in 2016. This represents about half of the total professionally managed assets.[3]

2.2 Literature Review

In previous empirical research authors try to explain ethical fund performance in different aspects. They work with different samples, including European, US, and international data. Therefore, the results can differ, depending on the sample and also on quality of the funds in the data set.

Regarding the performance and performance persistence analysis, facing the two major markets – Europe and Northern America – a data set of 500 European and 248 SRI funds from North America returns are analyzed over a 10-year sample period by Lean, Ang, and Smyth (2015). The main findings suggest that SRI funds in these two major markets outperform the benchmark and that the North American funds are doing it relatively better. It basically shows that investors can outperform without giving up ethical factors in their investment choice. Moreover, this research implies pursuant to the Carhart-four factor regression analysis, a sig-

[1] http://www.ussif.org/files/Infographics/Overview%20Infographic.pdf
[2] http://www.gsi-alliance.org/wp-content/uploads/2015/02/GSIA_Review_download.pdf
[3] https://www.unpri.org/about

nificant alpha value for North American ethical funds and therefore suggests a greater performance for these funds. They also find that performance persistence seems to exist more for European ethical funds with the aspect of major downside risk.

Leite and Cortez (2014) analyze the SRI-funds in European markets in terms of performance and style. For this reason, they create a group of conventional funds, which fit in their characteristics to the ethical funds. The final sample includes 54 SRI funds and 154 conventional funds located in 8 countries in Europe over a sample period of 8 years (2000-2008). Due to survivorship-bias, i.e., the sample does not include dead funds, the sample shows inconsistencies. Their main findings show no significant differences in performance of SRI funds with their characteristic matched peers and similar factor risks in their investment style. A similar approach is used by Climent and Soriano (2011) to compare the SRI funds with their conventional peers in terms of performance. They considered 49 funds in total (7 green funds, 21 SRI funds and 28 conventional) in the sample period of 1987-2009. The sample does not lack of survivorship bias and they use monthly returns. Depending on the analysis horizon, they came to different conclusions. In the total sample period, they find that green funds show worse performance compared to conventional funds, while in more recent time period (2001-2009), performance of green funds didn't differ significantly from their conventional peers. Bauer, Derwall and Otten (2007) also applied a similar approach to analyze the performance of Canadian ethical funds in comparison to their conventional peers. The sample includes 8 ethical funds and 267 conventional funds in the sample period from 1994 to 2003. The sample lacks survivorship bias. The results show no significance in the performance evolution of ethical funds in comparison to the conventional funds.

There is also some literature on SRI performance using broad international data set in recent studies. Moreover, one should mention that the number of studies for Emerging Markets is also not representative.

Makni, Benouda and Delhoumi (2016) take a broad sample of 1130 Islamic funds for the analysis, which are located in 29 countries around the world. In this research, the analysis is focused on several aspects. They analyze if performance persistence exists and how fund-attributes can affect the performance of Islamic funds. The results show that characteristics such as fund age, the size of the fund and costs (management fees) have a positive influence on the performance of these funds. On the other hand, attributes like minimum investment size, flows, load fees influence the performance in a negative way. Fund size does not influence the performance of the Islamic funds. The research also reveals that there is a negative persistence in the performance. Bauer, Koedijk and Otten (2005) also use a broad internation-

al data set for analyzing ethical funds in terms of investment style and check if the market phase or style application can explain the returns of these funds. The main findings suggest no significant evidence for the existence of return differentiation between ethical funds and their conventional peers. They also show that ethical funds are less sensitive to return volatility than non-ethical funds. Moreover, they show that the return variability of ethical funds can not be explained by the ethical indexes.

But what determines mutual fund performance? In consonance with Ferreira, Keswani, Miguel and Ramos (2011) mutual funds are not able to overperform the market overall. Moreover, they show that characteristics of fund performance globally have different implications. Funds inside and outside the US are affected differently by scale. While US funds show decreasing return to scale, funds outside US are not affected negatively when they increase their size. This phenomenon is linked to the liquidity restrictions in the USA, since they mainly invest in domestic equities. Liquid equity markets and strong legal environment shows a superior performance development. In this analysis, they study a sample of 16.316 funds (8.176 domestic and 8.140 international mutual funds) in 27 countries and over the sample period 1997-2007. This study was developed further, also analyzing the flow-performance relationship in Ferreira, Keswani, Miguel and Ramos (2012). The main objective of this research is showing how fund flows are depending on former evolution of performance. They find that there are differences in the flow-performance relationship across different countries. The main findings reveal that investors in mutual funds in more developed nations acquire winners less and sell bad performing funds more. Moreover, due to the development of the fund industry in the well-developed nations, investors tend to be more prudent and pay less to actively enter the fund market. A similar approach was used by Renneboog, Horst and Zhang (2011) to determine attributes, affecting the money inflow and outflow in SRI funds. The final survivorship bias free sample included 321 SRI equity funds in the sample period from 1992 to 2003. The sample data contains data of funds in 17 countries. To understand the behavior of ethical fund investors relative to conventional fund investors, they established a control group of conventional peers. Results in this research show that SRI money flows are independent from former evolution of fund returns. Moreover, they find that ethical money flows show less sensitivity than their conventional peers in case of negative evolution of returns. In contrary to this, adding ethical features to SRI funds, there is opposing trend between money inflow and past positive rate of returns. In fact, they do not find any significant validation of the smart money effect. SRI funds that get more money inflow do not out- or underperform the market or their conventional peers.

Overall ethical funds mostly do not have a specific negative aspect in terms of return and risk compared to characteristic matched conventional peers. Therefore, a significant question comes up in that case: Under which circumstances do investors place money in ethical funds? Barreda-Tarrazona, Matallín-Sáez, and Balaguer-Franch (2011) conduct a research on this question and try to get answers for investor behavior. Data was collected through an experimental study from 166 students of the program Business Administration. Each student needed to distribute 16€ between two funds. In this experiment, they show that participants who are more informed about the ethical fund, allocate more money into it regardless the return and diversification effects. Investors who care more about social responsible issues, invest a significant amount of money in the SRI funds. Another research dealing with fund attributes and investor behavior was conducted by Bollen (2007). In this study, he analyzes the flow-performance relationship of SRI funds in comparison to their conventional peers. He tests, whether the flow-performance relationship of SR funds are equal, stronger or weaker compared to conventional funds. He also contemplates differences in the flow volatility between ethical and conventional funds. The final survivorship-bias free data set included 205 matched conventional and ethical funds and the total number of funds were 2.596. The sample period was from 1961 to 2002. Findings suggest that money flows in SRI funds are less sensitive to performance when compared to their conventional peers. There is also strong evidence that money flows in SRI funds show a significant sensitivity to delayed positive returns than flows into their conventional peers. In contrary they show a low sensitivity to delayed negative rate of returns. The findings suggest that investors in ethical funds derive some benefits from the SR characteristics.

3 Data and Variables Formation

3.1 Data Set Description

The dataset we will use for further analysis is from Lipper Hindsight, following, e.g., Ferreira et. al. (2012). The data set is survivorship bias-free. We start by preparing our data and narrow the sample for our analysis. First, we are restricting our sample to actively managed and open-end equity funds, ruling out closed-end funds, exchange traded funds, insurance funds, investment trust and pension funds. After that we are narrowing our sample to primary funds. Some mutual funds offer different share classes to investors. It is like different mutual funds within the same mutual fund. All share classes invest in the same portfolio but, depending on investors (for example institutional versus general public or long term vs short term investors) these share classes may charge different fees, for example, charge front loads or not charge end loads or not. In order to classify funds in our sample as SRI funds: (1) we first look at funds that are classified by Lipper Hindsight database as ethical funds; (2) we also manually look at the name of the funds in order to find some word that allows us to classify funds as ethical funds (see Appendix II, Panel A).

In the sample we are considering quarterly data for our fund level variables, including fund size (TNA) and returns. Moreover we exclude countries with less than ten funds in each quarter. To get meaningful results we also drop countries, where there are not ethical funds. The final database includes around 10,403 funds, from which 234 are classified as ethical and 10,169 as non-ethical in twelve countries, over the 2003-2014 period. We define the following countries as European: Austria, Belgium, France, Germany, Ireland, Sweden, Switzerland and U.K. The Non-U.S. countries are composed of the European ones extend by Australia, Canada and Japan. And the Non-European and Non-U.S. countries are Australia, Canada and Japan.

Table 1 shows the number of funds for ethical, non-ethical and all countries and the TNA for each country.

Table 1 - Number of Funds and Average TNA ($ million) by Country

	Number of funds			TNA ($ million)		
Country	Total	Ethical	Non-ethical	Total	Ethical	Non-ethical
Australia	927	27	900	3.05	3.00	3.05
Austria	257	14	243	3.49	2.97	3.51
Belgium	560	26	534	3.37	3.21	3.38
Canada	1,075	18	1,057	4.05	3.50	4.06
France	1,599	22	1,577	4.07	3.19	4.08
Germany	460	15	445	4.34	4.12	4.35
Ireland	1,100	16	1,084	4.32	3.50	4.33
Japan	937	17	920	3.20	2.57	3.21
Sweden	130	5	125	4.74	4.04	4.77
Switzerland	369	12	357	4.68	3.84	4.70
U.K.	1,313	35	1,278	4.92	4.37	4.93
U.S.	1,676	27	1,649	5.26	4.58	5.27
All Countries	10,403	234	10,169	4.38	3.68	4.39

The U.S. and France have the highest number of funds, 1,676 and 1,599, and an average TNA of $5,26 million and $4,07 million respectively. In comparison, Sweden has the lowest number of funds (130) with a TNA of $4,74 million. We also divide the funds in our sample into ethical and non-ethical to see more in detail the differences. U.K. has the highest number of ethical funds, followed by U.S. and Australia. The distribution of ethical funds among all countries is widely equal and around 15-20 ethical funds per country. Sweden has the lowest number of ethical funds in the sample (5) with a TNA of $4,74 million.

In our sample, we introduced two dummies. The first dummy is taking into account if the fund is ethical or not. The sample included a column, with a predefined ethical and non-ethical classification. To get sure we don't miss any ethical fund, we verify the ethical and non-ethical classification with the fund objectives of each fund. The second dummy is considering the classification in the ethical funds name. Therefore, we filtered for special terms in the fund name, such as "Ethical" and "Socially Responsible". To increase the number of ethical funds in our sample, we also filtered for ethical terms in different languages.

Table 2 presents detailed descriptive statistics about the evolution of the number of funds per country and region from 2003 to 2014 on a yearly basis for all funds, in Panel A, and for ethical funds, in Panel B.

Table 2 - Number of Funds by Region and Country

Panel A - All Funds

All Funds

Country	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Australia	10	12	499	802	1,086	1,165	1,236	1,077	1,193	1,126	940	932
Austria	172	177	181	192	201	212	197	191	196	194	204	188
Belgium	402	452	433	441	516	694	757	733	666	568	508	436
Canada	71	1,395	997	968	1,084	1,068	980	1,091	1,164	971	953	996
France	1,215	1,228	1,208	1,263	1,304	1,374	1,326	1,315	1,280	1,205	1,213	1,112
Germany	413	411	407	433	447	434	412	364	346	327	339	332
Ireland	508	569	576	611	652	691	617	658	714	722	733	688
Japan	1,103	1,002	1,016	1,102	1,200	1,270	1,277	1,298	1,342	1,350	1,277	1,218
Sweden	254	236	209	290	292	303	293	321	321	289	299	288
Switzerland	172	191	216	275	312	335	355	373	382	383	411	400
U.K.	973	1,025	1,000	1,041	1,049	1,108	1,088	1,082	1,158	1,114	1,110	1,046
U.S.	3,430	3,372	3,323	3,441	3,468	3,486	3,398	3,364	3,398	3,413	3,368	3,264
Total Number of Funds in year t	**8,723**	**10,070**	**10,065**	**10,859**	**11,611**	**12,140**	**11,936**	**11,867**	**12,160**	**11,662**	**11,355**	**10,900**
Share U.S. in year t	39%	33%	33%	32%	30%	29%	28%	28%	28%	29%	30%	30%
Share Non-U.S. in year t	61%	67%	67%	68%	70%	71%	72%	72%	72%	71%	70%	70%
Share Europe in year t	47%	43%	42%	42%	41%	42%	42%	42%	42%	41%	42%	41%
Share Non-Europe and Non-U.S. in year t	14%	24%	25%	26%	29%	29%	29%	29%	30%	30%	28%	29%

Panel B - Ethical funds

Ethical Funds

Country	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Australia			8	8	20	25	31	30	30	26	20	20
Austria	10	10	9	9	9	9	10	10	9	9	10	10
Belgium	15	15	12	12	14	34	66	69	63	44	31	27
Canada	1	17	17	18	18	22	14	23	24	21	8	4
France	11	10	10	10	11	13	15	17	16	14	12	12
Germany	4	3	3	5	9	9	10	10	9	9	11	11
Ireland	1	2	3	3	4	5	4	5	6	11	14	14
Japan	4	8	14	16	20	26	29	28	28	26	25	21
Sweden	10	9	7	13	12	11	12	11	11	10	10	10
Switzerland	2	2	3	4	6	6	10	12	12	12	13	11
U.K.	23	22	19	22	22	24	24	21	25	23	24	25
U.S.	33	33	37	39	46	54	56	52	50	46	48	48
Total Number of Ethical Funds in year t	**114**	**131**	**142**	**159**	**191**	**238**	**281**	**288**	**283**	**251**	**226**	**213**
Share U.S. Ethical Funds in year t	29%	25%	26%	25%	24%	23%	20%	18%	18%	18%	21%	23%
Share Non-U.S. Ethical Funds in year t	71%	75%	74%	75%	76%	77%	80%	82%	82%	82%	79%	77%
Share Europe Ethical Funds in year t	67%	56%	46%	49%	46%	47%	54%	54%	53%	53%	55%	56%
Share Non-Europe and Non-U.S. Ethical Funds in year t	4%	19%	27%	26%	30%	31%	26%	28%	29%	29%	23%	21%

From Panel A, we can see that around 40% of the funds in our sample accounts for the European countries, followed by U.S. with 30% and Other than U.S. and Europe with 30%. The evolution is quite stable in the sample period.

Table 2, Panel B, presents the number of ethical funds by year and country from 2003 to 2014. The proportion of the ethical funds in our sample is splitted in the following way. European ethical funds are representing around 50-60% of the total ethical funds. U.S. ethical funds are accounting for 20-30% and Other than U.S. and Europe for 30%. The proportional division fits to the Industry Overview we showed at the beginning. Therefore, we can state that the sample is representative.

In our sample between all countries the "Sustainability and Social" classification has the highest proportion with 53%, followed by "Ethics and other" classification with 31%. So, 84% of all ethical funds in the sample are in these two categories and the most representative classifications. The "Religious" and "Opportunities" classification have the lowest share with 5% and 2% respectively.

The regional proportional shares are equivalently. In Europe, 50% of the ethical funds are represented by the "Ethical" and "Sustainability and Social" classifications. In U.S. there is no fund, that is classified as "Religious". In our sample, "Religious" classified funds are just existing in the Europe.

3.2 Fund Characteristics

In this subsection, we construct and explain all the variables we use in our study. First, we describe the construction of the fund flow variable. Then, we will continue with the performance measurements and finally present additional control variables.

3.2.1 Fund Flow

Net fund flow represents the capital inflow and outflow in the mutual funds. According to Sirri and Tufano (1998), the net fund flow is defined according to equation (1) Flow is measured by the variation in the total assets under management by new external capital. The assets under management can fluctuate over time by the new external money injection. Capital gains and profits shares, which are declared as dividends, are excluded in this new capital. Equation (1) represents the calculation process of the fund flow:

$$Fund\ Flow_{z,c,q} = \frac{TNA_{z,c,q} - TNA_{z,c,q-1}(1+R_{z,c,q})}{TNA_{z,c,q-1}} \qquad (1)$$

where, *z* represents the specific fund, *c* the country the fund is located, and *q* is expressing the quarter. $TNA_{z,c,q}$ is the total net asset of the fund *z* at quarter *q*. We need to consider that the fund flows are taking place at the end of a quarter. Moreover, the values are presented in local currency since we don't want to take additional currency risk when we are converting into another currency. $R_{z,c,q}$ is representing the raw return of the fund *z* at quarter *q*.

