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**U.S Mutual Fund Managers and Socially Responsible Investing:
The role of Social Capital on Asset Allocation**

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Abstract

Using data on US equity mutual funds' holdings and social capital index (SC), this paper shows that managers who live in counties with a higher level of social capital are more likely to tilt their holdings towards highly responsible stocks. In particular, I find that higher social capital managers select stocks with a higher average KLD social rating relative to low social capital professionals, after controlling for fund and manager personal characteristics. High SC managers are also more exposed to socially and ethically sensitive industries (SESI). On average, they overweight SESI stocks by 0.60% compared to low SC subgroups. However, this result seems to be consistent with previous findings, as SESI stocks traditionally outperform the overall market and positively contribute to the holdings' KLD social rating. Money manager's individual values appear to matter also for more aggressive/speculative mutual funds, reporting the same positive relations with respect to holdings in SESI and KLD social rating. On the other side, performance analysis does not provide any conclusive insights into the potential motives behind these regularities. Finally, high SC managers' attitude is similar to that of social and ethical oriented mutual funds, e.g. SRI funds, even after controlling for clientele, religion, political values and home bias effects.

Keywords: Social capital Index, Mutual funds, SRI fund, Portfolio holdings.

Research area: Individual Values and Finance, Behavioral Finance.

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1. Introduction

Does the level of social capital play a role in explaining the investing behavior? This should be an important and relevant behavioral finance research question for a number of motivations.

First, beside well-established research on home bias, familiarity and friends transmission (French and Poterba, 1991; Tesar and Werner, 1995; Huberman, 2001; Hong et al., 2005; Morse and Shive, 2010) there is little understanding of both the main sources and drivers in shaping investment. While the role of social value has been traditionally underexplored, only recently a growing body of studies have shed some light on norm-constrained investing (Grinblatt and Keloharju, 2001; Hong and Kacperczyk, 2007; Hong and Kostovetsky, 2012; Borges et al., 2015; Hong et al. 2004).

Second, over the past few decades, numbers of firms, engaged in business with a large public-interest component, have more frequently promoted business activities that bring economic, social and environmental benefit to the society, the so-called corporate social responsibility (CRS) (Carroll, 1999; Griffin and Mahon, 1997). In the 2014, the volume of this commitment has reached more than \$15 billion for the largest U.K and U.S firms. At the same time, individual and institutional investors also appear to tilt toward social responsible investments. Indeed, according to the U.S Forum for Sustainable and Responsible Investment 2014 report, the total US-domiciled professionally managed assets using SRI strategies expanded from \$3.74 trillion at the beginning of 2012 to \$6.57 trillion at the beginning of 2014, with projections of further growth over the next years. Whereas literature has extensively focused on the motives behind of social responsible investments at company level (e.g., Deng et al., 2013; Fatemi et al., 2015; Pagano and Volpin, 2005; Surroca and Tribò, 2008; Di Giuli and Kostovetsky, 2014; Huppè, 2011; Arx and Ziegler, 2014), there are only few competing studies that attempt to provide direct insight into the socially and responsible investing (SRI) trend. They seem to suggest that a significant number of investors have preference for certain stocks substantially based on nonfinancial factors.

Third, as Hong and Kacperczyk (2007) document, a large host of institutional investors abstain from investing in socially sensitive industries relative to other stocks, whereas ownership of sin stocks tends to be dispersed among individual investors. In this context, political values and religious beliefs have cater most of the attention as possible explanation for the institutional underweighting of “sin stock” (Renneboog et al., 2011; Salaber, 2007; Hong and Kacperczyk, 2007; Hong and Kostovetsky, 2012). The suspect, however, is that this is not the complete truth. Despite religion traditionally proxy for compassion and charity should be positively related to CSR, McGuire et al. (2012) find a negative association. Political views are often used as the “*critical discriminant*” for funds and company managers in their holdings because they get a “warm glove” by engaging decision close to their ideologies (Joshua and Arthur, 2005). Alternatively, Jha and Cox (2015) argues

that this “warm glove” need not to come from only adhering to political ideologies but can also come from apolitical values as altruism, solidarity and fellowship derived from local communities.

Finally, most of these studies attempt to explain the mutual funds behavior by referring separately to either political, cultural or religious values. To some extent, a possible way into these different influences might be gathered in a more comprehensive analysis might be consider *social capital*. This concept became fashionable only relatively recently in literature, though the term has been in use for almost a century (Putnam, 2000). As defined in Keeley (2007), *social capital* is the links, shared values and understandings in society that enable individuals and groups to trust each other and so work together. Jha and Cox (2015) point out that social capital is the most precise social construct that can capture altruistic inclinations in a specific community. Although some contributions dealing with social capital in social science, economics and managerial decisions, the influences on investment and stock selection seem still not completely explored.

This study directly investigates the role of social and ethical values in shaping investment decisions of professional money managers, by using the social capital index. In particular, I focus on a large host of US equity, well-diversified, single-managed mutual funds, collecting data on manager’s location and holdings information from 2006 to 2014. This allows to formulate the central hypothesis. Managers, who come from higher socially altruistic communities, are more likely to tilt their holdings toward socially responsible stocks, compared to managers coming from counties with lower social capital. Whereas the null hypothesis, is that there is no relations between social capital and investment decisions of mutual funds managers. The speculation, then, tries to covers the issue of performance by comparing two possible explanations: pecuniary and non-pecuniary motives. In this sense, if pecuniary motives are at work I should observe difference in performance between higher and lower social capital managers because their different values shape their risk-return model. On the other side, if non-pecuniary motives are the explanations, professional money managers might use their values when allocating as a form of perk or extra benefit, incurring in potential agency conflicts with their shareholders (Jensen and Meckling, 1976). In this circumstance, managers extract direct utility from the level of social responsibility in fund’s holdings. Among these competing view, however, is not possible to formulate any prediction ex-ante, since the effects usually overlaps and are difficult to separate.

Moving to the sample analysis, I collect financial data on U.S mutual funds coming from multiple datasets, resulting in a unique self-constructed dataset from 2006 to 2014. While data on holdings are obtained from CRSP Mutual Funds and Thomson Reuters/ CDA Mutual Funds Spectrum, whereas the Northeast Regional Centre for Rural Development of the PennState University College provides the social capital index measure, following the methodology in Rupasingha et. al.

(2008) and Hawes and Rocha (2010). Then, personal biographical information on fund managers, f.e. education, age, location and gender, is obtained from S&P 500 Capital IQ, Bloomberg and a self-collected database provided by the professor Leonard Kostovetsky, used in Kostovetsky (2011) and Hong and Kostovetsky (2012). The overall sample counts 2,364 mutual fund with roughly 550 different managers in the sample, sorted in three different categories based on the level of social capital associated to the place where they live. Firstly, I divide the sample in below and above average values. Then, I compare the extreme tails of the distribution by looking at deciles (High vs Low) and percentiles (Top vs Bottom). Finally, I take the level of social capital index as continuous variable.

In order to measure the values impact, I estimate the differences in portfolio's holdings. Following the research design in recent contributions (Hong and Kacperczyk, 2007; Hong and Kostovetsky, 2012; Borges et al., 2015; McWilliams and Siegel, 2000; Wang et al., 2015), the main dependent variable is a twofold, proxying for the level of responsibility in fund's holdings. The first proxy considers the average share in the portfolio invested in Socially and Ethically Sensitive Industries (SESI). It consists of the sum of the share in tobacco, alcohol, gaming, gun and defense and natural resources industries. The overall fund percentage and its components are obtained by matching companies' SIC and NAICS codes of firms with Fama-French 48 industries classification. The second measure of responsibility is constructed using commercially available score of corporate social responsibility provided by Kinder, Lydenberg, Domini, & Co. (KLD). I obtain a composite index of SRI resulting from the KLD social ratings, as a point-by-point assessment of Corporate Social Responsibility actions along five different dimensions (community activity, diversity, employees relations, human rights and environmental record). Other dimensions, are not directly included in the measure due to their traditional link to financial-based assessment, rather than social or ethical screening.

Moving to the results, these seems to confirm the hypothesis, suggesting a direct conditioning in investing coming from managers' individual values. By simply looking at mutual funds average holdings, above average SC managers invests 4.01 % in SESI stocks whereas below average SC invest only 3.84 %, with a difference of less than a half-percent point (0.17 % with robust t-stat 1.38). On the other side, the average KLD score of above mean SC group mutual funds is 3.22 with a gap of 0.50 points relative to below average SC (2.70), and a t-stat of 2.22. In first approximation, mutual funds managed by professional living in high social capital level areas seem to overweight stocks in SESI and higher KLD ratings. This behaviour appears roughly similar to the behaviour of Socially Responsible Funds that generally screen out investment in SESI industries and invest in higher KLD social rating. Constituting the natural benchmark when assessing the mutual fund holdings, they have an average investment in SESI stocks of about 3.6% while the average KLD score is 6.12. For these

reasons, I drop them from the sample in the early statistics and controlled for in the regression analysis, using a dummy variable.

After running the main regressions, which allows to control for style effects, funds and manager characteristics, estimated coefficients appear to point in the same direction as summary statistics. In fact, social capital index seems positively associated to both holdings in SESI industries and KLD social ratings. The coefficient is 0.23 % with a t-statistic of 3.61 in the SESI holding specification, whereas it assumes value of 0.30 with t-stat of 2.69 in the KLD specification. Furthermore, the breakdown component analysis shows that gaming industry with 0.09 % (t-stat 1.96) represents the most relevant effects. Afterwards, alcohol and gun & defense have larger positive coefficients, 0.06 % and 0.05 %, while t-statistics are both around 1.35. The most important KLD components are environmental records and community activities, with 0.10 (t-stat 1.93) and 0.04 (t-stat 1.42) respectively. Further speculation into the positive relation between holdings in SESI and social capital index, seems to reveal that the outperformance of these stocks might create higher incentive to consider individual values in second order. As suggested in the literature, might be that investors simultaneously overweight SESI stocks, due to their profitability, while select among them those with the higher social commitment. This conjecture seems confirmed by looking at the positive coefficient associated to the holdings held in SESI stocks, which implies that the investment in sin stocks positively contributes to the average KLD social scores. This can ultimately reconcile the early relations, supporting the initial hypothesis.

Moving to consider the possible reasons behind managers' behaviour, the net return differences across managers appear to confirm the traditional difficulties in distinguishing between pecuniary and non-pecuniary reasons. In fact, while the Fama&McBeth (1973) estimates for the continuous measure of social capital are not different from zero, a comparison between extreme percentiles reports 50 bps per month higher return for higher SC managers. Consequently, higher social capital index level seems not related to any kind of performance advantage, except for extreme realizations. More realistically, the outcome observed might be the result of multiple forces. On the other side, the analysis of the subgroups of funds adopting aggressive strategies corroborates the relations already documented. As these funds follow higher volatility strategies, they are more largely exposed to the performance fluctuations in their compensation. Hence, I expect a reduced willingness in the influence of individual values, if this could potentially distort the performance. Nevertheless, the results document even stronger positive relations between social capital and both holdings in SESI stocks and KLD social ratings. Hence, since these results are not suggestive of superiority between pecuniary and non-pecuniary motives, is not possible to draw any conclusive statement.

Finally, the consistency checks further strengthen the early findings. After having introduced the all component KLD definition, an alternative style-adjustment, and controlled for the financial crisis peaks, the positive relations remain unchanged. Furthermore, alternative explanations referring to clientele effects, religious and political specific values and home-bias, appear to validate further the influence of managerial social capital on fund holdings. In the end, this allows to conclude that the relation between individual values and investment decisions is substantial and difficult to neglect, despite some caution in generalizing the findings due to some natural limitation in the study.

This paper is organized as follows. Section 2 discusses in brief the most important contributions in literature regarding personal values and financial decisions and formulates the main hypotheses. Section 3 reports the summary statistics for the main variables used in the analysis, as the social capital index and the independent variables that proxy for the level of social responsibility in holdings. Section 4 presents the results as multivariate regressions, considers the performance impact and investigates the generalization of the relations for more speculative funds. Section 5 perform some robustness tests and checks for possible alternative explanations. Section 6 presents the conclusions.

2. Literature Review

Within the extensive literature in behavioural finance, this study is primarily related to the stream of research focusing on the effect of social norms on the decision-making process of institutional investors. This issue has been traditionally approached employing cognitive psychology findings, which looks at how individuals personally processes the information and how they form their beliefs accordingly. Along with the well-established regularities, f.e. home-bias and preference for local investments (French and Poterba, 1991; Tesar and Werner, 1995; Huberman, 2001; Hong et al., 2005; Morse and Shive, 2010; Pool et. al. 2012), there is a bulk of contributions that directly discusses whether certain investors or institutional investors indeed make investment decisions dependent on social norms and/or values. Hong and Kacperczyk (2009), for instance, using data on political contributions, investigate the role of political values on mutual funds holdings. They demonstrate how portfolio managers that make political contributions to Democrats are more likely to tilt their holding towards stocks with higher KLD social ratings and screen out stocks in politically sensitive industries (PSI), relative to their Republican peers. Hoepner and Schopohl (2015) and Bradley et al.(2015), show that state pension funds tend to invest in politically-connected stocks, fostering a deep intimate connection between political values and portfolio holdings. Moving to cultural proximity, Grinblatt and Keloharju (2001) document that both a relevant subset of institutional and individual investors tend to trade more stocks of Finnish companies located more

close investors, that have a CEO with a closer background and communicate in the investor's native tongue, suggesting some form of cultural influence in their portfolio. Hong and Kacperczyk (2007) present evidence that among institutional investors, pension funds are more likely to rely on societal norms, relative to hedge funds, mutual funds and other natural arbitrageurs in the market. Indeed, these norm constrained agents hold less sin stocks as compared to other institutional investors. Hood et al. (2014), firstly confirm that politics and religion are relevant in determining the ownership of sin stock across individual investors. Then, looking specifically at KLD strengths and concerns components in the holdings, they generalize the previous finding, arguing that investors can consider important some social dimensions, that in turn may not be important to other socially conscious investors. Finally, analysing the prices and return impact, differences in countries religion and culture seem also to cause fluctuations in abnormal returns of "sin stocks" in various European stock markets (Salaber, 2007).

In this context, political values and religious beliefs have cater most of the attention as potential explanations for the institutional overweighting (underweighting) of socially irresponsible (responsible) stocks. The suspect, however, is that this is not the complete truth. The main prompts come from examining the research on firm-level investment in Corporate Social Responsibility (CSR henceforth). In fact, everyone should expect that religion, which traditionally proxies for compassion, altruism and charity, is positively related to the level of company CSR. Surprisingly, McGuire et al. (2012) find consistent evidence of a negative association. On the other side, political views are often used as the critical discriminant for funds and company managers in their holdings because they get a "warm glove" by engaging decision close to their ideologies (Joshua and Arthur, 2005). Alternatively, Jha and Cox (2015) argue that this "warm glove" need not to come only from adhering to political ideologies but can also come from apolitical values as altruism, solidarity and fellowship derived from local communities. In fact, this study specifically introduces the social capital measure, as specific proxy for fund manager altruism and collectivism attitude related to the location where they live. This might better capture the correlation among actual asset selections and managers personal values. Nevertheless, although social capital is usually considered a community-level attribute, economists have historically linked the observed behavior of agents as based upon individual choice, refusing the collective characterization. Therefore, following Rupasingha et al. (2008) formulation which uses the Becker's (1965, 1974) work on household allocation of time and theory of social interactions to calculate social capital, they directly support the characterization of social capital "as a collective manifestation of behaviours, attitudes, and values of individual members of a community". Ultimately, this permit a directly link between manager's personal values and social capital index.

Furthermore, a related issue is that most of these studies attempt to explain the mutual funds behavior by referring separately to either political, cultural or religious values (Hong and Kacperczyk 2007, Grinblatt and Keloharju, 2001, Salaber, 2007). To this extent, by considering the social capital as the central measure in this study, I attempt to deal with these different influences gathered in a more comprehensive analysis. In particular, this concept became fashionable only recently in literature, although the term has been in use for almost a century. As defined in Keeley (2007), social capital concept considers the links, shared values and understandings in society that enable individuals and groups to trust each other and work together. Jha and Cox (2015) point out that social capital is the most precise social construct that can capture altruistic inclinations in a specific community. Despite a broad literature dealing with social capital in social science, economics and managerial decisions, the influences on investment and stock selection seem still not completely explored. Therefore, appears meaningful plugging into the analysis this measure. It should have some added value in explaining at least a part of the cross-sectional variation in fund holdings and how professional money managers decisions are ultimately affected.

Secondly, this study is also partially related to the behavioural finance research that stems from social psychology. In particular, this approach substantially considers the effects of the actual, imagined, and perceived social relations among individuals as determinant of financial decisions. Therefore, individuals being part of social networks like education, sports, politics or simply living in the same environment, can allow information to flow, influencing the other member within the networks. Looking at the effects on professional investors of location factors, Pool et al., (2015) show that mutual fund managers classified as neighbours, have higher overlapping in their fund holdings and trades. Remarkably, they show also that the information shared is on average valuable and profitable. These results indeed seem not far from what proposed through the definition of social capital. Despite various criticism and lack of consensus on its complex definition (Sobel, 2002), social capital is known as the “connections among individuals, social networks and the norms of reciprocity and trustworthiness that arise from them” (Putnam, 1995). Therefore, this study using social capital measures related with the fund manager county of living, directly investigate the impact of both individual values formed through network effects. For the United States, the role of social capital appear frequently covered in research related to the state and local politics (Keefer and Knack 2002; Hero, 2007; Putnam 2000; Rice 2001; Tavits 2006; Hawes and Rocha 2010). The only studies that links specifically this concept to financial decisions, are Jha and Cox (2015) and Giuso et al.(2004). They associate it to the level of CSR and financial development respectively, discovering its prominence in explaining part of the underlying phenomena. Overall, most of the contrasting views and obstacles in literature seems to concentrates more on measurement and definition level, than

questioning the real potential of an increase in social capital. This indeed is a useful tool to achieve effective political institutions, economic development, low crime rates, and reduced incidences of some social problems (Rupasingha et al., 2008).

Finally, this study has its roots in the broad literature that tries to better understand two major trends started in the past few decades. First, firms engaged in business with a large public-interest component have more frequently promoted business activities that bring economic, social and environmental benefit to the society, the so-called Corporate Social Responsibility (CSR) (Carroll, 1999; Griffin, 1997). Secondly, at the same time, individual and institutional investors also appear to tilt their holdings toward social responsible investments. Whereas academics have extensively focused on the motives behind social responsible investments at company level (e.g., Deng et al., 2013; Fatemi et al., 2015; Pagano and Volpin, 2005; Surroca and Tribò, 2008; Di Giuli and Kostovetsky, 2014; Huppè, 2011; Arx and Ziegler, 2014), only few competing studies try to provide direct insight into the trend of SRI focusing on performance (Bauer et al., 2007; Schueth, 2003; Ghoul and Karam, 2007; Barnett and Salomon 2006). They seem to suggest that a significant number of investors have preferences for certain stocks substantially based on non-financial factors.

In this empirical research, I extend earlier analysis of mutual fund manager personal values by introducing the social capital dimension, based on their living locations. This leads to the formulation of the central hypothesis that states:

H1: Managers who come from higher socially altruistic communities are more likely to tilt their holdings away from (toward) socially irresponsible (responsible) stocks compared to managers coming from counties with lower social capital. This means that there is a positive relation between the level of social capital associated to the mutual fund manager location and the level of the socially responsible investments in portfolio.

3. Data and Methodology

According to the literature focusing on finance and personal values, I need to collect data from various databases in order to construct the different variables useful for testing the hypothesis. Therefore, the foundations of this study are: the isolation of the fund manager sample specifying the main control variables, the determination of the social capital index and the association to the managers and, finally, the construction of the main independent variables, as the propensity to invest according to social responsibility criteria, potentially proxying for fund manager individual values.

3.1 Fund Manager Sample and Control Variables

I start by considering the universe of US mutual funds from 2006 until 2014 available on CRSP Mutual Fund Database. Then, I focus on single managed funds that have at least 80% of their portfolio invested in US equity. I also screen out “Team Managed” funds due to the impossibility to

infer clearly which individual prevails in the team and consequently, the lack of personal link to the holdings. This database provides information on manager names, tenure, management company and management fee. The result is a final sample constituted of approximately 950 different managers. Then, data on mutual fund quarterly holdings, total net asset, fund turnover and monthly fund net returns are obtained primarily from CRSP mutual fund database whereas the Thomson Reuters/CDA Spectrum database provides complementary data on total asset, useful to determine the percentage of each stocks in the portfolios. Funds that do not have the requisite information from all three databases in any given quarter are dropped from the sample. After that, I screen out funds that follows a passive strategy, using Lipper Objective Classification. In this sense, “U.S equity index funds” and “US equity market neutral funds” that normally mirror the overall market, are dropped out. The final sample consists of actively managed, diversified, domestic equity mutual funds. Personal manager information on gender, education records, age, bachelor degree and advanced degree are obtained from the self-collected database on fund manager used in Kostovetsky (2009)¹. Regarding location of fund managers, I obtain state and county of living of manager by self- collecting data and comparing information using Bloomberg, S&P500 Capital IQ, management company websites, US public birth and residence indexes using as fundamental input year of birth and manager name. As further double check, I scrutinize personal information publicly disclosed by fund managers through management company websites, professional network directories and financial press articles. This allows to get complete information of about 60% of the initial manager sample, accounting respectively for 55% of the overall manager-fund year (2,364 out of 4,453)

In order to look in detail to stock holdings, I match data on CRSP Mutual Funds with shares outstanding, price, the SIC and NAICS industry codes, based on Fama-French 48 industries classification, extracted from CRSP. Then, complementary data for the calculation of book value, total asset value and book-to-market from COMPUSTAT. The SRI status of mutual funds is obtained from biennial reports of the Social Investment Forum, from screening in the SEC database and finally using the database of the SRI world group funds. Further, as consistency checks are classified as SRI funds those that includes the word like “Social” or “Environmental”.