Table 3 presents the number of observations in each country and region and the corresponding fund flow means. In our sample the fund flows for all, ethical and non-ethical funds are calculated by the money growth rate from 2003 to 2014 on a quarterly basis.

Table 3 - Mutual Fund Flows (% per quarter)

	Number of observations			Mean			
Country	All	Ethical	Non-ethical	All	Ethical	Non-ethical	Non-ethical-Ethical Difference
Australia	38,657	859	37,798	2.67	1.91	2.68	-0.77
Austria	8,717	440	8,277	0.65	1.28	0.62	0.66
Belgium	23,827	1,400	22,427	-1.00	-1.68	-0.95	-0.73
Canada	43,359	718	42,641	2.94	-1.51	3.02	-4.53**
France	43,208	478	42,730	1.44	0.80	1.45	-0.65
Germany	17,606	344	17,262	1.88	4.76	1.82	2.94
Ireland	28,709	253	28,456	5.26	3.31	5.28	-1.97
Japan	55,665	939	54,726	-0.02	-0.01	-0.02	0.01
Sweden	13,604	514	13,090	0.75	0.54	0.76	-0.22
Switzerland	14,248	357	13,891	2.89	1.67	2.92	-1.25
U.K.	48,299	1,027	47,272	0.84	0.04	0.86	-0.82
U.S.	162,301	2,132	160,169	5.01	6.88	4.99	1.89
Europe	198,218	4,813	193,405	1.62	0.41	1.65	-1.24*
				(44.68)	(24.59)	(45.07)	
Non-U.S.	335,899	7,329	328,570	1.64	0.34	1.67	-1.32***
				(41.17)	(24.87)	(41.46)	
Non-Europe and Non-U.S.	137,681	2,516	135,165	1.67	0.22	1.69	-1.48**
				(35.50)	(25.40)	(35.66)	
All Countries	498,200	9,461	488,739	2.74	1.82	2.76	-0.94*
				(54.44)	(27.99)	(54.83)	

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

U.S. and German ethical funds show the highest quarterly inflows while Belgium and Canada have the lowest. In our sample the fund flows for ethical funds in European countries is 0,41%; for Non-U.S. countries we have a positive inflow of 0,34% and Non-European and Non-U.S. account for 0,22% per quarter. U.S. shows the highest quarterly money growth rate of 6,88% in ethical funds.

We conducted the t-test to see whether the differences of the means are statistically significant or not. Results show that the averaged fund flow difference of -4,53% between non-ethical and ethical funds in Canada is statistically significant on a 5% significance level.

On a regional basis there are also statistically significant results in terms of flows in ethical funds. On the level of all countries, the difference of flows in non-ethical to ethical funds is

-0,94% per quarter. The deviation is even greater in the European an Non-U.S. Countries with -1,24% and -1,32% per quarter respectively. The highest variation is represented in the Non-European and Non-U.S. countries with -1,48% per quarter. Results indicate that flows in ethical funds are significantly lower than flows in non-ethical funds. More specifically, results show that investor are allocating their money due to some ethical principles or ethical issues. Fund performance is not the leading criteria for investments in ethical funds. Therefore, we can state that flows into ethical funds is not dependent on the past fund performance.

3.2.2 Performance Measurement

Following Ferreira et al. (2012), the most adequate performance measurements for funds are the raw returns and the risk-adjusted returns. Raw returns are calculated before taxes and net of total expenditures. For the calculation of the risk-adjusted returns we take the Carhart four-factor model into account. The factors market, size, value and momentum are included in the regression of the risk adjusted returns, according to equation (2).

$$r_{zq} = \alpha_j + \beta_m RM_q + \beta_{SMB} SMB_q + \beta_{HML} HML_q + \beta_{MOM} MOM_q + \epsilon_q \qquad (2)$$

r_{zq} : actual return of the fund z in time q and q-1 on a quarterly basis

α_j : Variation actual return to forecasted return on a quarterly basis

β: Beta factor for the market, size, value and momentum

RM_q: Market excess returns for each region and country per quarter

SMB_q: Size premium per quarter (Small minus Big)

HML_q: Value premium per quarter (High minus Low)

MOM_q: Momentum (up minus down) Premium per quarter

ϵ_q: Error term per quarter

Table 4 - Average Raw Returns and Four-Factor Alpha for Ethical and Non-Ethical Funds

	Raw return (% per quarter)				Four-factor alpha (% per quarter)			
Country	All	Ethical	Non-Ethical	Non-ethical-Ethical Difference	All	Ethical	Non-Ethical	Non-ethical-Ethical Difference
Australia	0.26	0.28	0.26	0.02	0.21	0.07	0.21	-0.14
Austria	1.06	0.80	1.08	-0.27	1.27	1.01	1.28	-0.27
Belgium	1.12	1.11	1.12	-0.01	0.65	0.61	0.65	-0.04
Canada	0.75	0.17	0.76	-0.59*	0.17	-0.35	0.18	-0.53
France	1.24	1.13	1.25	-0.11	0.87	0.40	0.87	-0.47*
Germany	1.25	0.56	1.27	-0.70	1.22	0.77	1.23	-0.46
Ireland	1.70	1.39	1.70	-0.32	1.19	1.11	1.19	-0.07
Japan	1.93	0.82	1.95	-1.13***	2.03	1.35	2.04	-0.69***
Sweden	1.93	1.95	1.93	0.02	0.56	0.52	0.56	-0.05
Switzerland	1.56	1.30	1.57	-0.27	1.04	0.55	1.05	-0.50
U.K.	1.97	1.67	1.98	-0.31	1.83	1.64	1.83	-0.20
U.S.	2.44	1.85	2.45	-0.60***	-0.25	-0.52	-0.25	-0.28***
Europe	1.54	1.28	1.54	-0.26**	1.16	0.87	1.17	-0.30***
	(8.97)	(7.76)	(8.99)		(5.96)	(5.04)	(5.98)	
Non-U.S.	1.35	1.00	1.36	-0.36***	1.07	0.72	1.08	-0.36***
	(9.49)	(8.54)	(9.51)		(6.06)	(5.15)	(6.08)	
Other non-Europe	1.09	0.45	1.10	-0.65***	0.93	0.43	0.94	-0.51***
	(10.18)	(9.85)	(10.19)		(6.19)	(5.35)	(6.21)	
All Countries	1.71	1.19	1.72	-0.53***	0.64	0.44	0.64	-0.20***
	(9.64)	(8.85)	(9.65)		(5.48)	(4.83)	(5.49)	

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

The average raw return for the sample is 1,71% per quarter. U.S., U.K. and Japan have the highest average raw returns, that is 2,44%, 1,97% and 1,93%. per quarter. In contrast Australia, Canada and Austria the lowest, namely 0,26%, 0,75% and 1,06%. The average raw return in European countries account for 1,54% per quarter. Non-U.S. countries generate returns of 1,35% and Non-European and Non-U.S. 1,09% per quarter. To see if there is a difference for raw returns for ethical and non-ethical funds, we split our sample. Generally, the results show that ethical funds have lower raw returns than non-ethical funds. Japan., U.S. and U.K. have the highest average raw returns, that is 1,95%, 1,97% and 1,93%. per quarter. Whereas Canada, Australia and Germany the lowest, namely 0,17%, 0,28% and 0,56%. To see if the differences between ethical and non-ethical funds are statistically significant, we conducted a t-test. The raw return deviation for the sample show a significant deviation of -0,53% per quarter. Similar results can be achieved for European, Non-U.S. and Other Non-European countries. On the country level, Canada, Japan and U.S. show a significant variation of -0,59%, -1,13% and -0,60% respectively. The results are consistent with former research in this area. Since

investors in ethical funds derive different non-monetary benefits from their investments, they are willing to give off additional return to satisfy their needs.

The four-factor alpha gives an idea about the skill of the fund manager (Ferreira et al. (2012)). So, if alpha is greater than 0, the fund manager is overperforming the benchmark and lower than 0 means underperforming. The four-factor alpha for the sample is 0,64% per quarter. Japan., U.K. and Germany have the highest four-factor alphas, that is 2,03%, 1,83% and 1,22%. per quarter. In contrast U.S., Canada and Australia the lowest, namely -0,25%, 0,17% and 0,21%. The four-factor alpha in European countries account for 1,16% per quarter. Non-U.S. countries generate a four-factor alpha of 1,07% and Non-European and Non-U.S. 0,93% per quarter.

To see if there is a difference for the four-factor alphas for ethical and non-ethical funds, we divided our sample. Generally, the results show that ethical funds have lower four-factor alphas than non-ethical funds. By looking at the ethical funds, we see that U.K. and Japan have the highest four-factor alphas, that is 1,83% and 1,35% per quarter. Whereas U.S. and Canada the lowest, namely 0,52% and -0,35%.

We conducted a t-test to check for the significance of the differences of the four-factor alphas for ethical and non-ethical funds. The four-factor alpha deviation for the sample show a significant deviation of -0,20% per quarter. Similar results can be achieved for European, Non-U.S. and Other Non-European countries.

On the country level, France, Japan and U.S. show a significant variation of -0,47%, -0,69% and -0,28% respectively.

Ethical Fund managers for are restricted in their investment horizon, since they need to select carefully and screen the companies according to some ethical or social criteria. This confirms the lower ability to beat the benchmark and therefore the lower alphas in comparison to non-ethical fund managers.

3.2.3 Additional Control Variables

A widely used approach to explain the flow-performance relationship is the introduction of additional control variables. These non-performance-related attributes provide information regarding the specified relationship of flow and performance of mutual funds (Ferreira et al. (2012)). In the following, these variables will be introduced and analyzed.

Following Chevalier and Ellison (1997), Sirri and Tufano (1998), Brennan and Hughes (1991), Barber et al. (2005) large funds are more likely to get money. Therefore, we are including the fund size as an additional variable the explain the flow-performance relationship

of funds. Table 5 Panel A shows the TNA, which is the total net asset in U.S.-dollar. Moreover, it shows data on the TNA family. The larger the TNA family the more money can be captured by the fund, since it is able to establish new funds in a cost and information efficiently way (Chen, Hong, Huang and Kubik (2004), and Khorana and Servaes (1999)). Table 5, Panel A, shows the averaged TNA and TNA family for ethical and non-ethical funds.

Table 5 - Mutual Fund Additional Control Variables

Panel A – TNA and TNA family

	TNA ($ million)				TNA family ($ million)			
Country	All	Ethical	Non-Ethical	Non-ethical-Ethical Difference	All	Ethical	Non-Ethical	Non-ethical-Ethical Difference
Australia	3.05	3.00	3.05	-0.04	11.68	11.48	11.69	-0.20***
Austria	3.49	2.97	3.51	-0.54***	11.29	10.82	11.32	-0.50***
Belgium	3.37	3.21	3.38	-0.17***	13.15	13.09	13.15	-0.06
Canada	4.05	3.50	4.06	-0.56***	13.30	12.47	13.32	-0.85***
France	4.07	3.19	4.08	-0.89***	11.93	11.89	11.93	-0.04
Germany	4.34	4.12	4.35	-0.22**	12.23	11.13	12.26	-1.13***
Ireland	4.32	3.50	4.33	-0.82***	12.07	11.03	12.07	-1.04***
Japan	3.20	2.57	3.21	-0.65***	12.17	12.13	12.17	-0.05
Sweden	4.74	4.04	4.77	-0.73***	12.17	11.90	12.18	-0.28***
Switzerland	4.68	3.84	4.70	-0.86***	12.63	11.24	12.66	-1.42***
U.K.	4.92	4.37	4.93	-0.56***	13.26	12.81	13.27	-0.46***
U.S.	5.26	4.58	5.27	-0.68***	14.16	13.11	14.17	-1.06***
Europe	4.32	3.65	4.33	-0.68***	12.49	12.19	12.49	-0.30***
	(1.63)	(1.39)	(1.63)		(2.20)	(2.19)	(2.20)	
Non-U.S.	3.95	3.42	3.96	-0.54***	12.45	12.13	12.45	-0.33***
	(1.76)	(1.54)	(1.76)		(2.15)	(2.06)	(2.15)	
Other non-Europe	3.43	2.98	3.44	-0.45***	12.39	12.01	12.40	-0.39***
	(1.81)	(1.70)	(1.81)		(2.07)	(1.77)	(2.08)	
All Countries	4.38	3.68	4.39	-0.71***	13.00	12.35	13.02	-0.67***
	(1.94)	(1.63)	(1.94)		(2.59)	(2.19)	(2.60)	

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

In the overall view, U.S., U.K. and Sweden have the highest average TNA, while Australia and Japan the lowest. Moreover, we can see that the TNA for ethical funds are significantly lower comparing to non-ethical funds. Similar results are achieved for the TNA family size. Ethical funds need to select and invest in companies and fulfill special social or ethical restrictions. This reduces the number of investments the fund manager can undertake and therefore explains the negative significant variation of the TNA of ethical to non-ethical funds. Fund managers are not able to attract the same amount of money, when they are restricted in their investment universe.

From Table 5, Panel B, we can see additional relevant variables that have an influence on the flows of a fund, namely fund age, loads and the total expense ratio (TER).

Panel B: Fund Age, Loads and Total Expense Ratio

	Fund age (years)				Loads (%)				TER (%)			
Country	All	Ethical	Non-Ethical	Non-ethical-Ethical Difference	All	Ethical	Non-Ethical	Non-ethical-Ethical Difference	All	Ethical	Non-Ethical	Non-ethical-Ethical Difference
Australia	2.29	2.32	2.28	0.03*	0.62	0.26	0.62	-0.37***	1.47	1.48	1.47	0.01
Austria	2.47	2.34	2.47	-0.14***	4.30	4.40	4.29	0.11*	1.80	1.79	1.80	-0.01
Belgium	2.13	1.95	2.14	-0.18***	1.50	2.41	1.44	0.97***	1.25	1.31	1.25	0.06***
Canada	2.50	2.51	2.50	0.01	0.53	0.27	0.54	-0.27***	2.16	2.24	2.16	0.08***
France	2.59	2.44	2.59	-0.14***	0.15	0.20	0.15	0.05	1.66	1.79	1.66	0.13***
Germany	2.64	2.15	2.65	-0.50***	3.86	3.68	3.86	-0.18*	1.51	1.52	1.51	0.01
Ireland	2.14	1.76	2.15	-0.38***	0.99	0.98	0.99	-0.01	1.72	1.50	1.72	-0.23***
Japan	2.33	2.12	2.33	-0.21***	0.20	0.17	0.20	-0.03**	1.44	1.58	1.43	0.15***
Sweden	2.68	2.62	2.68	-0.07***	0.06	0.12	0.06	0.06***	1.32	1.16	1.32	-0.16***
Switzerland	2.37	2.15	2.38	-0.23***	0.30	0.63	0.29	0.34***	1.10	1.71	1.08	0.63***
U.K.	2.66	2.60	2.66	-0.06***	3.36	3.26	3.36	-0.10	1.47	1.53	1.47	0.06***
U.S.	2.63	2.44	2.63	-0.19***	1.89	2.79	1.87	0.91***	1.20	1.16	1.20	-0.05***
Europe	2.47	2.26	2.48	-0.22***	1.73	2.19	1.72	0.47***	1.50	1.49	1.50	-0.02**
	(0.65)	(0.64)	(0.65)		(2.26)	(2.12)	(2.26)		(0.62)	(0.51)	(0.62)	
Non-U.S.	2.43	2.28	2.44	-0.16***	1.19	1.52	1.19	0.33***	1.57	1.57	1.57	0.00
	(0.61)	(0.60)	(0.61)		(2.00)	(2.01)	(2.00)		(0.68)	(0.58)	(0.68)	
Other non-Europe	2.37	2.30	2.37	-0.07***	0.42	0.23	0.43	-0.20***	1.67	1.74	1.67	0.06***
	(0.56)	(0.50)	(0.56)		(1.20)	(0.82)	(1.21)		(0.75)	(0.65)	(0.75)	
All Countries	2.50	2.31	2.50	-0.19***	1.42	1.80	1.41	0.39***	1.45	1.48	1.45	0.03***
	(0.63)	(0.60)	(0.63)		(2.19)	(2.29)	(2.19)		(0.65)	(0.60)	(0.66)	

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Fund age is presented in years at the end of a quarter. Barber et al. (2005), Huang, Wei and Yan (2007) indicate that fund flows are also affected by fees. Therefore, we include loads, which are calculated by the sum of the front-end and back-end load as additional control variable. The TER is a ratio of the funds costs related to the assets of each funds. Regarding fund age, we see a significant difference between ethical and non-ethical funds. Ethical funds in our sample are younger than non-ethical funds. This can be also explained by the sample period. Since the financial crises 2008, the demand for ethical funds increased. Therefore, we have a higher number of ethical funds in the recent periods and less track record compared to non-ethical funds. Moreover U.S. shows on average, older ethical funds compared to European countries.