Overall, the main explanatory variables referring to manager’s characteristics are five. Age, calculated as the closest integer number of difference between manager year of birth and mutual fund date. Then, Female dummy variable, which assumes value of 1 if the fund manager is female otherwise is zero. A bachelor dummy variable, which assumes value of 1 if a manager holds a

¹ Special thanks goes to the professor Leonard Kostovetsky, Assistant Professor of Finance at Boston College, Carroll School of Management, for providing a self-collected database on biographical information of U.S mutual funds manager. This database is also used in Kostovetsky, L., 2009. Brain drain: are mutual funds losing their best minds? Unpublished working paper.

bachelor degree otherwise is zero, whereas an advanced degree dummy is also introduced, which assumes value of 1 if a manager holds a Master's, PhD or MBA degree otherwise is zero. The management fee is a continuous variable, defined as percentage of the total asset under management. On the other side, the variables referring to the fund features are: Log Fund Size, as the natural logarithm of the yearly total net asset expressed in million dollars; Fund Inception, as the period since the funds was first offered; SRI status, a dummy variable that assumes 1 if the fund is labelled as Socially Responsible Funds otherwise zero. The holdings' features and style effects are captured by the Mean Component Log Size and Mean Component Log B/M. The former refers to the weighted average of the natural logarithm of total asset of stocks in the mutual fund's portfolio (weighted by their share in the portfolio), while the latter is a weighted average of the log book-to-market of stocks in the mutual fund's portfolio (weighted by their share in the portfolio).

Looking at the overall sample statistics reported in Table 1, the final sample accounts for 2,364 manager-funds, with roughly 550 unique fund managers. The average funds in the sample has a manager that is 49 years old, male, with a college degree, in most of the cases a bachelor degree (92 %) paired with an advanced one (66 %). He manages a fund charging a fee of 0.60% of the total assets under management. Only in 2.60% of the cases, the fund is a Socially Responsible Funds whereas the mean period since fund was firstly offered, is roughly 16 years.

3.2 Social Capital Index.

US county-level index of social capital are constructed following the mainstream social capital definition, as proposed in Rupasingha et al. (2008). Although the estimates has been discussed and the questioned from different perspectives, this study is widely recognised to be one of the most comprehensive and punctual in measuring the level of collectivism and altruism for the United States (Jha and Cox, 2015). In fact, this is because of a couple of reasons. The fist key point in Rupasingha et.al (2008) methodology is that, it matches carefully the formulation of the variables proxying for altruism and collectivism proposed by Putnam (2000), which firstly suggested a country- level social capital score. Secondly, this calculation has the advantage that is defined at county level and not fixed in time. It is particularly useful with respect to socio-economic studies which increasingly consider county as unit of study. Remarkably, the authors highlight that “a single measure that captures completely a concept with complex and multiple dimensions, such as social capital, may not exist”.

Moving to the measurement underlying the index, they use Becker's (1965, 1974) study on household allocation of time and theory of social interactions. In these models, individuals choose the optimal amount of social capital to produce. As a trade-off, agents balance out the opportunity cost of allocating time and resources to the production of an additional unit of social capital with the marginal benefits associated with additional units of social capital. In this context, some of the

dimensions that play a role in the production of social capital are: ethnic divisions, income and income inequality, education, community attachment, education, role of women and home ownership. After having determined these components, the authors apply the principal component analysis using four factors, which are: the aggregation of the above mentioned variables affecting the production of social capital rescaled by population (1st), the voters participation in presidential election (2nd), the census mail response rate (3rd) and the number of non-profit association density (4th). The first principal component obtained is known as, social capital index. The result is a score associated to each US

Table 1. Sample summary statistics: mutual funds and managers.

Table 1 reports time-series averages of yearly cross-sectional means and standard deviations (shown in brackets) for fund and manager predictor variables. Results are shown for the entire sample, and then for subgroups by level of Social Capital Index. Above Av SC includes all mutual funds whose managers that live in areas with above average Social Capital Index score. Below Av SC includes all mutual funds whose managers that live in areas with below average Social Capital Index score. High SC refers to funds whose managers lives in areas associated with Social Capital Index score in the highest deciles of the distribution (10th, 9th and 8th). Low SC refers to funds whose managers lives in areas associated with Social Capital Index score in the lowest deciles of the distribution (1st, 2nd and 3rd). Top SC refers to funds whose managers lives in areas associated with Social Capital Index score in the top percentiles of the distribution (from 100th to 95th). Low SC refers to funds whose managers lives in areas associated with the lowest percentiles of the distribution of the Social Capital Index score (from 1st to 5th). Number of funds is the number of observations each quarter that meet the selection criteria. Manager age is the age of the mutual fund manager. Female is a dummy variable that equals one if the mutual fund manager is female and zero otherwise. Bachelor degree is a dummy variable that equals one if the mutual fund manager has a bachelor degree and zero otherwise. Advanced degree is a dummy variable that equals one if the mutual fund manager has an advanced degree (master's, doctoral or MBA) and zero otherwise. Log fund size is the natural logarithm of the total net assets of the mutual fund (in \$millions). Fund Inception refers to the period between the fund was first offered in the market on inception date relative to the date the fund appears in the sample. Mean component log size is a weighted average of the log market cap of stocks in the mutual fund's portfolio (weighted by their share in the portfolio). Mean component log B/M is a weighted average of the log book-to-market of stocks in the mutual fund's portfolio (weighted by their share in the portfolio). SRI status is a dummy variable that equals one if the mutual fund is classified as a socially responsible fund and zero otherwise. Management Fee is the cost charged by the manager for managing the funds, expressed as annual percentage of total asset under management. Social Capital Index is the average score for the Social Capital Index from 1997 to 2009 associated to the area where the fund manager lives. The sample consists of single-managed mutual funds from 2006 to 2014.

Variable	All Funds	Above Av SC	Below Av SC	High SC	Low SC	Top SC	Bottom SC
<i>N° of Funds</i>	2,364	1,121	1,243	695	724	129	126
<i>Manager age</i>	49.15 [10.5]	48.8 [10.6]	49.45 [10.4]	49.81 [10.7]	49.82 [11.1]	46.22 [8.85]	53.72 [14.1]
<i>Female</i>	8.82%	12.62%	5.56%	10.95%	6.12%	13.44%	0.81%
<i>Bachelor degree</i>	88.39%	86.20%	90.16%	87.48%	90.9%	91.72%	99.22%
<i>Advanced degree</i>	68.95%	69.80%	68.26%	70.35%	65.3%	66.93%	67.82%
<i>Log fund size</i>	4.45 [2.64]	4.15 [2.54]	4.71 [2.69]	4.06 [2.67]	4.36 [2.58]	4.22 [2.36]	4.45 [2.46]
<i>Mean component log size</i>	3.97 [1.86]	3.96 [1.79]	3.99 [1.92]	4.04 [1.71]	4.14 [1.85]	3.76 [1.96]	4.62 [1.80]
<i>Mean component log B/M</i>	-5.71 [0.95]	-5.72 [0.95]	-5.71 [0.95]	-5.63 [0.86]	-5.56 [0.90]	-5.80 [0.95]	-5.39 [0.92]
<i>Fund Inception</i>	15.90 [15.0]	15.50 [15.7]	16.32 [14.4]	16.12 [15.4]	14.72 [13.1]	15.72 [15.8]	17.75 [14.9]
<i>Management Fee (%)</i>	0.60 [0.95]	0.59 [1.84]	0.60 [0.80]	0.68 [2.13]	0.60 [0.94]	0.31 [2.41]	0.33 [1.25]
<i>SRI status</i>	2.6%	4.35%	1.33%	0.64%	2.24%	0.00%	0.00%
<i>Social Capital Index</i>	-0.35 [0.81]	0.26 [0.53]	-0.87 [0.61]	0.46 [0.57]	-1.25 [0.55]	1.25 [0.95]	-2.24 [0.28]

county, which is varying within the interval [-7; +20], depending on the specific period under considerations. In this study, I decide to consider the three most recent calculation of the index: 1997, 2005 and 2009. Then, I calculate the average of these separate realizations, in order to obtain an aggregate index. This procedure should winsorize the results from dependence from specific year. However, since the social capital like human capital is “sticky” (certified also by high serial correlation, 0.95, over different years) provides further isolation of the results from time specific bias (Jha and Cox , 2015). Finally, each manager in the sample is associated with the respective level of the social capital (SC henceforth) of the county where he/she lives.

Following the results reported in Table 1, the average mutual fund is guided by a manager having a level of social capital index that is slightly negative (-0.35). In order to account for differences in the cross-sectional variation in the social capital, I sort mutual funds in the sample based on average, deciles and percentiles social capital index score. The results are six different subsamples. For the above and below average SC, reported in the second and third column of Table 1, managers in below average sample are slightly older, more likely to be male, more educated, as a high share holds a bachelor degree (90%). However, almost the same percentage possess an advanced degree relative to above average. Management fee charged is the same. Funds characteristics are not different, except for the asset under management and the fund age, both higher in below average SC sample. SRI funds seem slightly clustering in the above average SC group, consistent with higher collectivism and altruism in the sample. Moving to the deciles analyses, the differences between highest deciles (from 8th to 10th) and lowest (from 1st to 3rd) seems approximately confirm the pattern already documented. The only exceptions are management fee, now higher for the high SC subset, and percentage of SRI funds that reverts completely, suggesting how the relations probably are driven by intermediate deciles. To verify this conclusion, I look at the last subgroups which are obtained using percentiles. The differences in mutual fund features between top SC (from 100th to 95th percentile) and bottom SC (1st, 2nd and 3rd) appear to confirm most of the initial pattern concerning age, gender and manager fees. However, fund style now seems to matter, with top SC funds investing more in value and small cap stocks. The asset under management continues to be higher for lower social capital subsamples. As confirmation of initial conjecture, the SRI funds imbalances disappears as I look to extreme realizations of SC variable.

Turning to the social capital index analysis, Table 2 magnifies some general features of the index in the sample. Panel A displays that the top and bottom counties sorted by social capital level covers approximately an equal cumulative percentage (3%). This suggests that the distribution of social capital appears not affected by extreme values. Panel B, however, shows some clustering at geographical level. Although the majority spreads equally among the remaining locations, a relevant

share (25%) of managers lives close to the largest financial centres as New York, Boston, Los Angeles and Chicago. A result, the most popular counties are New York, NY (12.56%), Suffolk, MA (9.09%), Middlesex, MA (6.13%), Baltimore, MD (3.55%), and Los Angeles, CA (2.79%). This, however, might be relatively a minor issue when considering the values assumed by the index. In fact, the level of social capital associated to the most popular counties is roughly the same as that of the least popular counties. Finally, Figure 1 reports the spatial distribution of the observations using two selected criteria, providing further insight into local clustering. A larger (smaller) mark accounts for an higher (lower) share of manager living in a certain county whereas different colours refers to the level of social capital index, with higher (lower) level of SC marked in red (yellow). Higher values of this index are concentrated in the upper Midwest and Northwest counties. The map also shows lower index values in the Southeast/Southwest counties. The upper and lower boundaries for the index are restricted in the sample to -2.84 and 3.34.

Table 2. County Ranking based on sorting by Social Capital Index and frequencies in the sample.

Panel A reports the county ranking based on the level of social capital index, the higher lever the index is associated with higher level of social capital. Social Capital Index is the average score for the Social Capital Index from 1997 to 2009 associated to the area where the fund manager lives. Panel B reports the county ranking based on the relative frequency in the sample, as percentage of total observation. The manager living locations belong to 154 different US federal counties and independent cities. The total observations count is 2,364 The sample consists of single-managed mutual funds from 2006 to 2014.