Loads are showing slightly different results. Comparing ethical to non-ethical funds, in some countries we see higher loads for ethical funds and in others lower. Belgium, U.S., and Switzerland show the highest variation in loads for ethical funds, namely 0,97%, 0,91% and 0,38%. The lowest difference of loads can be seen in Australia, Canada and Germany with -0,37%, -0,27% and 0,18% respectively. European countries show half the variation of the loads than U.S., namely 0,47%.

We expect TER to be higher for ethical funds than for non-ethical funds, since the due diligence process for ethical funds are more time consuming and the associated costs expected to be higher. By looking at TER, the differences between ethical and non-ethical funds are deviating slightly. Switzerland, Japan and France show the highest positive deviations of 0,63%, 0,15% and 0,13%. Ireland and Sweden expose the lowest variations, namely -0,23% and -0,16%. Taking into consideration the whole sample, we see that ethical funds are showing higher expense ratio than non-ethical funds, while European countries and U.S. show oppositional results. Since these control variables are statistically and economically significant to explain the flows a fund, we will include it in our regressions.

Table 6 shows the pairwise correlation of the variables Most correlations between our variables are low. Therefore, multicollinearity across our variables is a problem.

Table 6 - Pairwise Correlation

	Fund flow	Raw return	Local Alpha	TNA	TNA Family	Loads	TER	Fund age
Fund flow	1.00							
Raw return	0.08***	1.00						
Local Alpha	0.02***	0.62***	1.00					
TNA	0.10***	0.05***	0.00***	1.00				
TNA Family	0.03***	0.03***	-0.01***	0.48***	1.00			
Loads	-0.03***	0.01***	-0.01***	0.07***	0.14***	1.00		
TER	-0.04***	-0.02***	0.01***	-0.24***	-0.18***	0.10***	1.00	
Fund age	-0.03***	0.02***	0.00***	0.42***	0.24***	0.07***	-0.03***	1.00

*** sig at 1% level

4 Methodology

The first step of our analysis is to start with a linear approach to check the flow-performance relationship. The fund performance is ranked by using last quarter performance. In our analysis, we use raw returns and four-factor alpha to measure fund performance. Following Del Guercio and Reuter (2014), we run the regressions of the fund flows together with both performance ranks (raw returns and four-factor alpha) and the control variables, we presented in the previous section. Since we want to see if there are differences between the different geographical regions, we run the regressions for All Countries, Non-U.S., European and Non-European / Non U.S. countries.

Del Guercio and Reuter (2014) use the same methodology in order to see whether mutual funds sold through a broker or sold directly to investors have different sensitives to four-factor alpha. The idea is that investors that buy funds directly react more to risk-adjusted returns (i.e. four factor alpha). This is because these investors are supposed to be more sophisticated. They don't need an intermediary to invest in mutual funds.

In our analysis we test if ethical and non-ethical funds have different sensitivities to four-factor alpha. *We would expect ethical funds investors to react less to four-factor alpha than non-ethical funds investors, meaning that ethical fund investors are less sophisticated investors.*

The equation (3) presents the regression:

$$\text{Fund Flow}_{z,c,t} = a + b_{z,c}*\text{raw ret performance rank}_{z,c,t-1} + d_{z,c}*\text{four-factor performance rank}_{z,c,t-1} + e_{z,c}*\text{control variables}_{z,c,t-1} + \varepsilon_{2,t} \quad (3)$$

where *z* indicates the specific fund, *c* the country and *t* the period of time. $\varepsilon_{2,t}$ represents the error term in the regression. In all the regression time and country fixed effects are incorporated. Moreover p-values are heteroskedasticity-robust and clustered by fund.

$$\text{Fund Flow}_{z,c,t} = a + b_{z,c}*\text{raw ret performance rank}_{z,c,t-1} + c_{z,c}*\text{ethical}_{z,c,t-1} + d_{z,c}*\text{four-factor performance rank}_{z,c,t-1}*\text{ethical} + e_{z,c}*\text{control variables}_{z,c,t-1} + \varepsilon_{2,t} \quad (4)$$

By including the dummy variable *ethical*, we test whether there are differences between non-ethical and ethical funds. To check, whether investors react more or less to past performance

of ethical funds, we interact the dummy variable ethical with the performance rank, both measure.

Due to the fact, that the literature has shown so far, we can state that the flow-performance relationship is not linear. Therefore, we also run the regressions by using a three-piecewise linear approach. The idea is to see, how the flow-performance relationship is influenced at different performance ranks (see, e.g.,Chevalier and Ellison (1997), Sirri and Tufano (1998), Ferreira, et al. 2012).

Following Ferreira et. al. (2012) we begin by quantifying the level of convexity for all countries. The reason is to analyze the relationship between the fund flows and the corresponding good or bad fund performance. Taking raw return fund performance of the last year, we allot a rank between zero and one. Zero is allocated to the worst performing fund and one to the best respectively.

For the three-piecewise linear approach, we split the performance into the top 20%, middle 60%, and low 20% for each fund and country per quarter. Top 20% indicates the 20% best performing funds. Likewise, for the middle and low performing funds.

Finally, we additionally check whether investor react differently to the ethical classification, we presented in section 3.1. Equation (5) shows the three-piecewise approach using the ethical classification dummy.

These equations are similar to the previous ones but the raw return is multiplied by bottom 20, middle 60, and by top 20.

This equation is for next table column (2) and it does not include dummy ethical,

$$\text{Fund Flow}_{z,c,t}=a+b_{z,c}*\text{performance rank}_{z,c,t-1}+c_{z,c}*\text{classification}_{z,c,t-1}+ d_{z,c}*\text{performance rank}_{z,c,t-1}*\text{classification}+e_{z,c}*\text{control variables}_{z,c,t-1}+\varepsilon_{2,t} \quad (5)$$

This equation is for next table columns, 4, and 6 (we just run 1 regression for the 2 columns)

$$\text{Fund Flow}_{z,c,t}=a+b_{z,c}*\text{performance rank}_{z,c,t-1}+c_{z,c}*\text{classification}_{z,c,t-1}+ d_{z,c}*\text{performance rank}_{z,c,t-1}*\text{classification}+e_{z,c}*\text{control variables}_{z,c,t-1}+\varepsilon_{2,t} \quad (6)$$

In the next section, we will present the empirical results of the regressions.

5 Empirical Results

5.1 Ethical – Non-Ethical Regression Results

Table 7 Panel (A)-(E) are the regression outputs for the whole sample, for U.S., Non U.S., Europe, and Non-Europe / Non-U.S., respectively.

The main idea is to see whether ethical fund flows react differently to past performance when comparing to non-ethical funds. Do ethical fund investors react to (past) performance? Additionally, we also want to see if there are differences in how these investors react to four-factor alpha. Del Guercio and Reuter (2014) as shown that less sophisticated investors react less to four-factor alpha. If ethical fund investors are motivated by other incentives, they would care less about performance and they are expected to react less to past performance therefore also react less to four-factor alpha, i.e., behaving like unsophisticated investors.

Columns (1) and (2) is representing all the funds either non-ethical or ethical funds. Columns (3), (4), (5) and (6) corresponds to all the variables interacting with the dummy ethical. It takes the value one if it is ethical and zero if non-ethical. Colum (1), (3) and (5) are the regression without splitting the raw return performance rank. Column (2), (4) and (6) is the output of the three-piecewise regression. Here we include a dummy variable that takes value one if it performance is at the bottom or top 20 percentiles and zero otherwise. All the regressions include time fixed effects, country fixed effects and geographical focus fixed effects. Additionally, we show the number of observations. Moreover, we use regional factors for the calculation of the performance. See Appendix III and IV for global and local factors results.

Table 7 Panel A shows the Regressions for all countries. From Column (1) we can see a positive and significant relation between flows and past performance. Investors chase past performance, putting more money in funds that perform well, whether performance is measure using raw returns or four-factor alpha. These results are consistent with previous studies, including (Ferreira et. al.,2012). From Column (3) we see also see a positive and significant flow-performance relationship. Non-ethical fund investors also invest in funds that perform well independently if the performance is measured as raw returns or four-factor alpha. From column (5) we see that ethical fund investors react more to past raw returns (positive significant interaction between the dummy ethical variable and the raw return) and react less to four-factor alpha (negative significant interaction between the dummy ethical variable and the four-factor alpha). We would expect more sophisticated investors to react more to performance measured as four-factor alpha, and therefore our results indicate that ethical fund investors are less sophisticated when comparing with investors investing in non-ethical funds.

Ethical fund investors invest significantly more in older funds when comparing to non-ethical fund investors. Regarding the remaining control variables, the differences between ethical and non-ethical investors are not statistically significant. From Column (6) we also show that ethical fund investors react less to bottom performers and more to top performers, i.e, sell less funds that perform poorly and buy more funds that perform well. These results are also consistent with ethical fund investor being less sophisticated as Ferreira, Keswani, Miguel, and Ramos (2012) show that less sophisticated investors tend to sell less funds that perform worse and by more funds that perform well.

Table 7 - Regression Flow-Performance Ethical and Non-Ethical

Panel A - All Countries

All Countries						
	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.4745***	0.4744***	0.4748***	0.4748***	-0.0832	-0.0831
	(54.81)	(54.81)	(54.68)	(54.68)	(-0.92)	(-0.91)
Raw return t-1	37.1776***		36.9935***		8.4492***	
	(23.67)		(23.48)		(3.15)	
Raw return bottom 20 t-1		-0.8937***		-0.8223***		-4.0404***
		(-3.11)		(-2.83)		(-4.59)
Raw return mid 60 t-1		38.1514***		38.2305***		-8.0723**
		(21.98)		(21.86)		(-2.05)
Raw return top 20 t-1		-0.9123***		-0.9448***		1.7564***
		(-3.61)		(-3.68)		(2.71)
4f alpha t-1	13.8139***	13.6978***	14.2482***	14.1767***	-26.6571***	-28.9190***
	(7.25)	(7.05)	(7.40)	(7.22)	(-3.90)	(-4.22)
Dummy Ethical					-2.0092	-1.3762
					(-1.43)	(-0.98)
Log Size t-1	-0.2747***	-0.2772***	-0.2765***	-0.2792***	0.3579	0.3573
	(-2.80)	(-2.82)	(-2.79)	(-2.82)	(0.75)	(0.75)
Log Family Size t-1	0.3677***	0.3682***	0.3731***	0.3736***	-0.2185	-0.2296
	(10.42)	(10.43)	(10.49)	(10.50)	(-1.42)	(-1.49)
Age t-1	-0.4731***	-0.4770***	-0.4751***	-0.4789***	2.0855***	2.1757***
	(-7.46)	(-7.53)	(-7.40)	(-7.46)	(4.08)	(4.21)
TER t-1	-1.0683***	-1.0464***	-1.0680***	-1.0463***	-0.3883	-0.4277
	(-7.37)	(-7.21)	(-7.28)	(-7.12)	(-0.82)	(-0.91)
Loads t-1	-0.4731***	-0.4770***	-0.4751***	-0.4789***	0.0152	0.0077
	(-7.46)	(-7.53)	(-7.40)	(-7.46)	(0.10)	(0.05)
Time fixed effects	Yes					
Country fixed effects	Yes					
Geographical focus fixed effects	Yes					
Adjusted R-Squared	0.248					
Number of observations	498200					

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

In Panel B we check whether the results in Panel A are consistent throughout different regions. Therefore, we start by analyzing the Non-U.S. countries.

Colum (1) and (3) show similar results as shown in Panel A.

From column (5) raw returns and four-factor alpha are statistically not significant. By ranking the raw return in the bottom, middle and top percentile we get statistically significant results for raw returns. Considering column (6) we see that ethical fund investors react less to the bottom performers than top performers, confirming the results in Panel A. Moreover, we show that ethical fund investors invest significantly more in older funds when comparing to non-ethical fund investors (Ferreira et. al (2012)). Larger ethical funds in Non-U.S. countries get less flows. Moreover, results indicate that the size of ethical fund family decreases the level of fund flows in Non-U.S. countries. Following Adams and Ahmed (2013) this results in the sense that large fund families may not spent much consideration to individual funds as it is the case for smaller fund families. The success of these smaller fund families may be dedicated to less specialized funds.

Panel B - Non-U.S.

	Non-U.S.					
	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.1923***	0.1922***	0.1919***	0.1919***	0.0383	0.0387
	(24.54)	(24.53)	(24.37)	(24.36)	(0.66)	(0.67)
Raw return t-1	18.9616***		18.8965***		4.6698	
	(14.00)		(13.88)		(1.35)	
Raw return bottom 20 t-1		-0.6313**		-0.5739**		-2.9772***
		(-2.22)		(-1.99)		(-3.20)
Raw return mid 60 t-1		17.0939***		17.2269***		-7.4924
		(10.77)		(10.76)		(-1.57)
Raw return top 20 t-1		0.3162		0.2961		1.0832*
		(1.32)		(1.22)		(1.70)
4f alpha t-1	11.7450***	11.0609***	11.8361***	11.1864***	-6.8190	-7.9476
	(6.54)	(6.06)	(6.52)	(6.06)	(-0.80)	(-0.92)
Dummy Ethical					2.1545	2.6451*
					(1.46)	(1.75)
Log Size t-1	0.0181	0.0179	0.0304	0.0302	-0.6767**	-0.6775**
	(0.21)	(0.21)	(0.34)	(0.34)	(-2.41)	(-2.42)
Log Family Size t-1	0.2858***	0.2855***	0.2897***	0.2896***	-0.1639*	-0.1741**
	(10.30)	(10.29)	(10.29)	(10.28)	(-1.91)	(-2.03)
Age t-1	-0.1740***	-0.1747***	-0.1721***	-0.1728***	1.2789***	1.3496***
	(-3.88)	(-3.89)	(-3.81)	(-3.82)	(2.94)	(3.10)
TER t-1	-0.5218***	-0.5201***	-0.5154***	-0.5139***	-0.3699	-0.3760
	(-3.95)	(-3.94)	(-3.86)	(-3.85)	(-1.08)	(-1.10)
Loads t-1	-0.1740***	-0.1747***	-0.1721***	-0.1728***	0.0107	0.0012
	(-3.88)	(-3.89)	(-3.81)	(-3.82)	(0.12)	(0.01)
Time fixed effects			Yes			
Country fixed effects			Yes			
Geographical focus fixed effects			Yes			
Adjusted R-Squared			0.091			
Number of observations			335899			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel C shows the regression for U.S. funds. The results indicate that ethical fund investors in U.S. react less to bottom and middle performer funds. Moreover, U.S. ethical mutual fund investors react less to four-factor alpha, consistent with previous studies, including Ferreira et. al. (2012). More sophisticated investors react more to past performance measured as four-factor alpha. Due to the negative significant interaction between the dummy ethical variable and the four-factor alpha, we conclude that U.S. ethical fund investors are less sophisticated when we compare with U.S. investors in non-ethical funds.

Additionally, results show that larger U.S. ethical funds are able to increase the fund flows. Similarly, to previous results, we see that U.S. ethical fund investors mainly invest in older funds.

Panel C - U.S.