Rank	County	Social Capital Index	% of Tot Obs
Panel A: Social Capital Index sorting			
1.	Polk, IA	3.34	0.38%
2..	District of Columbia	3.01	0.55%
3.	San Juan, WA	2.62	0.04%
4.	Nantucket, MA	2.47	0.38%
5.	Alexandria, VA	1.78	0.08%
...
150.	Tulare, CA	-2.17	0.42%
151.	El Paso, TX	-2.44	0.08%
152.	Kings, NY	-2.56	1.10%
153.	Queens, NY	-2.74	0.85%
154.	Bronx, NY	-2.88	0.08%
Panel B: Relative Frequency sorting			
1.	New York, NY	0.31	12.56%
2.	Suffolk, MA	-0.78	9.09%
3.	Middlesex, MA	-0.27	6.13%
4.	Baltimore, MD	-0.48	3.55%
5.	Los Angeles, CA	-1.80	2.79%
...
150.	Snohomish, WA	-0.64	0.04%
151.	Alameda, CA	-0.91	0.04%
152.	San Diego, CA	-1.23	0.04%
153.	Prince William, VA	-1.28	0.04%
154.	Fort Bend, TX	-1.58	0.04%

3.3 Holdings in SESI and KLD Social Rating.

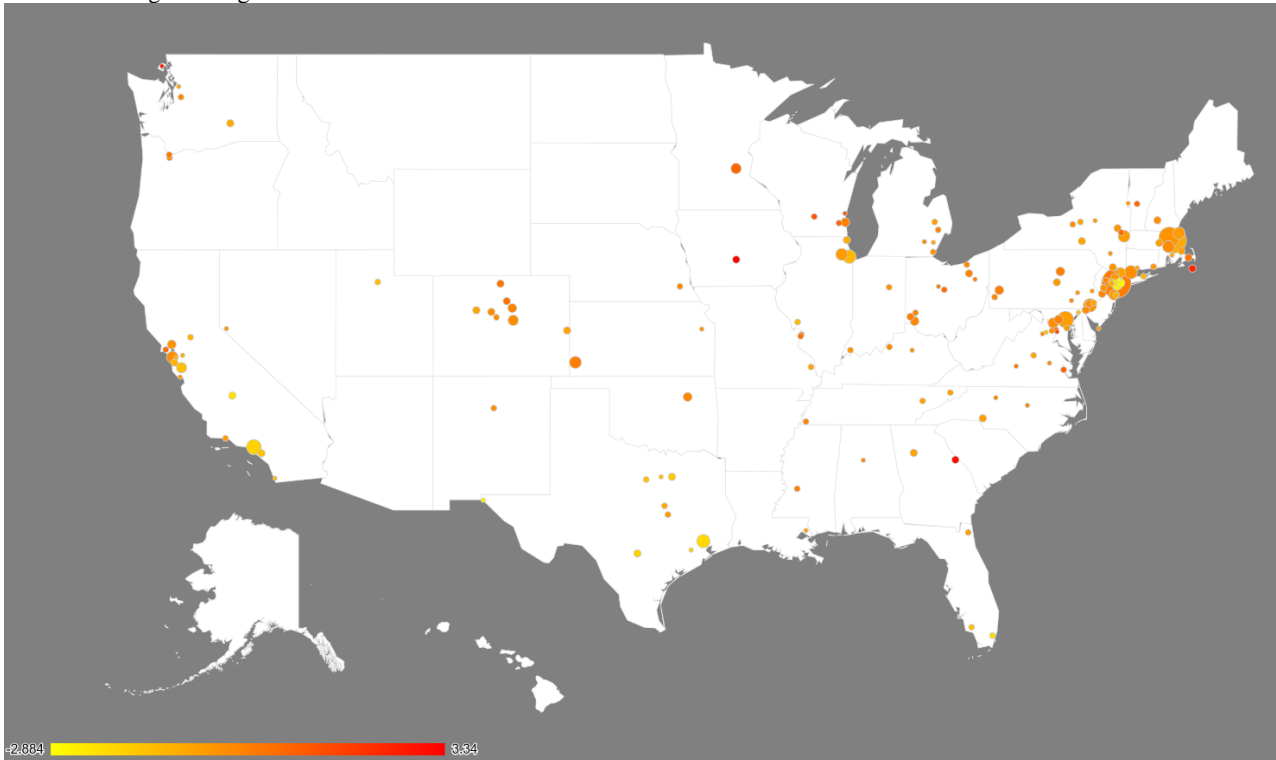
Looking at the main dependent variables, I use a measure of the impact of social values in the holdings that is twofold. Following Hong and Kostovetsky (2012), I firstly take into account the share of fund asset invested in stocks actively involved in Corporate Social Responsibility activities. This

measure depends on the KLD social ratings for single companies, collected using the KLD Research & Analytics database from 2006 to 2013. An higher (lower) KLD social rating is traditionally associated with higher (lower) involvement in CSR, expressed in terms of strengths and concerns. In particular, each strength in a single category is accounted assigning +1 point, while the concerns are marked as -1. Overall, there are 7 dimensions provided in the KLD database which are: components: community activities, diversity, employee relations, human rights and environmental, corporate governance and product quality. Notwithstanding, the last two dimensions more directly reflect financial and economic assessment than social and ethical screening, so are taken out from the variables.

The second measure, also widely covered in literature, looks at the percentage in the fund total asset invested in Social and Ethical Sensitive Industries (SESI thereafter), the so called "sin stocks". Following Hong and Kacperczyk (2007), I use a combination of SIC codes (from the Fama-French

Figure 1. Fund manager locations based on Social Capital Index and frequencies in the sample.

Figure 1 shows the US federal map with locations markers. The dimension of the marker is proportional to the absolute frequency the a certain county appear in the sample, the higher the frequency the larger the ray. The Social Capital Index is represented as differences in the colour of the marker, the highest social capital are marked in red the marker whereas the lower the social capital index score it tend to yellow. Intermediate level of the index are marked in orange. The Social Capital Index is the average score for the Social Capital Index associated to the area where the fund manager lives fin the period from 1997 to 2009. The manager living locations belong to 154 different US federal counties and independent cities. The total observations count is 2,364 The sample consists of single-managed mutual funds from the first from 2006 to 2014.



48 industries classification) and KLD screens to define the various components of the SESI. In particular, I consider five main constituents of the measure, which are: tobacco, guns and defense, natural resources, alcohol and gaming industries. Tobacco includes all stocks that are in Fama-French

5 ((SIC codes 2100–2199) or in KLD’s “tobacco” screen. Guns and defense includes all stocks in Fama-French 26 (SIC codes 3760–3769, 3795, 3480–3489) or in KLD’s “firearms” or “military” screens. Natural resources includes all forestry stocks (SIC codes 0800–0899) and all mining stocks (SIC codes 1000–1119, 1400–1499). Alcohol includes all stocks in Fama-French 4 (SIC codes 2080, 2082–2085) or in KLD’s “alcohol” screen. Gaming includes all stocks with the word “Casino(s)” in the name or in KLD’s “gambling” screen.

As result, I define two main variables: the percentage of total holdings in SESI and the fund KLD social rating. In constructing them, I follow the most popular contributions coming from the literature (Hong and Kacperczyk, 2007; Hong and Kostovetsky, 2012). Therefore, I define SESI in the broadest way possible, as the sum of holdings in five industries: tobacco, guns and defense, natural resources, alcohol and gaming. The KLD ratings are defined as the sum of five components: community activities, diversity, employee relations, human rights and environmental record scores. Ratings for a firm in each category are the result of the sum of all concerns and strengths in each subcategory. Any of them are accounted by adding one point for each strength and subtracting one point for each concern. A higher rating implies more strengths and/or fewer concerns. Overall, a mutual fund’s rating in each category is just the value-weighted average of its portfolio stock components’ ratings. As already mentioned, there are two additional components that are not directly representative of social and ethical values: corporate governance and product quality. For this reason, I decide to separate them creating another variable, defined other KLD categories. In section 5, I include these components in the main dependent variable, as robustness check.

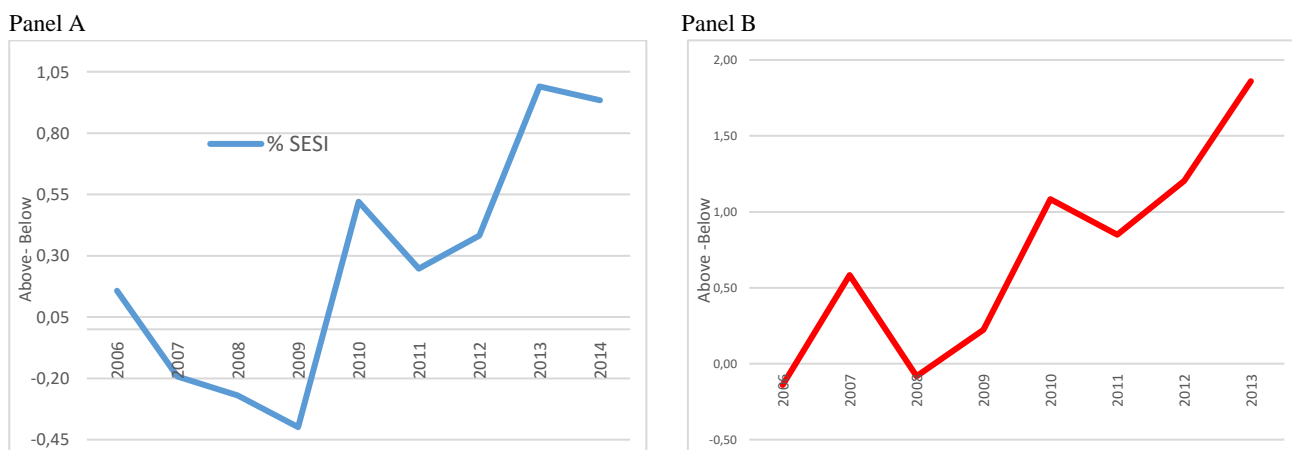
Moving to the sample analysis, Table 5 summaries statistics for the holdings in SESI and KLD social rating. To avoid biases in the estimates, I exclude the SRI funds, that overweight stocks with higher KLD score and underweighting unethical stocks. Starting from the industry holdings in Panel A, the typical fund in the sample invests on average 3.92% of the total assets under management in social and ethical sensitive stocks. Funds with manger living in higher SC counties appear initially to invest light more in SESI than below average SC funds, with a difference of less than a half-percent point (0.17% with robust t-stat 1.38). When considering deciles sorting, the results seem to revert. High SC funds that invest 3.92% in SESI while low SC funds 4.10%. This evidence goes in the direction of our initial prediction, with SESI stocks screened out by manager associated with higher social capital. Moving to the tails of the distribution of SC, the gap between Top and Bottom percentiles is larger and more significant (-0.60% with robust t-statistics of 1.47). Bottom SC percentiles invest 4.44% of their asset in SESI while top percentile SC limits this share to 3.84%. Regarding the various components, gun and defense, alcohol and gaming industries appear to drive mainly the aggregate measure, with 1.35%, 0.88% and 0.83% respectively. Panel B, on the other side,

reports data on KLD social ratings. By analysing the results considering average break point, higher SC mutual funds managers seem largely investing in stocks with high KLD score relative to the low group. The average KLD score of above mean SC group mutual funds is 3.22 with a gap of 0.50 points relative to below mean SC (2.70). The t-statistic associated is the highest (2.22). The main component is diversity that account for roughly 40% of the total score, while the human right assume a negative value due to the large impact of concerns. When sorting on decile basis, however, previous findings are confirmed, whereas the difference High-Low SC is lower and less significant (t-stat 0.44). In this case, however, the extreme percentiles are not supporting the original hypotheses with average higher KLD score for low SC funds. The gap now turns negative and amounts to -1.14. Furthermore, the analysis of other categories not in the KLD score support a constant positive discrepancy between high and low SC subsamples, reaching 0.30 (t-stat 3.48) in the deciles decomposition. By looking at time series evolution in the difference in KLD social ratings (Figure 2, Panel B), the initial conjecture that intermediate and close-to-average observations might drive the overall trends appear to hold. Indeed, as opposed to Panel A for SESI industries, the High-Low SC difference is consistently positive signally low/null dependence by certain sub periods.