	U.S.					
	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.6455***	0.6454***	0.6455***	0.6454***	-0.0273	-0.0273
	(83.85)	(83.87)	(83.69)	(83.71)	(-0.23)	(-0.23)
Raw return t-1	20.9838***		20.9900***		-0.9197	
	(4.10)		(4.10)		(-0.18)	
Raw return bottom 20 t-1		-1.9475***		-1.9078***		-3.4913*
		(-2.81)		(-2.73)		(-1.70)
Raw return mid 60 t-1		21.2479***		21.3935***		-17.1955**
		(3.99)		(4.02)		(-2.47)
Raw return top 20 t-1		-1.5212**		-1.5428**		2.5836
		(-2.37)		(-2.39)		(1.25)
4f alpha t-1	88.4717***	87.7453***	89.1709***	88.4729***	-68.8724***	-69.6516***
	(13.67)	(13.48)	(13.73)	(13.54)	(-3.24)	(-3.28)
Dummy Ethical					-6.5865**	-5.8358**
					(-2.42)	(-2.11)
Log Size t-1	-0.4119**	-0.4186**	-0.4292**	-0.4360***	1.8979**	1.8838*
	(-2.45)	(-2.49)	(-2.54)	(-2.58)	(1.96)	(1.96)
Log Family Size t-1	0.3098***	0.3159***	0.3194***	0.3254***	-0.5135	-0.5204
	(6.63)	(6.75)	(6.82)	(6.93)	(-1.20)	(-1.22)
Age t-1	-0.3971***	-0.4022***	-0.4036***	-0.4088***	2.1872*	2.1616*
	(-5.18)	(-5.25)	(-5.16)	(-5.23)	(1.68)	(1.65)
TER t-1	-2.8603***	-2.7830***	-2.8802***	-2.8028***	0.5069	0.4063
	(-6.98)	(-6.77)	(-6.93)	(-6.72)	(0.47)	(0.37)
Loads t-1	-0.3971***	-0.4022***	-0.4036***	-0.4088***	0.1062	0.1167
	(-5.18)	(-5.25)	(-5.16)	(-5.23)	(0.49)	(0.54)
Time fixed effects	Yes					
Country fixed effects	Yes					
Geographical focus fixed effects	Yes					
Adjusted R-Squared	0.435					
Number of observations	162301					

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

In European countries we achieve following results. Ethical fund investors react more to raw returns and less to four-factor alpha. Column (6) shows that ethical fund investors react less to bottom performing funds compared to non-ethical European funds. That means European ethical fund investors sell bad performing funds less, i.e. (Ferreira et. al. 2012)). Moreover, larger ethical mutual fund families decrease the fund flows. European ethical funds also invest mainly in older funds compared to European investors in non-ethical funds.

Panel D - Europe

	Europe					
	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.2251***	0.2251***	0.2250***	0.2246***	0.0797	0.0790
	(23.22)	(23.22)	(23.09)	(23.05)	(1.35)	(1.34)
Raw return t-1	21.9952***		23.4985***		8.9665**	
	(8.99)		(9.41)		(2.30)	
Raw return bottom 20 t-1		0.2650		0.3437		-3.6981***
		(0.65)		(0.83)		(-3.14)
Raw return mid 60 t-1		19.3219***		19.5132***		-4.9862
		(6.94)		(6.96)		(-0.77)
Raw return top 20 t-1		1.1485***		1.1259***		0.9465
		(3.39)		(3.27)		(1.26)
4f alpha t-1	16.2648***	15.5560***	14.8002***	15.9351***	-30.0403***	-32.7180***
	(4.61)	(4.34)	(4.13)	(4.41)	(-3.01)	(-3.18)
Dummy Ethical					1.4258	2.2061
					(0.82)	(1.24)
Log Size t-1	-0.0526	-0.0495	0.1246	-0.0418	-0.2052	-0.2839
	(-0.46)	(-0.43)	(1.05)	(-0.36)	(-0.77)	(-1.03)
Log Family Size t-1	0.2939***	0.2943***	0.2132***	0.2994***	-0.2702***	-0.1815*
	(7.82)	(7.83)	(5.99)	(7.82)	(-2.83)	(-1.84)
Age t-1	-0.1589***	-0.1533***	-0.1804***	-0.1519***	1.2834***	1.1689**
	(-2.96)	(-2.85)	(-3.93)	(-2.79)	(2.76)	(2.49)
TER t-1	-0.6038***	-0.6243***	-0.2201	-0.6216***	-0.0559	-0.2386
	(-3.08)	(-3.19)	(-1.15)	(-3.13)	(-0.15)	(-0.63)
Loads t-1	-0.1589***	-0.1533***	-0.1804***	-0.1519***	-0.0415	-0.0276
	(-2.96)	(-2.85)	(-3.93)	(-2.79)	(-0.44)	(-0.27)
Time fixed effects	Yes					
Country fixed effects	Yes					
Geographical focus fixed effects	Yes					
Adjusted R-Squared	0.118					
Number of observations	198218					

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel E shows following statistically relevant results for Non-European and Non-U.S. countries. Larger ethical funds in Non-European and Non-U.S. countries decrease the level of fund flows. Moreover, we see that ethical funds that charge more, get less flows comparing to non-

ethical funds. As previous Panels has shown, ethical fund investors for Non-European and Non-U.S. invest more in older funds.

Panel E - Non-Europe and Non-U.S.

Non-Europe and Non-U.S.

	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.1205***	0.1203***	0.1206***	0.1204***	-0.0225	-0.0221
	(9.00)	(8.97)	(8.96)	(8.93)	(-0.24)	(-0.23)
Raw return t-1	25.5814***		25.6646***		-2.8377	
	(13.50)		(13.49)		(-0.45)	
Raw return bottom 20 t-1		-2.5490***		-2.5135***		-1.7821
		(-6.53)		(-6.39)		(-1.03)
Raw return mid 60 t-1		21.7750***		21.9692***		-9.2311
		(10.60)		(10.59)		(-1.25)
Raw return top 20 t-1		0.2233		0.2141		0.2075
		(0.63)		(0.60)		(0.18)
4f alpha t-1	-8.1526***	-10.4515***	-8.4517***	-10.7304***	20.2773	19.9523
	(-3.57)	(-4.49)	(-3.67)	(-4.56)	(1.60)	(1.59)
Dummy Ethical					2.8531	3.2012
					(1.31)	(1.39)
Log Size t-1	0.1310	0.1353	0.1508	0.1551	-1.1936**	-1.2003**
	(0.99)	(1.02)	(1.12)	(1.15)	(-2.45)	(-2.44)
Log Family Size t-1	0.3037***	0.3004***	0.3055***	0.3022***	-0.2785*	-0.2842*
	(6.58)	(6.52)	(6.56)	(6.50)	(-1.94)	(-1.96)
Age t-1	-0.1584**	-0.1630**	-0.1445**	-0.1491**	1.4561*	1.5060*
	(-2.13)	(-2.20)	(-1.96)	(-2.03)	(1.89)	(1.94)
TER t-1	-0.4965**	-0.4829**	-0.4969**	-0.4835**	0.3830	0.3870
	(-2.56)	(-2.49)	(-2.53)	(-2.46)	(0.60)	(0.60)
Loads t-1	-0.1584**	-0.1630**	-0.1445**	-0.1491**	-1.2229***	-1.1879***
	(-2.13)	(-2.20)	(-1.96)	(-2.03)	(-5.47)	(-5.40)
Time fixed effects			Yes			
Country fixed effects			Yes			
Geographical focus fixed effects			Yes			
Adjusted R-Squared			0.071			
Number of observations			137681			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

5.2 Ethical Classification Results

In order to check whether the behavior of ethical fund investors to different categories of ethical funds, we split ethical funds in our sample into account five classifications Ethics and other, Social and Sustainability, Ecology and Environment, Opportunities and Religious. These classifications are presented in Appendix II, Panel B.

The Ecological and Environmental factor is filtering for funds that are engaged in investments in companies with a special focus on clean environment and the conscientious handling of

renewable primary products. The Sustainability and Social factor is considering funds that invest in corporations that pay attention to environmental and as well as social sustainability. That means restricting the investments to companies that don't produce alcohol or actively engaged in the gambling or tobacco industry. On the other hand, it can be also positively linked to companies that invest in medical improvement or clean technology. For example, some automotive producers are intensifying the production and development of electric vehicles, such as Tesla. Another classification is considering the Opportunity factor. Some big corporations offer their employees an occupational pension. Therefore, it's important to manage these liabilities in a sustainable manner and don't take too much risk. The religious classification is dealing with investments, that take into account Islamic or sharia principles. For example, avoiding investments in gambling or pork producing companies. The last classification is about ethics in general. All the funds that have the term "Ethical" or cannot be allocated to the predefined classifications are considered here.

Table 8 Panel (A)-(D) is representing the regressions, where we analyze if there are existing differences between the ethical mutual fund classifications and non-ethical funds. thee regressions are similar to the one presented in equation 5. The only difference is that now we have one dummy variable for each of our five classifications of ethical funds. Each Panel is considering a region or country. Panel A accounts for all countries. Panel B for the Non-U.S. countries. Panel C shows U.S. Panel D is facing the European countries and Panel E the Non-European and Non-U.S. countries.

Column (1) presents the non-ethical funds. Column (2) is representing the ethical and other classification. These variables are interacting with the dummy ethics and other that takes the value one if it contains the ethical related terms and zero if not. Column (3) is representing the social and sustainability classification. These variables are interacting with the social and sustainability dummy that takes the value one if it contains the social or sustainability related terms and zero if not. Column (4) is shows the opportunities classification. These variables are interacting with the opportunities dummy that takes the value one if it contains the opportunity related terms and zero if not. Column (5) indicates the religious classification. These variables are interacting with the religious dummy that takes the value one if it contains the religious related terms and zero if not. Column (6) is representing the ecological and environmental classification. These variables are interacting with the ecological and environmental dummy that takes the value one if it contains the ecological or environmental related terms and

zero if not. All regressions include time fixed effects, country fixed effects and geographical focus fixed effects. Additionally, we show the number of observations. Moreover, we use regional factors for the calculation of the performance. We show the raw returns ranked by the bottom 20%, middle 60% and top 20% performers.

Table 8 - Regression Non-Ethical and Ethical Classification

Panel A - All Countries

	All Countries					
	Non-ethical	Ethical				
		Ethics and Other	Social and Sustainability	Opportunities	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.4748***	0.0347	-0.1946***	-0.1128***	5.4057**	-0.0970**
	(54.68)	(0.20)	(-3.37)	(-3.01)	(2.13)	(-2.04)
Raw return bottom 20 t-1	-0.8198***	1.5368	1.3050	5.6163	-2.2833	-4.6537***
	(-2.82)	(1.29)	(-4.29)	(0.92)	(-1.33)	(-2.69)
Raw return mid 60 t-1	38.2166***	-4.7899	-7.9705	11.8795	16.4664*	-17.0913***
	(21.85)	(-0.71)	(-1.39)	(0.53)	(1.78)	(-2.63)
Raw return top 20 t-1	-0.9458***	-4.1563***	-4.6950***	5.6163	-2.2885	1.5368
	(-3.69)	(-2.58)	(-4.29)	(0.92)	(-1.45)	(1.29)
4f alpha t-1	14.2001***	-32.6012***	-7.9705	11.8795	16.4664*	-20.7000**
	(7.23)	(-3.97)	(-1.39)	(0.53)	(1.78)	(-2.14)
Dummy Ethical		-3.0516	-2.1197	-11.1986***	-9.3579	3.4902
		(-1.12)	(-0.63)	(-2.89)	(-1.42)	(1.63)
Log Size t-1	-0.2803***	0.5150	0.0750	0.2300	4.5018*	0.2649
	(-2.83)	(0.57)	(0.21)	(0.39)	(1.94)	(1.17)
Log Family Size t-1	0.3742***	-0.3396	-0.0185	-0.0307	-0.3297	-0.3923**
	(10.52)	(-1.03)	(-0.10)	(-0.08)	(-0.98)	(-2.52)
Age t-1	-0.4797***	2.9504***	2.1474**	2.8462***	0.4648	0.8045
	(-7.47)	(2.78)	(2.36)	(2.79)	(0.16)	(1.31)
TER t-1	-1.0480***	-0.4999	-0.7398	1.0920	2.2743	0.4797
	(-7.13)	(-0.48)	(-1.14)	(1.26)	(1.23)	(0.91)
Loads t-1	-0.4797***	0.0971	-0.1345	-0.0453	-0.0735	0.0115
	(-7.47)	(0.32)	(-0.88)	(2.79)	(-0.23)	(0.10)
Time fixed effects			YES			
Country fixed effects			YES			
Geographical focus fixed effects			YES			
Adjusted R-Squared			0.248			
Number of observations			498200			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel A shows the regression for all countries. From Column (1) we can see a positive and significant relation between flows and past performance. Investors in non-ethical funds chase past performance, putting more money in funds that perform well, whether performance is measure using raw returns or four-factor alpha. These results are consistent with previous studies, including Ferreira et. al. (2012). When we look at the different classification types for ethical funds, we see from Column (3), (4) and (6) statistically significant negative flows for

each ethical fund classification. There is a negative relation between flows and past performance. Investors react less to bottom and middle performing environmental funds. On the other hand, we see that religious ethical funds react more to middle performers, while ethical and social fund investors react less to top performer. Investors mainly invest in older funds that contain ethical, social and opportunity terms. Larger religious ethical funds tend to increase the flows. Religious fund investors react positively to the four-factor alpha. That means these religious investors are more sophisticated (see Ferreira et. al. 2012)). Investors in funds that contain ethical and ecological terms react less to four-factor alpha. We would expect that more sophisticated investors react more to the performance measured as the four-factor alpha as previous studies has shown (Ferreira et. al. (2012)). So, we can say that ethical and ecological investors react less to four-factor alpha and therefore are less sophisticated than religious ethical fund investors.

Panel B shows the regression for Non-U.S. countries. From Column (1) we can see a positive and significant relation between flows and past performance. Investors in non-ethical funds chase past performance, putting more money in funds that perform well, whether performance is measure using raw returns or four-factor alpha. Non-ethical fund investors react less to bottom performing and more to middle performing funds. These results are consistent with previous studies, including Ferreira et. al. (2012). When we look at the different classification types for ethical funds, we see from Column (4) and (6) statistically significant positive flows for each ethical fund classification. There is a positive relation between flows and past performance. Non-U.S. Investors react less to bottom performing environmental funds. On the other hand, we see that Non-U.S. investors in religious ethical funds react less to bottom and top performers. Also, ethical and social fund investors react less to top performer. Investors mainly invest in older funds that contain ethical and social terms. Larger social ethical funds tend to decrease the flows. Moreover, the family size of these social funds is also decreasing the flows.

Panel B - Non-U.S.

	Non-U.S.					
	Non-ethical	Ethical				
		Ethics and Other	Social and Sustainability	Opportunities	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.1919***	-0.1984	0.0693	0.1881***	4.7990	0.1746***
	(24.36)	(-1.40)	(0.98)	(19.42)	(1.07)	(3.44)
Raw return bottom 20 t-1	-0.5714**	1.5514	-1.3290	6.6241	-3.8982*	-3.0300**
	(-1.98)	(1.15)	(-3.03)	(0.79)	(-1.76)	(-2.10)
Raw return mid 60 t-1	17.2250***	-6.7978	-8.5364	23.9997	13.9116	-7.9099
	(10.75)	(-0.70)	(-1.10)	(0.78)	(1.05)	(-1.03)
Raw return top 20 t-1	0.2976	-3.0340*	-3.6300***	6.6241	-5.6272**	1.5514
	(1.22)	(-1.81)	(-3.03)	(0.79)	(-2.27)	(1.15)
4f alpha t-1	11.1839***	-11.7228	-8.5364	23.9997	13.9116	-17.2473
	(6.06)	(-0.84)	(-1.10)	(0.78)	(1.05)	(-1.42)
Dummy Ethical		0.9276	4.3543	-8.0500***	-10.2376	4.2969**
		(0.43)	(1.58)	(-2.77)	(-1.28)	(1.99)
Log Size t-1	0.0306	-1.1022	-0.5376*	-0.0038	5.3082*	-0.1948
	(0.35)	(-1.45)	(-1.83)	(-0.01)	(1.80)	(-0.84)
Log Family Size t-1	0.2898***	-0.0698	-0.2621*	0.1449	0.1505	-0.1205
	(10.28)	(-0.35)	(-1.95)	(0.37)	(0.33)	(-0.94)
Age t-1	-0.1720***	2.1679**	1.1491*	1.1929	-0.3418	-0.4058
	(-3.80)	(2.41)	(1.81)	(0.94)	(-0.10)	(-0.84)
TER t-1	-0.5124***	-0.6533	-0.6343	0.5244	1.2232	0.0791
	(-3.83)	(-0.85)	(-1.45)	(0.40)	(0.60)	(0.13)
Loads t-1	-0.1720***	0.0366	-0.0670	-0.3490	-0.2240	0.1431
	(-3.80)	(0.27)	(-0.44)	(0.94)	(-0.59)	(1.04)
Time fixed effects			YES			
Country fixed effects			YES			
Geographical focus fixed effects			YES			
Adjusted R-Squared			0.091			
Number of observations			335899			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel C is showing the regression output for U.S.

Before we continue with the analysis, we need to mention that there is no religious fund in the United States, therefore we can't take any conclusions about this classification.

From Column (1) we can see a positive and significant relation between flows and past performance. U.S. Investors in non-ethical funds chase past performance, putting more money in funds that perform well, whether performance is measure using raw returns or four-factor alpha.

We see that investors in non-ethical funds in the U.S. react less to bottom and top performers and more to middle performer funds. When we look at the different classification types for ethical funds, we see from Column (3), (4) and (6) statistically significant negative flows for each ethical fund classification. There is a negative relation between flows and past perfor-

mance. U.S. Investors social and environmental funds react less to bottom performers. Moreover U.S. investors in social, opportunity and environmental funds react less to middle performers compared to non-ethical U.S. investors. Investors in social and opportunity funds react less to four factor alpha and therefore are less sophisticated compared to U.S. investors in non-ethical funds.

Considering the additional control variables, we see that U.S. investors invest mainly in older environmental funds and younger opportunity funds. Moreover, results indicate that environmental funds that charge more, increase the flows. On the other hand, opportunity funds that charge more decrease the level of flows. Moreover, results show that larger family fund sizes increase the fund flows for opportunity funds, while it is decreasing for funds that contain ethical and environmental terms.

Panel C - U.S.

	U.S.					
	Non-ethical	Ethical				
		Ethics and Other	Social and Sustainability	Opportunities	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.6454***	0.1070	-0.3720***	-0.5919***		-0.3665***
	(83.70)	(1.45)	(-4.83)	(-52.38)		(-4.82)
Raw return bottom 20 t-1	-1.8997***	0.1724	5.7407***	6.8676		-11.8959***
	(-2.72)	(0.11)	(-3.63)	(1.06)		(-2.70)
Raw return mid 60 t-1	21.3910***	-8.4669	-17.0710*	-25.0147***		-45.9186***
	(4.01)	(-0.75)	(-1.87)	(-3.25)		(-9.03)
Raw return top 20 t-1	-1.5405**	-2.9397	-5.8659***	6.8676		0.1724
	(-2.39)	(-0.89)	(-3.63)	(1.06)		(0.11)
4f alpha t-1	88.4493***	-13.5968	-17.0710*	-25.0147***		-26.2480
	(13.53)	(-0.37)	(-1.87)	(-3.25)		(-0.82)
Dummy Ethical		1.2407	-20.0714**	-524.7943***	NA	6.4634
		(0.21)	(-2.01)	(-10.16)		(1.39)
Log Size t-1	-0.4367***	2.0314	1.7747	-0.6487		0.0892
	(-2.58)	(1.58)	(1.11)	(-0.45)		(0.09)
Log Family Size t-1	0.3253***	-0.8476*	1.1755	61.5777***		-1.4560**
	(6.92)	(-1.65)	(1.25)	(10.27)		(-2.50)
Age t-1	-0.4088***	1.1794	-0.7697	-56.1509***		6.6676*
	(-5.23)	(0.68)	(-0.28)	(-9.26)		(1.74)
TER t-1	-2.8043***	-1.1825	-1.2295	4.8549		1.3944
	(-6.72)	(-0.74)	(-0.32)	(1.59)		(1.39)
Loads t-1	-0.4088***	0.2437	0.1014	-32.1630***		1.1192*
	(-5.23)	(0.76)	(0.16)	(-9.26)		(1.83)
Time fixed effects			YES			
Country fixed effects			YES			
Geographical focus fixed effects			YES			
Adjusted R-Squared			0.436			
Number of observations			162301			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

The following output in Panel D is going to be the analysis of the European market.

From Column (1) we can see a positive and significant relation between flows and past performance. European Investors in non-ethical funds chase past performance, putting more money in funds that perform well, whether performance is measure using raw returns or four-factor alpha. Moreover, we see that investors in non-ethical funds in the Europe react more to middle and top performer funds. When we look at the different classification types for ethical funds, we see from Column (2) statistically significant negative flows for each ethical fund classification. There is a negative relation between flows and past performance. European investors react less to bottom performer funds that contain ethical terms. Moreover, European investors funds that use ethical terms react less to four factor alpha and therefore are less sophisticated compared to non-ethical European investors. From Column (4) and (6) results indicate significantly positive flow-performance relationship for opportunity and environmental funds. That means European investors in these types of funds chase past performance, putting more money in funds that perform well. Furthermore, European investors in religious funds react less to bottom and top performers.

Panel D - Europe

	Europe					
	Non-ethical	Ethical				
		Ethics and Other	Social and Sustainability	Opportunities	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.2246***	-0.1477***	0.0325	0.1603***	5.3265	0.1583***
	(23.04)	(-4.10)	(0.34)	(14.66)	(0.85)	(2.95)
Raw return bottom 20 t-1	0.3456	-4.1573***	-4.5394***	6.9044	-6.4861*	-2.2023
	(0.83)	(-3.46)	(1.30)	(0.83)	(-1.95)	(-1.13)
Raw return mid 60 t-1	19.4754***	-6.4909	-3.1856	31.7595	2.1519	-6.5517
	(6.94)	(-0.96)	(-0.27)	(1.07)	(0.11)	(-0.49)
Raw return top 20 t-1	1.1263***	1.2030	1.2595	-2.3215	-5.0286*	0.7207
	(3.27)	(1.19)	(1.30)	(-1.53)	(-1.71)	(0.30)
4f alpha t-1	15.9546***	-49.2396***	-3.1856	31.7595	2.1519	-28.0821
	(4.42)	(-5.58)	(-0.27)	(1.07)	(0.11)	(-1.38)
Dummy Ethical		-1.3128	4.7464	-8.8418***	-12.6827	1.8544
		(-0.56)	(1.32)	(-3.06)	(-1.26)	(0.67)
Log Size t-1	-0.0448	0.7983***	-0.7880*	0.0713	5.9456	-0.1746
	(-0.38)	(2.71)	(-1.73)	(0.09)	(1.63)	(-0.51)
Log Family Size t-1	0.3013***	-0.4514***	-0.2176	0.1407	0.2501	-0.0469
	(7.86)	(-3.32)	(-1.15)	(0.33)	(0.46)	(-0.35)
Age t-1	-0.1524***	1.1100	1.7041**	1.3453	0.7518	0.1308
	(-2.80)	(1.51)	(2.10)	(1.09)	(0.17)	(0.17)
TER t-1	-0.6257***	1.0859**	-0.3681	0.7915	0.8515	0.5676
	(-3.14)	(1.99)	(-0.62)	(0.63)	(0.29)	(0.40)
Loads t-1	-0.1524***	0.0842	-0.2818	-0.3598	-0.1602	-0.0065
	(-2.80)	(0.85)	(-1.47)	(1.09)	(-0.33)	(-0.05)
Time fixed effects			YES			
Country fixed effects			YES			
Geographical focus fixed effects			YES			
Adjusted R-Squared			0.118			
Number of observations			198218			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Taking into consideration the additional control variables we see that European investors invest mainly in older social funds. Moreover, results indicate that larger funds that contain ethical terms increase the level of flow, while the family size show an opposite outcome. In addition, funds with an ethical term that charge more, increase the flows into the fund.

The following output in Panel E is going to be the analysis of the Non-European and Non-U.S. countries. In the Non-European and Non-U.S. market we just have data for the social, ethics and ecological classification.

From Column (1) we can see a positive and significant relation between flows and past performance. European Investors in non-ethical funds chase past performance, putting more money in funds that perform well when performance is measured using raw return. Non-ethical investors in Non-European and Non-U.S. countries react less to four factor alpha.

Moreover, we see that investors in non-ethical funds in the Europe react less to bottom and more to middle performer funds. When we look at the different classification types for ethical funds, we see from Column (3) that investors react less to bottom and middle performing ecological funds and more to top performing funds. Moreover, the larger the ecological funds, the smaller is the fund flow. We also see a positive significant relation between fund flows and past performance for social funds. Meaning that, funds that perform well, also increase the flows.

Panel E – Non-Europe and Non-U.S.

Non-Europe and Non-U.S.

	Non-ethical	Ethical				
		Ethics and Other	Social and Sustainability	Opportunities	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.1204***	-0.1256	0.1469***			-0.0939
	(8.93)	(-0.86)	(3.70)			(-0.98)
Raw return bottom 20 t-1	-2.5102***	-1.7188	-0.8249			-5.4920***
	(-6.38)	(-0.42)	(-0.63)			(-3.17)
Raw return mid 60 t-1	21.9542***	-8.2880	-9.1849			-20.3522***
	(10.60)	(-0.30)	(-0.96)			(-2.86)
Raw return top 20 t-1	0.2179	1.5036	-0.8597			3.3556***
	(0.61)	(0.59)	(-0.63)			(2.87)
4f alpha t-1	-10.7351***	36.0738	-9.1849			-2.6356
	(-4.57)	(1.11)	(-0.96)			(-0.36)
Dummy Ethical		2.8049	2.2053	NA	NA	8.6204***
		(0.34)	(0.62)			(4.26)
Log Size t-1	0.1555	-3.3665*	-0.6781**			-0.4563
	(1.16)	(-1.87)	(-2.14)			(-1.40)
Log Family Size t-1	0.3031***	-0.2339	-0.2148			-0.5471***
	(6.52)	(-0.30)	(-1.34)			(-3.56)
Age t-1	-0.1495**	6.4632*	0.6827			0.7764
	(-2.03)	(1.67)	(0.76)			(1.23)
TER t-1	-0.4787**	-1.8106	0.3483			-0.4425
	(-2.44)	(-0.90)	(0.54)			(-0.80)
Loads t-1	-0.1495**	-0.3706	-1.0764***			0.1511
	(-2.03)	(-0.44)	(-3.20)			(0.07)
Time fixed effects			YES			
Country fixed effects			YES			
Geographical focus fixed effects			YES			
Adjusted R-Squared			0.072			
Number of observations			137681			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Considering the additional control variables, we see that Non-European and Non-U.S. investors invest mainly in older funds that contain ethical terms. Moreover, results indicate that environmental funds that charge more, increase the flows. On the other hand, social funds that charge more decrease the level of flows. Moreover, results show that larger fund sizes decrease the fund flows for ethics and social funds.

6 Conclusion

There are just a few research papers analyzing the flow-performance relationship with an international data set.

In this dissertation we study the difference of ethical and non-ethical funds. Main findings suggest that flows in ethical funds are significantly lower than flows in non-ethical funds. Fund performance is not the leading criteria for investments in ethical funds. Therefore, we can state that flows into ethical funds are not dependent on the past performance. Moreover, results show that ethical funds have lower raw returns than non-ethical funds. Since investors in ethical funds derive different non-monetary benefits from their investments, they are willing to give away additional return to satisfy their needs. Generally, the results show that ethical funds have lower four-factor alphas than non-ethical funds. Fund managers are not able to overperform the market, since they are restricted in their investment horizon. Taking into consideration the whole sample, we see that ethical fundss show higher expense ratio than non-ethical funds, while European countries and U.S. show oppositional results. Moreover, we can see that the TNA for ethical funds are significantly lower comparing to non-ethical funds. Our results indicate that there are differences in the flow-performance relationship of ethical funds compared to non-ethical funds. So, do ethical fund investors react to (past) performance and are there differences in how these investors react to four-factor alpha?

If ethical fund investors are motivated by other incentives, they would care less about performance and they are expected to react less to past performance therefore also react less to four-factor alpha, i.e., behaving like unsophisticated investors. Generally, results in 5.1 and 5.2 indicate that ethical fund investors are behaving like unsophisticated investors.

Results in the section 5.1. show us that investors chase past performance, confirming former research (Ferreira et. al. (2012)). Considering all countries, we see that ethical fund investors react more to past raw returns and less to four-factor alpha. Results provide consistent evidence for all regions, that ethical fund investors mainly invest in older funds. For Non-U.S. countries we get similar results. Larger ethical fund families in Non-U.S. countries get less flows. U.S. investors also react less to four-factor alpha, and therefore behaving like unsophisticated investors. Moreover, we see that larger U.S. ethical funds can increase fund flows. In Europe, ethical fund investors react more to raw returns and less to four-factor alpha. Moreover, larger European ethical fund families get less flows.

For other countries than U.S. and Europe we see that larger ethical funds decrease the level of fund flows. Moreover, we see that ethical funds that charge more, get less flows.

By classifying ethical funds, we achieve following conclusions by the results in section 5.2.

Considering the flow-performance relationship, we see that for all countries this relation is negative for social, opportunity and ecological funds. In U.S. we get similar results for these classifications. Non-U.S. countries show a negative relation between fund flow and performance for opportunity and ecological funds. Nonetheless, we also get slightly different results for Europe. The flow-performance relationship between funds with ethical terms is negative, while it is positive for opportunity and ecological funds. Other than U.S. and European countries show a positive flow-performance relation for social funds.

Interestingly is that, in the bottom performing funds U.S. and European investors react to different types of funds. While U.S. investors react less to social and environmental funds, European investors show similar reaction on funds that contain ethical and religious terms. Furthermore, results show that for all countries, investors react less to top performing funds that contain ethical and social terms. European investors react less to top performing religious funds, while investors Non-European and Non-U.S. countries react more to environmental funds.

Considering all countries, results indicate that investors in religious funds react more to four-factor alpha and therefore are more sophisticated investors. On the other hand, U.S. investors react less to the four-factor alpha for social and opportunity funds and European investors react less to funds that contain ethical terms. That means investors in these types of funds are less sophisticated.

Considering the loads of the ethical fund types, we get some interesting results. On the one hand, we see that European funds with ethical terms and environmental U.S. funds that charge more, increase the level of flow. On the other hand, opportunity U.S. funds and social funds from Non-European and Non-U.S. countries that charge more, decrease the level of flows.

Moreover, findings on the fund age for all countries indicate that investors mainly invest in older funds that contain ethical, social and opportunity terms. While Europeans invest predominantly invest in older social funds, U.S. investors tend to invest in older environmental and younger opportunity funds.