Consistently to the initial hypothesis, it appears that funds managed by professional living in high social capital level areas would tend to overweighting stocks with higher KLD ratings while slightly underweighting SESI stocks. Nevertheless, I cannot draw any conclusions until I introduce properly control for other managerial and fund characteristics that could explain these relations. Specifically, controllers for fund's style, should be introduced as industry weights are generally influenced by funds size and value factors. The raw results suggest that individual social and ethical values seem to have an effect on mutual funds asset allocation.

Figure 2. Holdings in SESI and KLD social rating differences sorted by level of social capital index.

These graphs illustrate the distribution of Social and ethical sensitive industries (SESI) sorted by social capital index. Panel A shows how the difference (in means) of PSI holdings between Above Average SC and Below Average SC evolved from the beginning to the end of the sample period. Panel B repeats the same analysis in Panel A for KLD social ratings. Note that for KLD social ratings are reported in the period 2006-2013, while for the SESI holding the period is 2006-2014.



4. Empirical Results

This section starts presenting the main results of the multivariate regression analysis. Specifically, I test the main hypothesis, while controlling for manager and funds characteristics introduced in section 3.1. Then, using data on funds net returns I check for performance differences based on social capital subgroups. Finally, I focus on aggressive and speculative mutual fund subsample.

4.1 Individual Values and Mutual Fund Holdings: Multivariate Regression Analysis

Table 4 reports estimates for the multivariate regression analysis that relates the main independent variables to the level of social capital index of linked to the fund managers, while controlling for other covariates. The central dependent variables are the percentage holdings in Social and ethical sensitive industries (SESI) and KLD social rating, while the independent variable of interest is Social Capital Index, a continuous measure of the level of altruism and collectivism in the area where the managers lives which indirectly proxies for the social, political, religious values and ethical values of the individuals. Particularly, I decide to focus on a continuous measure of social capital, since either deciles or percentiles do not provide a straightforward break down in the sample and the absence of extreme realizations suggest that averages realizations are driving the relations. In addition, I also include regional dummies for each the nine U.S census area, yearly dummies and variables controlling for fund style in all the regressions. Therefore, the main specifications are:

- (1) Holdings in $KLD_i = \beta_0 + \beta_1 * \text{Social Capital Index}_i + \beta_2 * \text{SRI status}_i + \beta_3 * \text{SRI status}_i * \text{Social Capital Index}_i + \beta_4 * \text{Age}_i + \beta_5 * \text{Management fee}_i + \beta_6 * \text{Dummy female}_i + \beta_7 * \text{Dummy bachelor}_i + \beta_8 * \text{Dummy advanced degree}_i + \beta_9 * \text{Log Fund Assets}_i + \beta_{10} * \text{Mean Component Log Size}_i + \beta_{11} * \text{Mean Component B/M}_i + \varepsilon_i \quad i=1,2,\dots,K \text{ (Mutual Fund)}$
- (2) Rating $KLD_i = \beta_0 + \beta_1 * \text{Social Capital Index}_i + \beta_2 * \text{SRI status}_i + \beta_3 * \text{SRI status}_i * \text{Social Capital Index}_i + \beta_4 * \text{Age}_i + \beta_5 * \text{Management fee}_i + \beta_6 * \text{Dummy female}_i + \beta_7 * \text{Dummy bachelor}_i + \beta_8 * \text{Dummy advanced degree}_i + \beta_9 * \text{Log Fund Assets}_i + \beta_{10} * \text{Mean Component Log Size}_i + \beta_{11} * \text{Mean Component B/M}_i + \varepsilon_i \quad i=1,2,\dots,K \text{ (Mutual Fund)}$

In Column 1, I report heteroskedasticity robust estimates for the equation (1). This specification regresses Holdings in SESI on the level of Social Capital Index. SRI funds are added to the sample, and I control for a host of covariates including a SRI fund dummy, managerial characteristics, and fund characteristics. The coefficient on social capital index is 0.23 % with a t-statistic of 3.61. This mean that as the social capital index increases an increasing share of the total asset is invested in SESI. In particular, multiplying this value by the lowest average difference between SC subgroups, reported in Table 1, as 1.12 (obtained as the difference between 0.26 and -

0.87), we get 0.26% as difference, which is roughly the same as 0.17% reported in Table 4. The SRI fund dummy has a coefficient of -0.77%, with a t-statistic of 1.70. This means that a typical SRI fund underweight socially sensitive industries by about 0.80 percentage points. This effect is complemented by the interaction term which consider the combination of SRI status and social capital. The coefficient is indeed well above the baseline value (-1.23%), whereas the low significance (t-stat 1.34), does not allow to draw conclusions on potential differential effects. The mutual funds with lower level of SC seems roughly mimicking SRI funds in their loadings. After controlling for clustering standard errors for manager and fund families, the significance is lower but enough to reject the null hypotheses of zero coefficient at 5 per cent level (t-stat 1.96). Moreover, manager's individual values appear largely uncorrelated with other fund and manager characteristics. As such, the dependent variables are largely unaffected, once I introduce controllers for a host of other fund or manager characteristics. The only exceptions are Mean component Size and Book-to-market which proxies for fund style. Both of these relations are positive, suggesting that funds that invest more in large cap and value stocks generally tilt their holding more towards SESI stocks.

Moving to KLD social rating using equation (2), in Column 4 are reported baseline coefficient with heteroskedasticity robust standard error. Specifically, the coefficient associated to the social capital index is positive (0.30) and highly significant (t-stat 2.69). This means that as the social capital index increases, managers invest more in company that have higher KLD ratings, namely more involved in CRS programmes. The evidence substantially confirms the central hypothesis, showing that higher level of social capital index might induce money managers to be more responsible in their allocation decisions. Moving to analysing the SRI variables, the estimates seem consistent to the expectations. In particular, being a SRI funds increases the overall level of KLD social rating of 1.85 (with a t-stat of 2.82). This effect magnifies further once I consider the interaction term. As in the case of holdings in SESI, I cannot safely argue that there is an incremental effect due to social capital in SRI since the significance is still below level of acceptance. In addition, allowing for standard error clusters for manager and fund family, the significance of the initial estimates are reduced but differing significantly from zero at 10% level. Switching to analyse the effects of the other covariates, the managerial features that explain partially the results are gender and education. In fact, female managers are associated with a decrease in the overall KLD score of -0.63. This suggests that female are slightly less prone to invest in responsible stocks relative to male peers. Having a bachelor degree, on the other side, can cause a reduction of -1.29 points in the mean score of the fund. On the other side, an advanced degree is associated with a broad increase in the holdings' social rating, partially offsetting the initial effect. Overall, having a college degree seems to reduce the socially responsible investment. The funds characteristics that influence the holdings are the total asset under management

(-0.15) and the mean component log size (1.46). This means that mutual funds with more asset and investing in small cap stocks are more likely to select lower KLD rating stocks.

To this extent, Table 5 provides further insight into the possible interactions between the social capital index and the managerial features. In particular, the first column shows that the social capital coefficient is substantially zero, with a low t-stat at 1.07. Although this result seems running counter previous conclusions, the interactions terms considered help to shed some light on the true impact of social capital. In fact, while the management fee, age, gender and advanced degree have a null combined effect on social capital, Bachelor degree is the only terms that significantly interact with the baseline coefficient (t-stat 1.54). The value associated is 0.32, roughly comparable to that in Table 4. It suggests that there is a positive relation between level of social capital index and holdings in SESI for the subset that holds a bachelor degree. More importantly, the outcome can be reconcile with the positive relation already found, since approximatively 90% of the managers in the sample have a bachelor degree. Considering the same analysis for KLD social rating, the baseline coefficient for the social capital index is surprisingly negative (-2.05) and significantly different from zero (t-stat -3.05). In this case, only age and bachelor degree positively interact with the social capital index, 0.04 and 0.41 respectively, whereas management fee has a negative impact on the social capital index, though negligible (-0.24). This means that, as the manager is older, have a college degree and charges a lower fee, is more likely to increase the KLD social rating of the holdings as the level of social capital increases, keeping fixed all the conditions. Therefore, if we recognize that a typical manager in the sample is 49 years old and holds a bachelor degree, while charging a fee of almost 0.60% per year, the combined effect of social capital with the baseline coefficient would be 0.35. In the end, both columns 2 and 4 of Table 5 point towards the presence of some clustering at manager level, which slight reduce the generalizing power of the findings.

Table 6 reports regression estimates of the underlying dimensions of SESI holdings and KLD on the level of social capital index. In particular, after controlling for standard error clustering at manager level, I breakdown the dependent variables in Table 4 into single constituents. Column 1 of Table 6 reports the same results as in the first column of Table 4 for comparison purpose. From Column 2 to 6, I report multivariate regression analysis for the 5 industries constituting the SESI measure. By looking in detail at the coefficients, I observe that they point in the same direction as the aggregate measure, in spite of the low significance. In term of magnitude of the positive coefficient linked to social capital index, gaming industry with 0.09% (t-stat 1.96) represents the most relevant effects. Afterwards, alcohol and gun & defense have the second and third largest coefficients, with 0.05% and 0.06%, while t-statistics are both around 1.35. On the other side, the estimates for the SRI status are also pointing in the directions of aggregate findings. The tendency of SRI funds to screen

Table 3. Summary Statistics: Industry holdings in SESI and KLD social ratings.

Panel A time series average of yearly cross-sectional means for industry holdings for the entire sample and for subgroups sorted by social capital index. Panel B reports time series average of quarterly cross-sectional means for KLD social ratings for the entire sample and for subgroups sorted by social capital index. Subgroups are defined in Table 1. A-B is the difference between Above Average SC and Below Average SC, i.e., Column 2 minus Column 3. H-L is the difference between High SC and Low SC. T-B is the difference between Top SC and Bottom SC. PSI is defined as the holdings (as a percentage of total assets) in the three politically sensitive industries of tobacco, guns and defense, natural resources, alcohol and gaming. The KLD rating is defined as the sum of the community activities, diversity, employee relations, and environmental record and human rights scores. Ratings for a stock in each category are obtained by adding one point for each strength and subtracting one point for each concern, with higher ratings implying more strengths and/or fewer concerns. A mutual fund's rating in each category is the value-weighted average of its portfolio stock components' ratings (using stock percentage of total asset of the fund). Other KLD categories is the sum of the score for product quality, human rights and corporate governance, obtained with the same methodology as the other categories. However, this variable is not included in the KLD ratings. In columns from (1) to (7) in brackets are reported standard deviation. In columns from (8) to (10), heteroskedasticity-robust t-statistics are reported in brackets. In Panel B, ratings are rescaled by 100 to simplify the display. Socially responsible mutual funds are excluded. The sample consists of single-managed mutual funds from 2006 to 2014.

Variable	All Funds (1)	Above Av SC (2)	Below Av SC (3)	High SC (4)	Low SC (5)	Top SC (6)	Bottom SC (7)	A-B (8)	H-L (9)	T-B (10)
Panel A: Industry holdings										
<i>Holdings in SESI</i>	3.92 % [2.97 %]	4.01 % [2.80 %]	3.84 % [3.11 %]	3.97% [2.79 %]	4.10 % [3.34 %]	3.84% [2.386%]	4.44 % [3.90 %]	0.17 % [1.38]	-0.13 % [-0.82]	-0.60 % [-1.47]
<i>Tobacco</i>	0.36 % [0.85 %]	0.33 % [0.82 %]	0.38 % [0.88 %]	0.32 % [0.85 %]	0.44 % [0.98 %]	0.33% [0.711%]	0.52 % [1.36 %]	-0.04 % [-1.21]	-0.11 % [-2.16]	-0.19 % [-1.37]
<i>Gun and Defense</i>	1.35 % [1.17 %]	1.45 % [1.19 %]	1.26 % [1.15 %]	1.46 % [1.22 %]	1.35 % [1.20 %]	1.35% [0.884%]	1.51 % [1.36 %]	0.19 % [3.79]	0.11 % [1.64]	-0.16 % [-1.08]
<i>Natural Resources</i>	0.50 % [0.88 %]	0.43 % [0.72 %]	0.57 % [1.00 %]	0.41 % [0.71 %]	0.65 % [1.13 %]	0.48% [0.664%]	0.68 % [1.43 %]	-0.14 % [-3.94]	-0.23 % [-4.59]	-0.20 % [-1.38]
<i>Alcohol</i>	0.88 % [1.09 %]	0.93 % [1.12 %]	1.64 % [1.72 %]	0.87 % [1.04 %]	0.86 % [1.13 %]	0.848% [0.892%]	1.05 % [1.32 %]	0.09 % [1.95]	0.00 % [0.06]	-0.20 % [-1.40]
<i>Gaming</i>	0.83 % [1.04 %]	0.87 % [0.99 %]	0.79 % [1.07 %]	0.89 % [0.98 %]	0.80 % [1.06 %]	0.82% [0.859%]	0.68 % [0.93 %]	0.08 % [1.87]	0.09 % [1.68]	0.14 % [1.27]
Panel B: KLD Social rating										
<i>KLD rating</i>	2.95 [5.07]	3.22 [5.68]	2.72 [4.45]	3.11 [6.09]	2.98 [4.62]	1.97 [3.01]	3.12 [5.01]	0.50 [2.22]	0.13 [0.44]	-1.15 [-2.10]
<i>Community activities</i>	0.55 [0.93]	0.59 [0.10]	0.52 [0.85]	0.56 [1.07]	0.56 [0.79]	0.39 [0.54]	0.59 [0.89]	0.08 [1.98]	0.00 [0.03]	-0.20 [-2.10]
<i>Diversity</i>	1.56 [2.57]	1.61 [2.67]	1.52 [2.48]	1.48 [2.84]	1.63 [2.54]	1.05 [1.51]	1.96 [2.97]	0.09 [0.84]	-0.15 [-0.99]	-0.90 [-2.82]
<i>Employee relations</i>	0.53 [1.76]	0.60 [1.96]	0.46 [1.55]	0.67 [2.00]	0.55 [1.79]	0.34 [1.36]	0.56 [1.81]	0.14 [1.79]	0.12 [1.19]	-0.22 [-1.05]
<i>Environmental records</i>	0.48 [1.34]	0.57 [1.41]	0.41 [1.29]	0.55 [1.39]	0.46 [1.39]	0.29 [0.91]	0.24 [1.44]	0.15 [2.57]	0.09 [1.17]	0.05 [0.31]
<i>Human rights</i>	-0.18 [0.40]	-0.16 [0.33]	-0.20 [0.45]	-0.15 [0.33]	-0.22 [0.52]	-0.11 [0.32]	-0.25 [0.58]	0.03 [1.79]	0.06 [2.57]	0.13 [2.13]
<i>Other KLD categories</i>	-1.31 [1.57]	-1.27 [1.51]	-1.35 [1.64]	-1.16 [1.38]	-1.47 [1.72]	-1.07 [1.15]	-1.72 [1.96]	0.08 [1.20]	0.30 [3.48]	0.06 [3.07]

Table 4. Regression of Holdings in SESI and KLD social rating on manager level of Social Capital Index.

Table 4 reports estimated coefficients from pooled OLS regressions of total fund holdings in SESI (tobacco, guns and defense, natural resources, alcohol and gaming) and average KLD social rating (sum of community activities, diversity, employee relations, environmental record scores and human rights) on the level of social capital. KLD social rating variable is rescaled by 100. All other predictor variables are defined in Table 1. Each regression includes region dummy variables for each of the nine U.S. census regions, as well as time dummy variables. Heteroskedasticity-robust t-statistics without considering clustering in column (1) and (4), while allowing for clustering, by manager in specifications (2) and (5), or by fund family in specification (3) and (6) are reported in brackets. KLD social rating are rescaled by 100 to simplify the display. The sample consists of single managed mutual funds from 2006 to 2014.

Independent Variable	Dep. Variable: % Holding in SESI			Dep. Variable: KLD social rating		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Social Capital Index</i>	0.23 % [3.61]	0.23 % [1.92]	0.23 % [1.95]	0.45 [2.69]	0.45 [1.52]	0.45 [1.40]
<i>SRI status</i>	-0.78 % [-1.70]	-0.78 % [-1.00]	-0.78 % [-0.98]	1.85 [2.82]	1.85 [1.67]	1.85 [1.62]
<i>SRI status*Social Capital Index</i>	-1.24 % [-1.10]	-1.24 % [-1.10]	-1.24 % [-1.10]	1.43 [0.92]	1.43 [0.82]	1.43 [0.62]
<i>Age</i>	0.01 % [1.72]	0.01 % [0.84]	0.01 % [0.85]	0.00 [0.05]	0.00 [0.03]	0.00 [0.03]
<i>Management Fee</i>	0.04 % [1.83]	0.04 % [1.47]	0.04 % [1.38]	-0.00 [-0.04]	-0.00 [-0.04]	-0.00 [-0.04]
<i>Female</i>	-0.24 % [-1.60]	-0.24 % [-0.90]	-0.24 % [-0.86]	-0.65 [-2.92]	-0.65 [-1.73]	-0.65 [-1.86]
<i>Bachelor degree</i>	-0.08 % [-0.43]	-0.08 % [-0.26]	-0.08 % [-0.25]	-1.29 [-3.05]	-1.29 [-1.77]	-1.29 [-1.85]
<i>Advanced degree</i>	0.01 % [0.14]	0.01 % [0.08]	0.01 % [0.08]	0.85 [4.30]	0.85 [2.30]	0.85 [2.17]
<i>Log fund size</i>	-0.02 % [-1.13]	-0.02 % [-0.71]	-0.02 % [-0.73]	-0.15 [-4.01]	-0.15 [-2.54]	-0.15 [-2.22]
<i>Mean component log size</i>	0.81 % [24.19]	0.81 % [14.72]	0.81 % [13.2]	1.46 [24.54]	1.46 [13.64]	1.46 [12.26]
<i>Mean component log B/M</i>	0.19 % [2.64]	0.19 % [1.63]	0.19 % [1.39]	-0.26 [-2.02]	-0.26 [-1.20]	-0.26 [-0.98]
<i>Constant</i>	1.72 % [2.53]	1.72 % [1.44]	1.72 % [1.23]	-3.61 [-3.03]	-3.61 [-1.80]	-3.61 [-1.92]
SRI fund Included?	Yes	Yes	Yes	Yes	Yes	Yes
Clustering	No	Manager	Fund family	No	Manager.	Fund Family
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,290	2,290	2,290	1,864	1,864	1,864
Clusters	-	506	152	-	506	152

out stocks in SESI is ultimately supported by the breakdown. Particularly, the SRI managers underweight tobacco and natural resources industries by roughly half percentage point. These results ultimately confirm the initial findings as the tendency of Low social capital manager to overweight sensitive stocks relative to manager living in higher SC regions.

Table 6 also reports components breakdown for KLD social ratings. In Columns 8 to 13, I use sub categories as independent variables. At first sight, the estimates for the social capital index are consistent with aggregate ratings. In fact, the coefficients are always positive, suggesting that the level of SC positively relates to each of the 5 categories included. Among all, environmental record and community activities are the most relevant drivers in terms of significance, with t-stat of 1.93 and

1.42. The remaining categories report slightly higher effect, though even lower t-statistics. The categories not included in KLD social rating calculation display slight positive relation but almost zero t-stat. Moving to analyse the SRI dummy, the positive estimates are ultimately consistent with the investment policy of these funds. In particular, they appear to invest mostly in companies with higher KLD ratings according to three categories: employee relations, environmental record and human rights. Whereas the relative magnitude is 0.73, 0.50 and 0.18 respectively, the t-stats are reversed with human rights at 2.12 and the others around 1.85. Globally, the initial hypothesis on the effect of individual values seems, at least partially, confirmed by the positive and significant relation between social capital index and KLD social ratings. In fact, it more directly represents the level of responsibility in the holdings, mirroring managerial social and ethical values. This constitutes the key finding in this study.

At this point, in order to understand better the individual choices, what need further investigation is the positive relation between SESI holdings and social capital. Besides the various hypotheses proposed on the real trend underlying the investment in sensitive industries, performance of these stocks might create higher incentive to keep individual values in second order, especially in periods of recessions. Fostering this interpretation, recent contributions in literature show how investing in “sin stocks” seems quite profitable with “sin stocks” outperforming the overall market (Hong and Kacperczyk, 2007). In addition, these industries are involved in the production of addictive goods (e.g. alcohol, tobacco or gaming) and traditionally display lower market beta, which can help to diversify the fund portfolios. In this sense, I test this second order effect of values by hypothesizing that funds that tilts their holdings towards SESI stocks might select stocks with higher KLD social ratings. Therefore, consistently with this evidence, can be possible that mutual fund managers still invest in SESI industries but selecting particular stocks that have higher KLD ratings within these industries. Consequently, I should observe that level of stocks in sensitive industries should be positively associated with higher average KLD social score. To test this insight, I introduce in the previous multivariate regression using equation (2), the percentage invested in SESI companies. This covariate shows the relation between investing in “sin stocks” and the level of KLD social rating. Table 7, reports the output of these regressions, after controlling for canonical style effects, regional dummies and time effects and using heteroskedasticity robust standard errors. Besides similar values for the main covariates already discussed in Table 4, the coefficient associated to the % SESI is positive 0.12 and highly significant (t-stat 2.01). This seems to support the initial conjecture by which the investment in sin stocks positively contributes to the average KLD social scores. In this sense, the sin stocks selected appear to have KLD social ratings above average, fostering the interpretation of individual values as second order determinant. While the positive relation between social capital and

SESI holdings is difficult to neglect, the results in Table 6 provide evidence of the potential of underlying individual values on selecting high CSR companies in SESI, even after introducing standard error clustered at manager level and fund family.

Table 5. Regression of Holdings in SESI and KLD social rating on manager level of Social Capital Index controlling for interaction terms with manager's characteristics.

Table 5 reports estimated coefficients from pooled OLS regressions of % holdings in SESI (tobacco, guns and defense, natural resources, alcohol and gaming) and average KLD social rating (sum of community activities, diversity, employee relations, environmental record scores and human rights) on the level of social capital. KLD Social rating variable is rescaled by 100. All other predictor variables are defined in Table 1. Each regression includes region dummy variables for each of the nine U.S. census regions, as well as time dummy variables. Heteroskedasticity-robust t-statistics without considering clustering in column (1) and (3), while allowing for clustering, by manager in specifications (2) and (4), are reported in brackets. KLD social ratings are rescaled by 100 to simplify the display. The sample consists of single managed mutual funds from 2006 to 2014.