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Appendix I – Variables Definition

Table 1 - Variable Definition

Variable	Definition
Raw return	The net return of the specified fund (% per quarter)
Four-factor alpha	The four-factor alpha (% per quarter) measured by the three years of past monthly excess returns in $ and with regional factors
TNA	Total Net Assets of a fund in millions of USD (Lipper)
TNA family	Family total net assets declared in millions USD of further open-end equity funds in the same fund management company without the own TNA (Lipper)
Age	Fund age is declared in years and since it is launched (Lipper)
Total Expense Ratio	This ratio is expressed by dividing the total expenses of the fund by the TNA (Lipper)
Total Loads	Total loads are estimated by summing up the front-end and back-end loads for each fund (Lipper): Total Loads = Front-end load + Back-end load
Flow	The fund flow represents the internal growth of the TNA (in local currency) per quarter. Dividends and other gains are excluded in the calculation
Ethical Term	Dummy variable that takes the value of one if the fund is ethical and zero otherwise
Ethical Fund Classification	Differentiation of the ethical fund by classifying into different categories

Appendix II – Ethical Funds Classification

Panel A - List of Words in Ethical Funds Names

• Clean Energy	• Engagement
• Clean Technology	• Opportunities
• Ecology	• Opportunity
• Environment	• Pension
• Green Growth	• Life
• Oeko (ecology)	• Human
• Renewable	• Zukunft (future)
• Impact	• Islamic
• Umwelt (environment)	• Sharia
• Nachhaltigkeit (Sustainability)	• Ethica (Ethical)
• Sustain	• Ethical
• Sustainability	• Ethik (Ethical)
• Sustainable	• Ethique (Ethical)
• Social	• Calvert
• Socially Responsible	• MMA
• Sozial (social)	• Parnassus
• SRI Fair	• Value
• Future	

translation in parentheses

Panel B - Ethical funds categories

Ecological and Environmental	Sustainability and Social	Opportunities	Religious	Ethics and Other
• Clean Energy	• Nachhaltigkeit (Sustainability)	• Future	• Islamic	• Ethica (Ethical)
• Clean Technology	• Sustain	• Engagement	• Sharia	• Ethical
• Ecology	• Sustainability	• Opportunities		• Ethik (Ethical)
• Environment	• Sustainable	• Opportunity		• Ethique (Ethical)
• Green Growth	• Social	• Pension		• Calvert
• Oeko (Ecology)	• Socially Responsible	• Life		• MMA
• Renewable	• Sozial (social)	• Human		• Parnassus
• Impact	• SRI	• Zukunft (Future)		• Value
• Umwelt (Environment)	• Fair			

translation in parentheses

Appendix III – Robustness Regression Flow-Performance Ethical and Non-Ethical

Table 1 - Regression Flow-Performance Ethical and Non-Ethical (Local Factors)

Panel A - All countries

All Countries						
	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.4746***	0.4745***	0.4750***	0.4749***	-0.0835	-0.0835
	(54.85)	(54.84)	(54.72)	(54.72)	(-0.92)	(-0.92)
Raw return t-1	36.3271***		36.1243***		9.2774***	
	(23.75)		(23.52)		(3.08)	
Raw return bottom 20 t-1		-0.8867***		-0.8142***		-4.0608***
		(-3.10)		(-2.81)		(-4.63)
Raw return mid 60 t-1		37.3135***		37.3733***		-7.1438*
		(21.78)		(21.63)		(-1.77)
Raw return top 20 t-1		-0.9202***		-0.9512***		1.6682**
		(-3.65)		(-3.72)		(2.57)
4f alpha t-1	15.3058***	15.2353***	15.7433***	15.7126***	-26.9699***	-28.8955***
	(8.41)	(8.26)	(8.55)	(8.42)	(-4.23)	(-4.56)
Dummy Ethical					-2.1252	-1.4881
					(-1.50)	(-1.05)
Log Size t-1	-0.2749***	-0.2774***	-0.2768***	-0.2795***	0.3651	0.3651
	(-2.80)	(-2.83)	(-2.79)	(-2.82)	(0.77)	(0.77)
Log Family Size t-1	0.3661***	0.3665***	0.3713***	0.3718***	-0.2163	-0.2272
	(10.37)	(10.38)	(10.44)	(10.45)	(-1.41)	(-1.48)
Age t-1	-0.4730***	-0.4769***	-0.4751***	-0.4789***	2.0669***	2.1575***
	(-7.46)	(-7.53)	(-7.40)	(-7.46)	(4.04)	(4.18)
TER t-1	-1.0743***	-1.0522***	-1.0750***	-1.0533***	-0.3388	-0.3739
	(-7.41)	(-7.26)	(-7.33)	(-7.18)	(-0.71)	(-0.79)
Loads t-1	-0.4730***	-0.4769***	-0.4751***	-0.4789***	0.0233	0.0159
	(-7.46)	(-7.53)	(-7.40)	(-7.46)	(0.16)	(0.11)
Time fixed effects	Yes					
Country fixed effects	Yes					
Geographical focus fixed effects	Yes					
Adjusted R-Squared	0.248					
Number of observations	498200					

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel B - Non-U.S.

	Non-U.S.					
	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.1926***	0.1925***	0.1923***	0.1922***	0.0381	0.0385
	(24.57)	(24.56)	(24.40)	(24.39)	(0.65)	(0.66)
Raw return t-1	17.6812***		17.5674***		6.0833	
	(13.93)		(13.77)		(1.56)	
Raw return bottom 20 t-1		-0.6252**		-0.5656**		-3.0215***
		(-2.21)		(-1.97)		(-3.25)
Raw return mid 60 t-1		15.7367***		15.8276***		-6.2075
		(10.28)		(10.24)		(-1.30)
Raw return top 20 t-1		0.3034		0.2829		1.0717*
		(1.27)		(1.17)		(1.71)
4f alpha t-1	13.8119***	13.3512***	13.9779***	13.5497***	-9.2177	-10.2437
	(7.94)	(7.60)	(7.94)	(7.62)	(-1.16)	(-1.29)
Dummy Ethical					2.1052	2.6028*
					(1.42)	(1.71)
Log Size t-1	0.0170	0.0168	0.0294	0.0291	-0.6763**	-0.6765**
	(0.19)	(0.19)	(0.33)	(0.33)	(-2.42)	(-2.43)
Log Family Size t-1	0.2844***	0.2842***	0.2883***	0.2882***	-0.1615*	-0.1721**
	(10.26)	(10.25)	(10.23)	(10.23)	(-1.89)	(-2.01)
Age t-1	-0.1733***	-0.1741***	-0.1716***	-0.1723***	1.2709***	1.3421***
	(-3.86)	(-3.88)	(-3.79)	(-3.81)	(2.92)	(3.08)
TER t-1	-0.5273***	-0.5252***	-0.5214***	-0.5196***	-0.3498	-0.3534
	(-3.99)	(-3.98)	(-3.90)	(-3.89)	(-1.02)	(-1.04)
Loads t-1	-0.1733***	-0.1741***	-0.1716***	-0.1723***	0.0158	0.0062
	(-3.86)	(-3.88)	(-3.79)	(-3.81)	(0.17)	(0.07)
Time fixed effects	Yes					
Country fixed effects	Yes					
Geographical focus fixed effects	Yes					
Adjusted R-Squared	0.091					
Number of observations	335899					

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel C - U.S.

U.S.						
	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.6455***	0.6454***	0.6455***	0.6454***	-0.0274	-0.0275
	(83.84)	(83.87)	(83.68)	(83.71)	(-0.24)	(-0.24)
Raw return t-1	20.6252***		20.6217***		-0.5677	
	(3.98)		(3.97)		(-0.11)	
Raw return bottom 20 t-1		-1.9383***		-1.9016***		-3.2149
		(-2.79)		(-2.72)		(-1.55)
Raw return mid 60 t-1		20.9261***		21.0527***		-15.5938**
		(3.88)		(3.90)		(-2.27)
Raw return top 20 t-1		-1.5238**		-1.5429**		2.3493
		(-2.38)		(-2.39)		(1.14)
4f alpha t-1	87.9913***	87.2574***	88.6468***	87.9270***	-64.2979***	-64.2075***
	(13.49)	(13.29)	(13.54)	(13.35)	(-3.02)	(-3.01)
Dummy Ethical					-6.6332**	-5.9207**
					(-2.45)	(-2.14)
Log Size t-1	-0.4163**	-0.4230**	-0.4335**	-0.4402***	1.8759*	1.8645*
	(-2.47)	(-2.52)	(-2.56)	(-2.60)	(1.93)	(1.92)
Log Family Size t-1	0.3105***	0.3166***	0.3201***	0.3261***	-0.5096	-0.5157
	(6.65)	(6.77)	(6.83)	(6.94)	(-1.20)	(-1.21)
Age t-1	-0.3979***	-0.4030***	-0.4046***	-0.4097***	2.2278*	2.1911*
	(-5.20)	(-5.26)	(-5.18)	(-5.24)	(1.72)	(1.68)
TER t-1	-2.8552***	-2.7781***	-2.8748***	-2.7976***	0.5058	0.4182
	(-6.97)	(-6.76)	(-6.91)	(-6.70)	(0.47)	(0.39)
Loads t-1	-0.3979***	-0.4030***	-0.4046***	-0.4097***	0.1108	0.1215
	(-5.20)	(-5.26)	(-5.18)	(-5.24)	(0.51)	(0.56)
Time fixed effects	Yes					
Country fixed effects	Yes					
Geographical focus fixed effects	Yes					
Adjusted R-Squared	0.435					
Number of observations	162301					

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel D - Europe

Europe						
	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.2254***	0.2254***	0.2253***	0.2249***	0.0786	0.0782
	(23.29)	(23.29)	(23.15)	(23.11)	(1.34)	(1.32)
Raw return t-1	13.5349***		13.9264***		8.9115	
	(5.65)		(5.73)		(1.64)	
Raw return bottom 20 t-1		0.2978		0.3776		-3.6508***
		(0.74)		(0.92)		(-3.17)
Raw return mid 60 t-1		10.8136***		10.9056***		-5.1261
		(3.84)		(3.84)		(-0.67)
Raw return top 20 t-1		1.1211***		1.0986***		0.9614
		(3.33)		(3.20)		(1.30)
4f alpha t-1	27.4202***	27.1026***	27.7099***	27.5529***	-24.2424***	-25.9468***
	(8.78)	(8.65)	(8.72)	(8.69)	(-2.79)	(-2.96)
Dummy Ethical					1.3204	2.0203
					(0.75)	(1.13)
Log Size t-1	-0.0547	-0.0517	0.1199	-0.0439	-0.2121	-0.2861
	(-0.47)	(-0.45)	(1.01)	(-0.37)	(-0.80)	(-1.04)
Log Family Size t-1	0.2943***	0.2946***	0.2134***	0.2995***	-0.2670***	-0.1792*
	(7.84)	(7.84)	(6.00)	(7.82)	(-2.77)	(-1.80)
Age t-1	-0.1581***	-0.1524***	-0.1932***	-0.1514***	1.2468***	1.1358**
	(-2.94)	(-2.83)	(-4.21)	(-2.78)	(2.69)	(2.43)
TER t-1	-0.6062***	-0.6266***	-0.2336	-0.6247***	-0.0066	-0.1701
	(-3.10)	(-3.20)	(-1.22)	(-3.14)	(-0.02)	(-0.45)
Loads t-1	-0.1581***	-0.1524***	-0.1932***	-0.1514***	-0.0210	-0.0036
	(-2.94)	(-2.83)	(-4.21)	(-2.78)	(-0.22)	(-0.04)
Time fixed effects	Yes					
Country fixed effects	Yes					
Geographical focus fixed effects	Yes					
Adjusted R-Squared	0.118					
Number of observations	198218					

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel E - Non-Europe and Non-U.S.

Non-Europe and Non-U.S.

	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.1202***	0.1200***	0.1204***	0.1202***	-0.0243	-0.0241
	(8.97)	(8.94)	(8.93)	(8.90)	(-0.26)	(-0.25)
Raw return t-1	25.4010***		25.3363***		4.6296	
	(14.20)		(14.14)		(0.81)	
Raw return bottom 20 t-1		-2.5354***		-2.4974***		-1.8977
		(-6.55)		(-6.40)		(-1.10)
Raw return mid 60 t-1		21.0857***		21.1459***		-2.3251
		(10.50)		(10.42)		(-0.39)
Raw return top 20 t-1		0.2381		0.2278		0.2759
		(0.68)		(0.64)		(0.23)
4f alpha t-1	-8.7253***	-10.3765***	-8.7169***	-10.3536***	1.3845	0.9881
	(-4.21)	(-4.95)	(-4.19)	(-4.92)	(0.10)	(0.07)
Dummy Ethical					3.2956	3.6620
					(1.50)	(1.59)
Log Size t-1	0.1320	0.1363	0.1519	0.1561	-1.1820**	-1.1874**
	(1.00)	(1.03)	(1.13)	(1.16)	(-2.45)	(-2.45)
Log Family Size t-1	0.3050***	0.3020***	0.3070***	0.3039***	-0.2879*	-0.2932*
	(6.61)	(6.55)	(6.59)	(6.54)	(-1.93)	(-1.95)
Age t-1	-0.1604**	-0.1651**	-0.1463**	-0.1511**	1.3942*	1.4411*
	(-2.16)	(-2.22)	(-1.98)	(-2.05)	(1.86)	(1.91)
TER t-1	-0.4874**	-0.4717**	-0.4862**	-0.4708**	0.2827	0.2850
	(-2.51)	(-2.44)	(-2.48)	(-2.40)	(0.45)	(0.45)
Loads t-1	-0.1604**	-0.1651**	-0.1463**	-0.1511**	-1.2465***	-1.2107***
	(-2.16)	(-2.22)	(-1.98)	(-2.05)	(-5.80)	(-5.70)
Time fixed effects			Yes			
Country fixed effects			Yes			
Geographical focus fixed effects			Yes			
Adjusted R-Squared			0.071			
Number of observations			137681			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Table 2 - Regression Flow-Performance Ethical and Non-Ethical (Global Factors)

Panel A - All Countries

All Countries						
	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.4746***	0.4745***	0.4750***	0.4749***	-0.0820	-0.0819
	(54.83)	(54.83)	(54.70)	(54.70)	(-0.90)	(-0.90)
Raw return t-1	47.9251***		47.7594***		6.7812**	
	(26.00)		(25.87)		(2.24)	
Raw return bottom 20 t-1		-1.2506***		-1.1826***		-3.8208***
		(-4.32)		(-4.04)		(-4.35)
Raw return mid 60 t-1		47.8187***		47.9042***		-9.0143**
		(24.30)		(24.21)		(-2.09)
Raw return top 20 t-1		-0.6817***		-0.7122***		1.5957**
		(-2.70)		(-2.79)		(2.45)
4f alpha t-1	-5.4390**	-6.1157***	-5.0553**	-5.6951**	-21.7711***	-23.1518***
	(-2.44)	(-2.69)	(-2.26)	(-2.49)	(-2.66)	(-2.84)
Dummy Ethical					-2.2832	-1.6927
					(-1.62)	(-1.20)
Log Size t-1	-0.2710***	-0.2737***	-0.2729***	-0.2758***	0.3633	0.3631
	(-2.76)	(-2.79)	(-2.75)	(-2.78)	(0.76)	(0.76)
Log Family Size t-1	0.3674***	0.3678***	0.3726***	0.3730***	-0.2073	-0.2179
	(10.40)	(10.41)	(10.47)	(10.48)	(-1.34)	(-1.42)
Age t-1	-0.4734***	-0.4773***	-0.4753***	-0.4791***	2.1099***	2.2026***
	(-7.46)	(-7.53)	(-7.40)	(-7.46)	(4.13)	(4.27)
TER t-1	-1.0880***	-1.0661***	-1.0876***	-1.0660***	-0.4273	-0.4685
	(-7.50)	(-7.35)	(-7.41)	(-7.26)	(-0.91)	(-1.01)
Loads t-1	-0.4734***	-0.4773***	-0.4753***	-0.4791***	0.0247	0.0173
	(-7.46)	(-7.53)	(-7.40)	(-7.46)	(0.17)	(0.12)
Time fixed effects	Yes					
Country fixed effects	Yes					
Geographical focus fixed effects	Yes					
Adjusted R-Squared	0.248					
Number of observations	498200					

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel B - Non-U.S.

Non-U.S.						
	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.1920***	0.1920***	0.1917***	0.1917***	0.0373	0.0377
	(24.49)	(24.49)	(24.32)	(24.32)	(0.64)	(0.65)
Raw return t-1	13.8354***		13.7259***		7.8187**	
	(8.89)		(8.79)		(2.37)	
Raw return bottom 20 t-1		-0.5581**		-0.5019*		-2.9450***
		(-1.97)		(-1.75)		(-3.20)
Raw return mid 60 t-1		12.3675***		12.4669***		-4.8401
		(7.06)		(7.07)		(-1.02)
Raw return top 20 t-1		0.2316		0.2086		1.1615*
		(0.97)		(0.86)		(1.83)
4f alpha t-1	19.7716***	19.1295***	19.9950***	19.3742***	-16.5342**	-16.5836**
	(8.72)	(8.34)	(8.75)	(8.38)	(-2.01)	(-2.01)
Dummy Ethical					2.0083	2.4690
					(1.35)	(1.63)
Log Size t-1	0.0179	0.0177	0.0303	0.0300	-0.6766**	-0.6782**
	(0.21)	(0.20)	(0.34)	(0.34)	(-2.42)	(-2.44)
Log Family Size t-1	0.2853***	0.2851***	0.2893***	0.2892***	-0.1634*	-0.1726**
	(10.28)	(10.27)	(10.26)	(10.26)	(-1.91)	(-2.02)
Age t-1	-0.1762***	-0.1769***	-0.1743***	-0.1750***	1.3283***	1.3951***
	(-3.93)	(-3.94)	(-3.85)	(-3.87)	(3.03)	(3.18)
TER t-1	-0.5241***	-0.5218***	-0.5178***	-0.5158***	-0.3858	-0.3888
	(-3.97)	(-3.95)	(-3.87)	(-3.86)	(-1.13)	(-1.14)
Loads t-1	-0.1762***	-0.1769***	-0.1743***	-0.1750***	0.0112	0.0028
	(-3.93)	(-3.94)	(-3.85)	(-3.87)	(0.12)	(0.03)
Time fixed effects			Yes			
Country fixed effects			Yes			
Geographical focus fixed effects			Yes			
Adjusted R-Squared			0.091			
Number of observations			335899			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel C - U.S.

U.S.						
	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.6459***	0.6459***	0.6459***	0.6459***	-0.0294	-0.0295
	(83.93)	(83.95)	(83.77)	(83.79)	(-0.25)	(-0.25)
Raw return t-1	29.7172***		29.7809***		-5.3985	
	(5.72)		(5.73)		(-1.03)	
Raw return bottom 20 t-1		-1.7757**		-1.7327**		-3.5906*
		(-2.53)		(-2.46)		(-1.72)
Raw return mid 60 t-1		30.5241***		30.7250***		-20.6556***
		(5.68)		(5.71)		(-2.85)
Raw return top 20 t-1		-1.4559**		-1.4723**		2.0679
		(-2.27)		(-2.28)		(1.01)
4f alpha t-1	73.4544***	72.1853***	73.7070***	72.4619***	-25.6494	-26.5995
	(11.97)	(11.60)	(11.99)	(11.63)	(-1.15)	(-1.18)
Dummy Ethical					-6.2760**	-5.4131**
					(-2.29)	(-1.96)
Log Size t-1	-0.4045**	-0.4108**	-0.4220**	-0.4282**	1.9603**	1.9412**
	(-2.40)	(-2.44)	(-2.49)	(-2.53)	(2.05)	(2.03)
Log Family Size t-1	0.3075***	0.3131***	0.3169***	0.3225***	-0.4964	-0.5007
	(6.56)	(6.67)	(6.74)	(6.84)	(-1.17)	(-1.17)
Age t-1	-0.3951***	-0.3998***	-0.4013***	-0.4061***	1.8141	1.7769
	(-5.14)	(-5.20)	(-5.12)	(-5.18)	(1.40)	(1.36)
TER t-1	-2.9020***	-2.8303***	-2.9259***	-2.8542***	0.8528	0.7530
	(-7.08)	(-6.88)	(-7.04)	(-6.84)	(0.77)	(0.68)
Loads t-1	-0.3951***	-0.3998***	-0.4013***	-0.4061***	0.1109	0.1213
	(-5.14)	(-5.20)	(-5.12)	(-5.18)	(0.51)	(0.55)
Time fixed effects			Yes			
Country fixed effects			Yes			
Geographical focus fixed effects			Yes			
Adjusted R-Squared			0.435			
Number of observations			162301			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel D - Europe

	Europe					
	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.2250***	0.2251***	0.2249***	0.2245***	0.0796	0.0790
	(23.22)	(23.22)	(23.08)	(23.05)	(1.36)	(1.34)
Raw return t-1	16.7180***		18.5528***		10.9524***	
	(6.52)		(7.14)		(3.00)	
Raw return bottom 20 t-1		0.3130		0.3864		-3.6436***
		(0.77)		(0.94)		(-3.13)
Raw return mid 60 t-1		14.5288***		14.6762***		-3.8651
		(4.97)		(4.99)		(-0.59)
Raw return top 20 t-1		1.0501***		1.0235***		1.0754
		(3.11)		(2.98)		(1.43)
4f alpha t-1	24.8405***	24.0509***	22.9317***	24.5716***	-39.0363***	-39.8442***
	(6.57)	(6.31)	(6.01)	(6.41)	(-3.98)	(-3.98)
Dummy Ethical					1.1030	1.8352
					(0.63)	(1.04)
Log Size t-1	-0.0532	-0.0502	0.1273	-0.0420	-0.2569	-0.3413
	(-0.46)	(-0.43)	(1.07)	(-0.36)	(-0.96)	(-1.24)
Log Family Size t-1	0.2944***	0.2947***	0.2113***	0.2998***	-0.2591***	-0.1664*
	(7.83)	(7.84)	(5.93)	(7.82)	(-2.74)	(-1.70)
Age t-1	-0.1626***	-0.1571***	-0.1834***	-0.1556***	1.4153***	1.2953***
	(-3.03)	(-2.92)	(-4.01)	(-2.86)	(2.98)	(2.70)
TER t-1	-0.6038***	-0.6233***	-0.2139	-0.6197***	-0.1453	-0.3329
	(-3.08)	(-3.18)	(-1.12)	(-3.11)	(-0.39)	(-0.88)
Loads t-1	-0.1626***	-0.1571***	-0.1834***	-0.1556***	-0.0343	-0.0189
	(-3.03)	(-2.92)	(-4.01)	(-2.86)	(-0.37)	(-0.19)
Time fixed effects	Yes					
Country fixed effects	Yes					
Geographical focus fixed effects	Yes					
Adjusted R-Squared	0.118					
Number of observations	198218					

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel E: Non-Europe and Non-U.S.

Non-Europe and Non-U.S.

	All		Non-ethical		Ethical	
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.1205***	0.1204***	0.1206***	0.1206***	-0.0233	-0.0228
	(9.01)	(8.99)	(8.96)	(8.95)	(-0.24)	(-0.24)
Raw return t-1	13.2656***		13.2626***		0.6382	
	(7.49)		(7.47)		(0.10)	
Raw return bottom 20 t-1		-2.1516***		-2.1107***		-2.1175
		(-5.52)		(-5.37)		(-1.21)
Raw return mid 60 t-1		10.8644***		10.9979***		-7.7478
		(5.52)		(5.54)		(-1.04)
Raw return top 20 t-1		-0.0386		-0.0496		0.3552
		(-0.11)		(-0.14)		(0.30)
4f alpha t-1	12.0967***	9.8857***	11.9427***	9.7320***	12.7753	14.2668
	(5.39)	(4.32)	(5.27)	(4.21)	(0.99)	(1.11)
Dummy Ethical					3.2411	3.6495
					(1.48)	(1.59)
Log Size t-1	0.1270	0.1311	0.1473	0.1513	-1.2144**	-1.2228**
	(0.96)	(0.99)	(1.10)	(1.13)	(-2.49)	(-2.48)
Log Family Size t-1	0.3032***	0.3001***	0.3050***	0.3020***	-0.2876*	-0.2934*
	(6.57)	(6.52)	(6.56)	(6.51)	(-1.94)	(-1.96)
Age t-1	-0.1562**	-0.1609**	-0.1421*	-0.1468**	1.4354*	1.4801*
	(-2.11)	(-2.17)	(-1.93)	(-2.00)	(1.87)	(1.92)
TER t-1	-0.4869**	-0.4731**	-0.4866**	-0.4731**	0.3393	0.3494
	(-2.51)	(-2.44)	(-2.48)	(-2.41)	(0.53)	(0.54)
Loads t-1	-0.1562**	-0.1609**	-0.1421*	-0.1468**	-1.2183***	-1.1805***
	(-2.11)	(-2.17)	(-1.93)	(-2.00)	(-5.36)	(-5.29)
Time fixed effects			Yes			
Country fixed effects			Yes			
Geographical focus fixed effects			Yes			
Adjusted R-Squared			0.071			
Number of observations			137681			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Appendix IV – Robustness Regression Non-Ethical and Ethical Classification

Table 1 - Regression Non-Ethical and Ethical Classification (Local Factor)

Panel A - All countries

All Countries

	Non-ethical	Ethical				
		Ethics and other	Social and Sustain-ability	Opportunities	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.4749***	0.0338	-0.1946***	-0.1118***	6.6194***	-0.0970**
	(54.71)	(0.20)	(-3.38)	(-2.83)	(2.70)	(-2.04)
Raw return bottom 20 t-1	-0.8115***	1.4621	1.5320	5.6112	-2.4212	-4.8013***
	(-2.80)	(1.22)	(-4.37)	(0.96)	(-1.50)	(-2.83)
Raw return mid 60 t-1	37.3626***	-3.5988	-7.7204	5.9434	24.7420***	-14.6653**
	(21.62)	(-0.55)	(-1.36)	(0.30)	(2.58)	(-2.06)
Raw return top 20 t-1	-0.9521***	-4.1332**	-4.6984***	5.6112	-2.2288	1.4621
	(-3.72)	(-2.54)	(-4.37)	(0.96)	(-1.28)	(1.22)
4f alpha t-1	15.7282***	-32.6861***	-7.7204	5.9434	24.7420***	-26.8664**
	(8.43)	(-3.06)	(-1.36)	(0.30)	(2.58)	(-2.46)
Dummy Ethical		-3.0098	-2.3213	-10.8381***	-8.1465	3.4358
		(-1.10)	(-0.68)	(-3.02)	(-1.27)	(1.55)
Log Size t-1	-0.2805***	0.5196	0.0858	0.1964	4.4739*	0.2779
	(-2.83)	(0.57)	(0.24)	(0.36)	(1.93)	(1.24)
Log Family Size t-1	0.3725***	-0.3498	-0.0105	-0.0332	-0.5413*	-0.3918**
	(10.47)	(-1.08)	(-0.06)	(-0.09)	(-1.86)	(-2.41)
Age t-1	-0.4797***	2.9506***	2.1377**	3.0352***	-0.0893	0.7935
	(-7.47)	(2.79)	(2.35)	(3.35)	(-0.03)	(1.28)
TER t-1	-1.0551***	-0.4773	-0.6901	0.7977	3.0275	0.5375
	(-7.19)	(-0.46)	(-1.07)	(1.11)	(1.53)	(1.00)
Loads t-1	-0.4797***	0.1062	-0.1295	-0.0713	-0.1024	0.0154
	(-7.47)	(0.35)	(-0.85)	(3.35)	(-0.34)	(0.13)
Time fixed effects			YES			
Country fixed effects			YES			
Geographical focus fixed effects			YES			
Adjusted R-Squared			0.248			
Number of observations			498200			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel B - Non-U.S.

Non-U.S.						
	Non-ethical	Ethical				
		Ethics and other	Social and Sustain-ability	Opportunities	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.1922***	-0.2022	0.0693	0.1916***	5.5338	0.1735***
	(24.38)	(-1.44)	(0.99)	(20.84)	(1.21)	(3.41)
Raw return bottom 20 t-1	-0.5630**	1.4788	-0.7439	6.4269	-3.9792*	-3.2381**
	(-1.96)	(1.11)	(-3.06)	(0.83)	(-1.79)	(-2.31)
Raw return mid 60 t-1	15.8346***	1.9909	-8.9084	9.4178	21.9982	-3.8963
	(10.24)	(0.23)	(-1.23)	(0.34)	(1.58)	(-0.44)
Raw return top 20 t-1	0.2845	-3.1290*	-3.6192***	6.4269	-5.5221**	1.4788
	(1.17)	(-1.86)	(-3.06)	(0.83)	(-2.10)	(1.11)
4f alpha t-1	13.5466***	-29.6595**	-8.9084	9.4178	21.9982	-26.8958*
	(7.61)	(-2.40)	(-1.23)	(0.34)	(1.58)	(-1.80)
Dummy Ethical		1.1920	4.2583	-7.4521***	-8.6443	4.3733*
		(0.56)	(1.52)	(-3.87)	(-1.05)	(1.96)
Log Size t-1	0.0295	-1.0656	-0.5386*	-0.1716	5.0860*	-0.1692
	(0.33)	(-1.44)	(-1.84)	(-0.26)	(1.69)	(-0.75)
Log Family Size t-1	0.2884***	-0.0872	-0.2572*	0.2161	-0.0475	-0.1126
	(10.23)	(-0.45)	(-1.90)	(0.52)	(-0.10)	(-0.85)
Age t-1	-0.1716***	2.1373**	1.1387*	1.6793**	-0.4888	-0.4777
	(-3.79)	(2.42)	(1.80)	(1.98)	(-0.14)	(-1.02)
TER t-1	-0.5181***	-0.6897	-0.6059	-0.3351	1.6006	0.0975
	(-3.88)	(-0.90)	(-1.38)	(-0.31)	(0.76)	(0.16)
Loads t-1	-0.1716***	0.0562	-0.0657	-0.4900**	-0.2409	0.1502
	(-3.79)	(0.42)	(-0.43)	(1.98)	(-0.65)	(1.09)
Time fixed effects			YES			
Country fixed effects			YES			
Geographical focus fixed effects			YES			
Adjusted R-Squared			0.091			
Number of observations			335899			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel C - U.S.

U.S.						
	Non-ethical	Ethical				
		Ethics and other	Social and Sustaina-bility	Opportunities	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.6454***	0.1065	-0.3725***	-0.5859***		-0.3652***
	(83.70)	(1.45)	(-4.79)	(-55.39)		(-4.81)
Raw return bottom 20 t-1	-1.8930***	0.1297	5.2492***	7.3794		-11.8460***
	(-2.71)	(0.09)	(-3.34)	(1.09)		(-2.64)
Raw return mid 60 t-1	21.0534***	-8.0981	-14.3020	-21.4078***		-45.3606***
	(3.90)	(-0.72)	(-1.62)	(-2.65)		(-8.45)
Raw return top 20 t-1	-1.5410**	-2.7756	-5.3872***	7.3794		0.1297
	(-2.39)	(-0.83)	(-3.34)	(1.09)		(0.09)
4f alpha t-1	87.8896***	-6.1056	-14.3020	-21.4078***		-26.4857
	(13.34)	(-0.15)	(-1.62)	(-2.65)		(-0.90)
Dummy Ethical		1.1344	-19.7296**	-507.4255***	NA	6.6434
		(0.19)	(-2.00)	(-10.59)		(1.43)
Log Size t-1	-0.4409***	2.0396	1.6959	-0.8837		0.0601
	(-2.61)	(1.57)	(1.06)	(-0.62)		(0.06)
Log Family Size t-1	0.3260***	-0.8378	1.1655	59.4521***		-1.4808**
	(6.94)	(-1.63)	(1.25)	(10.75)		(-2.53)
Age t-1	-0.4097***	1.1470	-0.6645	-53.7918***		6.7581*
	(-5.24)	(0.66)	(-0.24)	(-9.78)		(1.76)
TER t-1	-2.7992***	-1.1465	-1.3302	5.0667*		1.4020
	(-6.71)	(-0.72)	(-0.35)	(1.70)		(1.45)
Loads t-1	-0.4097***	0.2452	0.0992	-31.0344***		1.1521*
	(-5.24)	(0.77)	(0.16)	(-9.78)		(1.87)
Time fixed effects			YES			
Country fixed effects			YES			
Geographical focus fixed effects			YES			
Adjusted R-Squared			0.436			
Number of observations			162301			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel D - Europe

Europe						
	Non-ethical	Ethical				
		Ethics and other	Social and Sustaina-bility	Opportuni-ties	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.2249***	-0.1436***	0.0317	0.1625***	5.3960	0.1564***
	(23.11)	(-3.92)	(0.34)	(15.30)	(0.87)	(2.89)
Raw return bottom 20 t-1	0.3792	-4.1168***	-4.4301***	6.6581	-6.5901**	-2.4711
	(0.93)	(-3.38)	(1.32)	(0.86)	(-2.01)	(-1.45)
Raw return mid 60 t-1	10.8737***	-8.4390	-4.3391	20.7326	8.3074	2.7043
	(3.83)	(-1.07)	(-0.30)	(0.81)	(0.48)	(0.14)
Raw return top 20 t-1	1.0994***	1.2315	1.2689	-1.6160	-5.0725*	0.6404
	(3.21)	(1.14)	(1.32)	(-1.07)	(-1.66)	(0.25)
4f alpha t-1	27.5652***	-35.6872***	-4.3391	20.7326	8.3074	-43.9776
	(8.69)	(-4.50)	(-0.30)	(0.81)	(0.48)	(-1.59)
Dummy Ethical		-1.2639	4.4197	-8.5042***	-12.4519	1.7915
		(-0.56)	(1.22)	(-4.23)	(-1.26)	(0.62)
Log Size t-1	-0.0468	0.7510***	-0.7768*	-0.0917	6.0180	-0.1439
	(-0.40)	(2.60)	(-1.71)	(-0.13)	(1.62)	(-0.44)
Log Family Size t-1	0.3014***	-0.4632***	-0.2063	0.2390	0.2608	-0.0327
	(7.86)	(-3.67)	(-1.09)	(0.57)	(0.47)	(-0.25)
Age t-1	-0.1520***	1.1229	1.6898**	1.4719	0.4478	0.1125
	(-2.79)	(1.56)	(2.09)	(1.61)	(0.10)	(0.15)
TER t-1	-0.6286***	1.0996**	-0.3605	0.3037	0.8786	0.5154
	(-3.16)	(2.12)	(-0.60)	(0.30)	(0.29)	(0.36)
Loads t-1	-0.1520***	0.1229	-0.2613	-0.4817*	-0.1568	0.0167
	(-2.79)	(1.26)	(-1.36)	(1.61)	(-0.32)	(0.11)
Time fixed effects			YES			
Country fixed effects			YES			
Geographical focus fixed effects			YES			
Adjusted R-Squared			0.118			
Number of observations			198218			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel E - Non-Europe and Non-U.S.