Independent Variable	Dep. Variable: % Holdings in SESI		Dep. Variable: KLD social rating	
	(1)	(2)	(3)	(4)
<i>Social Capital Index</i>	-0.41 % [1.07]	-0.41 % [0.48]	-2.05 [-3.09]	-2.05 [-1.81]
<i>SRI status</i>	-0.77 % [-1.71]	0.77 % [1.01]	1.76 [2.61]	1.76 [1.54]
<i>SRI status* Social Capital Index</i>	-1.22 % [-1.29]	-1.22 % [-1.07]	1.49 [1.22]	1.49 [0.92]
<i>Age</i>	0.01 % [2.15]	0.01 % [1.22]	0.01 [1.1]	0.01 [0.62]
<i>Age* Social Capital Index</i>	0.02 % [0.82]	0.01 % [0.35]	0.04 [2.75]	0.04 [1.63]
<i>Management Fee</i>	0.04 % [1.80]	0.04 % [1.45]	-0.02 [-0.27]	-0.02 [-0.26]
<i>Management Fee* Social Capital Index</i>	-0.00 % [-0.17]	-0.01 % [-0.14]	-0.24 [-3.67]	-0.24 [-3.1]
<i>Female</i>	-0.27 % [-1.8]	-0.27 % [-1.00]	-0.69 [-3.07]	-0.69 [-1.81]
<i>Female *Social Capital Index</i>	-0.04 % [-0.15]	-0.04 % [-0.10]	-0.02 [-0.08]	-0.02 [-0.06]
<i>Bachelor degree</i>	-0.01 % [-0.08]	-0.02 % [-0.05]	-1.21 [-2.65]	-1.21 [-1.6]
<i>Bachelor degree* Social Capital Index</i>	0.32 % [1.54]	0.32 % [0.93]	0.41 [1.65]	0.41 [1.56]
<i>Advanced degree</i>	0.02 % [0.19]	0.02 % [0.12]	0.82 [3.58]	0.82 [1.99]
<i>Advanced degree* Social Capital Index</i>	0.07 % [0.55]	0.07 % [0.29]	0.10 [0.44]	0.10 [0.25]
<i>Log fund size</i>	-0.02 % [-1.22]	-0.02 % [-0.78]	-0.16 [-4.34]	-0.16 [-2.74]
<i>Mean component log size</i>	0.81 % [24.06]	0.81 % [14.72]	1.48 [24.94]	1.48 [14.04]
<i>Mean component log B/M</i>	0.18 % [2.61]	0.18 % [1.61]	-0.28 [-2.17]	-0.28 [-1.31]
<i>Constant</i>	1.54 % [2.31]	1.54 % [1.38]	-4.62 [-3.82]	-4.62 [-2.24]
SRI fund Included?	Yes	Yes	Yes	Yes
Clustering	No	Manager	No	Manager
Year Dummy	Yes	Yes	Yes	Yes
Observations	-	506	-	482
Clusters	2,290	2,290	2,099	2,099

4.2 Performance Evaluation: Pecuniary and Non-Pecuniary Motives.

When looking at the performance, I investigate the effect of individual values following two competing interpretation of the investor's behaviour. This results in two different predictions regarding the possible difference in terms of fund net returns achieved by professional managers

The first explanation, for high social capital manager investing in more responsible stocks, is that they might directly derive utility by abstaining from financing companies that are in conflict with their values. Indeed, the non-pecuniary based explanation suggests that professional money managers either might not want to invest in causes that they personally oppose or they might require certain responsibility standards before allocating capital to firms. The result is, following Jensen and Meckling (1976), that managers might incorporate values in their holdings as form of perks, in the context of the traditional principal-agent model. Conversely, the pecuniary-based explanation offers a slightly different interpretation. In fact, mutual funds managers and generally any investor, might have a multi-attribute utility function that incorporate social and ethical values in their risk-return models (Bollen, 2007). This means that firms that are inconsistent with their values will also be less profitable or more risky in the future. Regarding the possible expectations, I cannot formulate unequivocal reliable predictions before the results. According to Hong and Kostovetsky (2012), both pecuniary and non-pecuniary reasons might at the same time influence the results, not allowing to infer the superiority of one theory over the other. Notwithstanding, the only aspect to highlight is the issue of agency costs. In particular, as exposed by Geczy et al. (2003), if managers are indulging in non-pecuniary motives performance might suffer, achieving lower returns than their peers. Furthermore, the empirical evidence on the performance of "sin stocks", traditionally outperforming the overall market (Hong and Kacperzyck, 2007), would induce lower SC managers to achieve lower performance. Finally, despite some studies show few difficulties in "investing *well* while investing *good*" (Statman, 2000; Renneboorg et al. 2011; Geczy et al., 2003), investing in companies actively involved in CSR might pay-off in the long-term because these firms might be better able to adapt to changes in business conditions and market undervalues CRS in the short-term (Hong and Kostovetsky, 2012; Reneboorg et al., 2011). Looking at Table 8, which reports multivariate regression estimates using Fama and McBeth (1976) methodology, the first two columns report results for monthly fund returns net of expenses. In Column 1, the coefficient associated to social capital index is slightly positive (0.02 %) but with very low in significance (t-stat 0.70).

Table 6. Regression of Holdings in SESI Components and KLD social scores components on manager level of Social Capital Index.

Table 6 reports estimated coefficients from pooled OLS regressions components of SESI (tobacco, guns and defense, natural resources, alcohol and gaming) and average KLD rating (sum of community activities, diversity, employee relations, environmental record scores and human rights) on the level of social capital. Specifications (1) through (6) show regressions using holdings in various industries as dependent variables and coefficients are expressed as percentage. Specifications (7) through (13) show regressions using components of the KLD rating as the dependent variables. All other predictor variables are defined in Table 1. Each regression includes region dummy variables for each of the nine U.S. census regions, as well as time dummy variables. KLD social ratings are rescaled by 100 to simplify the display. Heteroskedasticity-robust t-statistics, allowing for clustering by fund manager, are reported in brackets. The sample consists of single managed mutual funds from 2006 to the 2014.

Independent Variable	% SESI (1)	% Tobacco (2)	% Guns & defense (3)	% Natural resources (4)	% Alcohol (5)	% Gaming (6)	KLD rating (7)	Community. activities (8)	Diversity (9)	Employee relations (10)	Enviro. Record (11)	Human Rights (12)	Other KLD Comp. (13)
<i>Social Capital Index</i>	0.27 [1.98]	0.00 [0.18]	0.05 [1.32]	0.01 [0.31]	0.05 [1.31]	0.09 [1.96]	0.30 [1.52]	0.04 [1.42]	0.07 [0.81]	0.05 [0.84]	0.10 [1.93]	0.01 [1.10]	0.01 [0.18]
<i>SRI status</i>	-0.78 [-1.00]	-0.42 [-2.63]	-0.14 [-0.45]	-0.35 [-1.56]	-0.00 [-0.02]	-0.09 [-0.33]	1.85 [1.67]	0.15 [1.12]	0.27 [0.76]	0.73 [1.87]	0.50 [1.83]	0.18 [2.12]	0.41 [1.30]
<i>SRI status* Social Capital Index</i>	-1.24 [-1.10]	-0.01 [-0.08]	-0.54 [-1.14]	-0.37 [-1.02]	-0.22 [-0.42]	-0.08 [-0.19]	1.43 [0.92]	0.17 [0.84]	0.66 [1.07]	0.69 [1.38]	-0.15 [-0.38]	0.04 [0.32]	-0.31 [-0.73]
<i>Age</i>	0.01 [0.84]	0.00 [0.67]	0.00 [0.45]	0.01 [2.38]	0.00 [0.11]	-0.00 [-0.98]	0.00 [0.03]	0.00 [0.47]	0.01 [1.31]	-0.00 [-0.60]	-0.00 [-1.40]	-0.00 [-2.60]	-0.01 [-1.73]
<i>Management Fee</i>	0.04 [1.47]	0.00 [0.08]	0.05 [1.50]	-0.01 [-0.83]	0.00 [0.12]	-0.00 [-0.17]	-0.00 [-0.04]	-0.00 [-0.09]	-0.00 [-0.06]	-0.02 [-0.45]	0.01 [1.19]	0.00 [0.95]	0.02 [0.91]
<i>Female</i>	-0.24 [-0.90]	-0.10 [-1.1]	-0.02 [-0.28]	0.04 [0.53]	-0.06 [-0.66]	-0.09 [-0.97]	-0.65 [-1.73]	-0.09 [-1.18]	-0.26 [-1.21]	-0.24 [-2.25]	-0.05 [-0.54]	0.00 [0.16]	0.20 [1.69]
<i>Bachelor degree</i>	-0.08 [-0.26]	-0.05 [-0.64]	0.02 [0.26]	0.11 [1.19]	-0.02 [-0.18]	-0.14 [-1.15]	-1.29 [-1.77]	-0.19 [-1.47]	-0.73 [-2.03]	-0.22 [-1.00]	-0.18 [-1.42]	0.03 [0.92]	0.10 [0.59]
<i>Advanced degree</i>	0.01 [0.08]	-0.02 [-0.43]	-0.04 [-0.59]	0.12 [2.10]	-0.02 [-0.29]	-0.02 [-0.26]	0.85 [2.30]	0.11 [1.71]	0.20 [1.1]	0.29 [2.45]	0.22 [2.65]	0.01 [0.73]	0.10 [1.15]
<i>Log fund size</i>	-0.02 [-0.71]	0.00 [0.54]	0.00 [0.21]	-0.01 [-1.28]	-0.02 [-2.15]	0.00 [0.69]	-0.15 [-2.54]	-0.02 [-2.28]	-0.05 [-2.07]	-0.02 [-1.39]	-0.04 [-3.26]	-0.00 [-0.78]	-0.01 [-1.03]
<i>Mean component log size</i>	0.81 [14.4]	0.21 [9.22]	0.14 [6.97]	0.07 [4.21]	0.26 [11.81]	0.12 [5.29]	1.46 [13.64]	0.22 [11.27]	0.96 [15.9]	0.23 [9.05]	0.14 [5.98]	-0.09 [11.87]	-0.43 [-13.03]
<i>Mean component log B/M</i>	0.19 [1.63]	-0.22 [-6.39]	0.33 [6.47]	0.06 [1.86]	-0.10 [-2.12]	0.11 [2.28]	-0.26 [-1.20]	0.03 [1.05]	-0.38 [-3.63]	-0.00 [-0.05]	0.05 [1.2]	0.03 [2.06]	-0.17 [-3.32]
<i>Constant</i>	1.72 [1.44]	-1.59 [-4.12]	2.62 [5.80]	-0.14 [-0.45]	-0.55 [-1.1]	1.39 [3.23]	-3.61 [-1.80]	0.05 [0.16]	-3.53 [-3.78]	-0.54 [-0.86]	0.03 [0.08]	0.37 [2.92]	-1.00 [-2.17]

Table 7. Regression of KLD social scores on manager level of Social Capital Index and % holdings in SESI stocks.

Table 7 reports estimated coefficients from pooled OLS regressions of average KLD social rating (sum of community activities, diversity, employee relations, environmental record scores and human rights) on the level of social capital. % holdings in SESI stocks is a control variable which proxies for the percentage of total assets invested in social and ethical sensitive industries. All other predictor variables are defined in Table 1. Each regression includes region dummy variables for each of the nine U.S. census regions, as well as time dummy variables. Heteroskedasticity-robust t-statistics without considering clustering in column (1) and while allowing for clustering, by manager in specifications (2) or by fund family in specification (3) and are reported in brackets. KLD social ratings are rescaled by 100 to simplify the display. The sample consists of single managed mutual funds from 2006 to 2014.