Non-Europe and Non-U.S.

	Non-ethical	Ethical				
		Ethics and other	Social and Sustaina-bility	Opportunities	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.1202***	-0.1396	0.1479***			-0.0949
	(8.90)	(-0.99)	(3.91)			(-1.06)
Raw return bottom 20 t-1	-2.4987***	-2.3982	-0.8598			-5.5227***
	(-6.40)	(-0.59)	(-0.44)			(-3.22)
Raw return mid 60 t-1	21.1783***	35.2931	-8.5043			-19.3152***
	(10.43)	(1.26)	(-1.14)			(-2.91)
Raw return top 20 t-1	0.2296	1.6264	-0.6262			3.2416***
	(0.65)	(0.65)	(-0.44)			(2.70)
4f alpha t-1	-10.3806***	-50.7063	-8.5043			-4.8726
	(-4.93)	(-1.24)	(-1.14)			(-0.57)
Dummy Ethical		4.2902	2.1970	NA	NA	8.8586***
		(0.53)	(0.62)			(4.65)
Log Size t-1	0.1565	-3.1642*	-0.6923**			-0.4403
	(1.16)	(-1.78)	(-2.20)			(-1.38)
Log Family Size t-1	0.3047***	-0.3075	-0.2192			-0.5699***
	(6.56)	(-0.39)	(-1.38)			(-3.97)
Age t-1	-0.1517**	6.1321	0.7449			0.7851
	(-2.06)	(1.62)	(0.83)			(1.25)
TER t-1	-0.4664**	-2.0437	0.2988			-0.4486
	(-2.38)	(-1.03)	(0.49)			(-0.84)
Loads t-1	-0.1517**	-0.7081	-1.0614***			0.3422
	(-2.06)	(-0.79)	(-3.18)			(0.16)
Time fixed effects			YES			
Country fixed effects			YES			
Geographical focus fixed effects			YES			
Adjusted R-Squared			0.072			
Number of observations			137681			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Table 2 - Regression Non-Ethical and Ethical Classification (Global Factor)

Panel A - All countries

All Countries

	Non-ethical	Ethical				
		Other	Social and Sustaina-bility	Opportunities	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.4749***	0.0353	-0.1926***	-0.1092***	5.5711**	-0.0962**
	(54.70)	(0.21)	(-3.35)	(-2.94)	(2.30)	(-2.00)
Raw return bottom 20 t-1	-1.1799***	1.3686	0.9482	5.3219	-1.9647	-4.4923***
	(-4.03)	(1.15)	(-3.97)	(0.91)	(-1.18)	(-2.59)
Raw return mid 60 t-1	47.8806***	-6.1347	-8.7205	16.5695	11.8196	-20.3255***
	(24.19)	(-0.89)	(-1.47)	(0.62)	(1.50)	(-3.14)
Raw return top 20 t-1	-0.7133***	-3.9183**	-4.3851***	5.3219	-2.0690	1.3686
	(-2.79)	(-2.41)	(-3.97)	(0.91)	(-1.39)	(1.15)
4f alpha t-1	-5.6572**	-23.4827*	-8.7205	16.5695	11.8196	-10.3236
	(-2.48)	(-1.85)	(-1.47)	(0.62)	(1.50)	(-1.06)
Dummy Ethical		-3.1569	-2.6086	-10.8367***	-10.9478	3.3117
		(-1.15)	(-0.77)	(-3.04)	(-1.61)	(1.62)
Log Size t-1	-0.2768***	0.5172	0.0778	0.1188	4.6641*	0.2830
	(-2.79)	(0.57)	(0.22)	(0.19)	(1.91)	(1.27)
Log Family Size t-1	0.3737***	-0.3383	0.0118	-0.0150	-0.2034	-0.3936***
	(10.50)	(-1.03)	(0.06)	(-0.04)	(-0.60)	(-2.63)
Age t-1	-0.4799***	2.9592***	2.1160**	3.0701***	-0.1480	0.8677
	(-7.47)	(2.77)	(2.33)	(2.70)	(-0.05)	(1.43)
TER t-1	-1.0678***	-0.5245	-0.7631	0.8607	2.4840	0.3919
	(-7.27)	(-0.51)	(-1.18)	(0.97)	(1.30)	(0.79)
Loads t-1	-0.4799***	0.1068	-0.1273	-0.0946	-0.1274	0.0148
	(-7.47)	(0.36)	(-0.83)	(2.70)	(-0.41)	(0.13)
Time fixed effects			YES			
Country fixed effects			YES			
Geographical focus fixed effects			YES			
Adjusted R-Squared			0.248			
Number of observations			498200			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel B - Non-U.S.

	Non-U.S.					
	Non-ethical	Ethical				
		Ethics and other	Social and Sus-tainability	Opportunities	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.1917***	-0.2018	0.0687	0.1885***	4.9561	0.1741***
	(24.32)	(-1.42)	(0.98)	(20.00)	(1.13)	(3.44)
Raw return bottom 20 t-1	-0.4996*	1.6694	-1.8901	6.0394	-3.9825*	-2.9402**
	(-1.74)	(1.26)	(-2.94)	(0.77)	(-1.88)	(-2.04)
Raw return mid 60 t-1	12.4710***	3.8979	-10.0420	36.1359	15.6442	-8.5915
	(7.07)	(0.42)	(-1.31)	(0.93)	(1.29)	(-1.27)
Raw return top 20 t-1	0.2101	-3.0282*	-3.5978***	6.0394	-5.4270**	1.6694
	(0.87)	(-1.82)	(-2.94)	(0.77)	(-2.22)	(1.26)
4f alpha t-1	19.3691***	-40.7665***	-10.0420	36.1359	15.6442	-15.2879*
	(8.38)	(-3.71)	(-1.31)	(0.93)	(1.29)	(-1.96)
Dummy Ethical		0.6623	4.1474	-6.9506***	-11.0753	3.7058*
		(0.31)	(1.48)	(-3.22)	(-1.32)	(1.81)
Log Size t-1	0.0304	-1.1072	-0.5352*	0.0033	5.1649*	-0.2071
	(0.34)	(-1.48)	(-1.84)	(0.00)	(1.66)	(-0.90)
Log Family Size t-1	0.2894***	-0.0551	-0.2592*	0.0937	0.1826	-0.1165
	(10.26)	(-0.28)	(-1.93)	(0.23)	(0.39)	(-0.91)
Age t-1	-0.1743***	2.2172**	1.1835*	1.4099	-0.1153	-0.2928
	(-3.85)	(2.47)	(1.87)	(1.11)	(-0.03)	(-0.56)
TER t-1	-0.5142***	-0.6972	-0.6207	0.2321	1.2453	0.1646
	(-3.85)	(-0.91)	(-1.42)	(0.19)	(0.60)	(0.28)
Loads t-1	-0.1743***	0.0352	-0.0686	-0.3284	-0.1899	0.1455
	(-3.85)	(0.26)	(-0.45)	(1.11)	(-0.50)	(1.07)
Time fixed effects	YES					
Country fixed effects	YES					
Geographical focus fixed effects	YES					
Adjusted R-Squared	0.091					
Number of observations	335899					

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel C - U.S.

	U.S.					
	Non-ethical	Ethical				
		Ethics and other	Social and Sustainability	Opportunities	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.6459***	0.1061	-0.3753***	-0.5931***		-0.3738***
	(83.78)	(1.44)	(-4.77)	(-46.15)		(-4.97)
Raw return bottom 20 t-1	-1.7248**	0.0499	4.6259***	6.3542		-12.1976***
	(-2.45)	(0.04)	(-4.08)	(1.05)		(-3.32)
Raw return mid 60 t-1	30.7283***	-11.1965	-22.6680**	-27.8192***		-48.2930***
	(5.71)	(-1.01)	(-2.15)	(-3.35)		(-8.30)
Raw return top 20 t-1	-1.4689**	-2.7382	-7.0111***	6.3542		0.0499
	(-2.28)	(-0.82)	(-4.08)	(1.05)		(0.04)
4f alpha t-1	72.5112***	16.7575	-22.6680**	-27.8192***		-14.8307
	(11.63)	(0.59)	(-2.15)	(-3.35)		(-0.40)
Dummy Ethical		0.9458	-19.1457*	-519.2819***	NA	6.0670
		(0.17)	(-1.91)	(-8.56)		(1.26)
Log Size t-1	-0.4289**	2.0554	1.8421	-0.0231		0.2180
	(-2.54)	(1.63)	(1.15)	(-0.02)		(0.21)
Log Family Size t-1	0.3224***	-0.8407*	1.2299	61.0924***		-1.2404**
	(6.84)	(-1.65)	(1.31)	(8.57)		(-1.98)
Age t-1	-0.4060***	1.0110	-1.2986	-56.6418***		5.4359
	(-5.18)	(0.60)	(-0.47)	(-7.56)		(1.35)
TER t-1	-2.8556***	-0.7454	-1.0243	4.5013		1.6609
	(-6.84)	(-0.48)	(-0.27)	(1.40)		(1.34)
Loads t-1	-0.4060***	0.2659	0.0567	-31.9355***		0.8833
	(-5.18)	(0.82)	(0.09)	(-7.56)		(1.46)
Time fixed effects			YES			
Country fixed effects			YES			
Geographical focus fixed effects			YES			
Adjusted R-Squared			0.436			
Number of observations			162301			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel D - Europe

Europe						
	Non-ethical	Ethical				
		Ethics and other	Social and Sustaina-bility	Opportunities	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.2245***	-0.1373***	0.0325	0.1606***	5.4986	0.1571***
	(23.04)	(-3.66)	(0.34)	(15.08)	(0.89)	(2.90)
Raw return bottom 20 t-1	0.3870	-3.9786***	-4.5544***	6.5824	-6.3685**	-2.1149
	(0.94)	(-3.31)	(1.47)	(0.84)	(-2.02)	(-1.05)
Raw return mid 60 t-1	14.6391***	-10.4538	-1.3019	39.7765	2.9076	-6.0247
	(4.98)	(-1.52)	(-0.11)	(1.06)	(0.17)	(-0.54)
Raw return top 20 t-1	1.0242***	1.4745	1.4119	-2.6215	-5.1904*	0.9231
	(2.98)	(1.45)	(1.47)	(-1.38)	(-1.85)	(0.39)
4f alpha t-1	24.5745***	-40.6058***	-1.3019	39.7765	2.9076	-32.2709**
	(6.40)	(-4.32)	(-0.11)	(1.06)	(0.17)	(-2.32)
Dummy Ethical		-1.7460	4.5133	-8.1296***	-14.2436	1.4174
		(-0.76)	(1.25)	(-3.78)	(-1.38)	(0.53)
Log Size t-1	-0.0449	0.6840**	-0.8566*	0.0492	6.1613	-0.2187
	(-0.38)	(2.35)	(-1.86)	(0.06)	(1.61)	(-0.66)
Log Family Size t-1	0.3016***	-0.4240***	-0.2073	0.1212	0.3439	-0.0499
	(7.86)	(-3.24)	(-1.12)	(0.30)	(0.64)	(-0.37)
Age t-1	-0.1561***	1.2460*	1.8106**	1.4475	0.5306	0.3331
	(-2.86)	(1.70)	(2.21)	(1.08)	(0.12)	(0.42)
TER t-1	-0.6238***	0.9630*	-0.4757	0.6075	1.0686	0.5143
	(-3.13)	(1.82)	(-0.80)	(0.49)	(0.36)	(0.37)
Loads t-1	-0.1561***	0.1038	-0.2753	-0.3539	-0.1406	-0.0015
	(-2.86)	(1.08)	(-1.42)	(1.08)	(-0.29)	(-0.01)
Time fixed effects			YES			
Country fixed effects			YES			
Geographical focus fixed effects			YES			
Adjusted R-Squared			0.118			
Number of observations			198218			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses

Panel E - Non-Europe and Non-U.S.

Non-Europe and Non-U.S.

	Non-ethical	Ethical				
		Ethics and other	Social and Sustainability	Opportunities	Religious	Ecological and Environmental
	(1)	(2)	(3)	(4)	(5)	(6)
Net flow t-1	0.1206***	-0.1350	0.1490***			-0.0843
	(8.95)	(-0.92)	(3.84)			(-0.91)
Raw return bottom 20 t-1	-2.1139***	-2.1511	-1.7922			-6.0433***
	(-5.37)	(-0.54)	(-0.50)			(-3.16)
Raw return mid 60 t-1	11.0159***	30.8621	-18.6110*			-24.2823***
	(5.55)	(1.16)	(-1.71)			(-3.17)
Raw return top 20 t-1	-0.0457	1.8034	-0.6985			3.6717***
	(-0.13)	(0.69)	(-0.50)			(2.96)
4f alpha t-1	9.7242***	-50.0573*	-18.6110*			9.6305
	(4.21)	(-1.84)	(-1.71)			(1.43)
Dummy Ethical		3.3818	2.3209	NA	NA	8.1973***
		(0.42)	(0.64)			(3.86)
Log Size t-1	0.1518	-3.2823*	-0.7026**			-0.6116*
	(1.13)	(-1.82)	(-2.18)			(-1.86)
Log Family Size t-1	0.3029***	-0.2724	-0.2094			-0.5527***
	(6.52)	(-0.34)	(-1.28)			(-3.68)
Age t-1	-0.1474**	6.3694*	0.8287			0.9124
	(-2.00)	(1.65)	(0.90)			(1.43)
TER t-1	-0.4682**	-1.9183	0.3024			-0.0740
	(-2.39)	(-0.95)	(0.49)			(-0.14)
Loads t-1	-0.1474**	-0.4126	-1.0716***			-0.2111
	(-2.00)	(-0.50)	(-3.07)			(-0.10)
Time fixed effects			YES			
Country fixed effects			YES			
Geographical focus fixed effects			YES			
Adjusted R-Squared			0.072			
Number of observations			137681			

* p<0.10 ** p<0.05 *** p<0.01 and standard deviation is presented in parentheses