Independent Variable	Dep. Variable: KLD social rating		
	(1)	(2)	(3)
<i>Social Capital Index</i>	0.27 [2.43]	0.27 [1.39]	0.27 [1.25]
<i>% holdings in SESI stocks</i>	0.12 [2.01]	0.12 [1.53]	0.15 [1.30]
<i>SRI status</i>	1.95 [2.96]	1.95 [1.67]	1.95 [1.62]
<i>SRI status* Social Capital Index</i>	1.47 [1.33]	1.47 [0.95]	1.47 [0.93]
<i>Age</i>	-0.00 [-0.05]	-0.00 [-0.03]	-0.00 [-0.02]
<i>Management Fee</i>	-0.01 [-0.11]	-0.01 [-0.10]	-0.01 [-0.10]
<i>Female</i>	-0.62 [-2.77]	-0.62 [-1.60]	-0.62 [-1.70]
<i>Bachelor degree</i>	-1.28 [-3.01]	-1.28 [-1.77]	-1.28 [-1.87]
<i>Advanced degree</i>	0.84 [4.25]	0.84 [2.29]	0.84 [2.14]
<i>Log fund size</i>	-0.15 [-3.83]	-0.15 [-2.43]	-0.15 [-2.10]
<i>Mean component log size</i>	1.36 [17.96]	1.36 [11.86]	1.36 [10.94]
<i>Mean component log B/M</i>	-0.28 [-2.13]	-0.28 [-1.27]	-0.28 [-1.03]
<i>Constant</i>	-3.80 [-3.14]	-3.80 [-1.87]	-3.80 [-1.95]
SRI fund Included?	Yes	Yes	Yes
Clustering	No	Manager.	Fund Family
Year Dummy	Yes	Yes	Yes
Observations	1,864	1,864	1,864
Clusters	-	506	152

This should suggest that, when we look at the overall effect using continuous variables, the difference among subgroups are negligible and close to zero. Moving to consider the values associated to the dummy variables, I can see only a slight difference among subgroups with below average SC funds slightly outperforming high SC funds (3bps per month). However, when taking into account extreme percentiles, the gap between high SC and low SC managers is positive and amounts to 50/60 bps per month. In fact, the top SC managers obtain significant positive average monthly returns whereas the bottom SC group has return on average close to zero. Given these results, I can conclude that an

higher level social capital index seems not related to any kind of performance advantage, except from very extreme realizations. Practically, this does not permit to draw any conclusive statement on the superiority between pecuniary and non-pecuniary explanations. Therefore, the outcome observed might be more realistically a result of the combination of multiple forces. Remarkably, as discussed in Section 3.1, the evidence of higher SC managers to tilt their holdings toward SESI stocks and more responsible stocks might explain at least part of the outperformance. This appears consistent to the effect of the level of SESI stocks and SRI status on performance, positive and low significant, but limited to extreme subsamples.

4.3 Aggressive Mutual Funds

To generalize early findings, I should consider whether or not the regularities can be extended to the case of more speculative and aggressive funds. As shown by Hong and Kostovetsky (2012), hedge funds are a popular mean to test how individual values ultimately affect the investment decisions. By obtaining the same relation on social capital index, it would foster the idea that different beliefs on asset allocation are actually influence the manager's behaviour. Conversely, if social capital discriminates less the hedge fund managers behaviour, agency conflicts and weak governance structures probably drive the previous relations on mutual funds industry. This would be the case, since they have higher performance-linked compensation packages which can reduce the incentive to drive their strategy away from solely exploiting the arbitrage opportunities in the market. However, extracting data on hedge funds is not always easy and straightforward as it is for mutual funds. Since these funds follows risky strategies to exploit temporary opportunities in the market, holdings data are not frequently disclosed and almost impossible to obtain, for example, for those with equity value less than 100 million dollars. Furthermore, the holdings data are usually aggregated at fund family and/or management company, rendering complicated and arbitrary the match between managers and portfolio characteristics. To this extent, I decide to bypass the issue and its potential biases arising by considering a specific subset of mutual funds in the sample. I focus on mutual funds that have more speculative/aggressive strategies, higher volatility in their holdings and that adopt highly levered strategies, typical of hedge funds. Therefore, using Lipper Objective Classification provided in CRSP Mutual Fund Database, mutual funds that can be classified as "more aggressive" are: Long/Short Equity Funds, Growth U.S equity funds, Capital Appreciation Funds and Absolute Return Funds. After that, I split the mutual funds in the sample, based on the dummy variable Aggressive Funds, that assumes value of 1 if the mutual funds enter in one of the mentioned categories otherwise zero. The overall sample of aggressive mutual funds is constituted by 836 different funds consisting of almost the 30% of the entire sample.

As reported in Table 9, the level of social capital index appears to be associated with higher percentage invested in SESI stocks and higher level of KLD social rating. In particular, while the average exposure to SESI stocks of aggressive funds is higher than the full sample (4.92 %), above average SC funds hold approximately 5.00% with a gap of 0.15 % relative to below average SC managers (4.84 %). This difference, however, reverts when considering the top-bottom percentile differences, increasing also in significance with t-stat from 0.69 to -1.33. On the other side, looking at results reported in Panel B, mean KLD social ratings for higher SC subsample are monotonically higher as we move from above-below average comparison to more extreme percentiles. In fact, the gap between the first decomposition in column 6 is 1.56, significantly differing from zero (t-stat 3.82). Once I move to consider the extreme percentiles, the gap decreases to 0.55 with the significance of the estimates, now at 0.75. Overall, the evidence appears to point in the direction of earlier findings, supporting the idea that individual values seems to manifest also in the context of more aggressive and growth-oriented mutual funds.

Moving to the regression analysis, Table 10 further confirm the goodness of the early results. In fact, after running the specifications as in Table 4 and controlling for the aggressive/speculative mutual funds, the estimates substantially confirm the positive relation between the percentages invested in SESI industries and the level of social capital index. This baseline relation is not dependent from a specific subset of mutual funds, as both the baseline and interaction coefficients are different from zero and highly significant, 0.29 % (t-stat 3.75) and 0.19 % (t-stat 1.68). In this context, aggressive mutual funds increasingly tilt their holding toward SESI stocks as the social capital index increases, fixed all the other conditions. Similarly, column 3 and 4 display the outputs for the specifications with KLD social rating as independent variable. The estimates reported are consistent with a positive link with the level of social capital index, for both the subsamples of aggressive and non-aggressive mutual funds. However, in this case, the aggressive group seems driving slightly more the results in comparison to the estimates in the first columns. Indeed, the interaction term is larger and more significant than the baseline, as 0.12 (t-stat 1.45) and 0.78 (t-stat 3.86), reducing marginally the generalisation potential.

Although this, ultimately, points in the in the direction of the belief-based explanations, is useful to highlight that these are just rough conclusions. A more speculative analysis directly into the hedge funds' world might provide different insights and clearer evidence on the real importance of values on investment decisions for more speculative institutional funds.

Table 8. Regression of fund returns on manager level of Social Capital Index.

Table 8 reports Fama-MacBeth (1973) estimates of monthly mutual fund returns regressed on lagged fund and managerial characteristics. Net returns are monthly returns, net of expenses.. Fund turnover is the fund's turnover of assets. Fund Inception is the number of years since the fund's inception. Expense ratio is total annual expenses as a fraction of assets under management. Lag 12Mth fund flows is net flows over the previous 12 months. The flow measure is obtained as difference between of assets under management in month T and T-1. Lag 12Mth returns are net returns over the last 12 months. All other predictor variables are defined in Table 1 and Table 3. Fama-Macbeth (1973) t-statistics are in brackets. The sample consists of single managed mutual funds from the first month of 2006 to the last month of 2014.

Independent Variable	Net Returns		
	(1)	(2)	(3)
<i>Social Capital Index</i>	0.02 % [0.70]		
<i>Dummy Above Av SC</i>		0.01% [0.37]	
<i>Dummy Below Av SC</i>		0.03% [1.97]	
<i>Dummy Top SC</i>			0.61% [2.28]
<i>Dummy Bottom SC</i>			0.10% [0.81]
<i>SRI status</i>	0.14 % [1.55]	0.12% [1.48]	0.00% [0.00]
<i>% invested in SESI industries</i>	-0.00 % [-0.90]	-0.01% [-0.85]	0.09 % [0.95]
<i>Log fund size</i>	-0.01 % [-0.35]	-0.01% [-0.47]	-0.01% [0.08]
<i>Mean component log size</i>	-0.01 % [-0.23]	-0.25% [-0.28]	-0.17% [-1.30]
<i>Mean component log B/M</i>	-0.01 % [-0.16]	-0.02% [-0.15]	0.16% [0.61]
<i>Fund Inception</i>	0.00 % [0.35]	0.00% [0.60]	-0.00% [-0.65]
<i>Expense Ratio</i>	0.12 % [1.66]	0.19% [1.61]	0.34% [1.65]
<i>Fund Turnover</i>	0.00 % [0.01]	-0.00% [-0.03]	0.15% [0.90]
<i>Lagged 12 Month Net Return</i>	-0.01% [-0.10]	-0.00% [-0.03]	0.11% [1.25]
<i>Lagged 12 Month Flow</i>	0.00% [0.97]	0.00% [1.05]	-0.00% [-0.13]
<i>Management fee</i>	-0.14 % [-2.15]	-0.02% [-2.19]	-0.98% [-1.90]
<i>Age</i>	-0.00 % [-0.81]	-0.00% [-0.90]	0.00% [0.31]
<i>Female</i>	-0.05 % [-0.55]	-0.04% [-0.47]	0.01% [1.09]
<i>Bachelor degree</i>	0.01 % [0.03]	-0.02% [-0.15]	1.24% [1.34]
<i>Advanced degree</i>	-0.09 % [-2.46]	-0.09% [-2.55]	-0.65% [-1.68]
<i>Constant</i>	0.93 % [0.84]	0.93% [0.82]	1.13% [0.34]
N° of months	108	108	108

Table 9. Summary statistics of holdings in SESI and KLD social ratings of aggressive/speculative mutual fund sorted by level of Social Capital Index.

Panel A time series average of quarterly cross-sectional means for industry holdings for the Aggressive/speculative funds and for subgroups sorted by social capital index. Panel B reports time series average of quarterly cross-sectional means for KLD social ratings for the entire sample and for subgroups sorted by social capital index. Subgroups are defined in Table 1. A mutual fund in the sample is defined as aggressive/speculative fund based on Lipper Objective Classification. In particular, funds that are classified as “Long/Short Equity Funds”, “Absolute Return Equity Funds”, “Capital Appreciation Funds” and “Growth Equity Funds”. A-B is the difference between Above Average SC and Below Average SC, i.e., Column 2 minus Column 3. T-B is the difference between Top SC and Bottom SC. PSI is defined as the holdings (as a percentage of total assets) in the three politically sensitive industries of tobacco, guns and defense, natural resources, alcohol and gaming. The KLD rating is defined as the sum of the community activities, diversity, employee relations, and environmental record and human rights scores. Ratings for a stock in each category are obtained by adding one point for each strength and subtracting one point for each concern, with higher ratings implying more strengths and/or fewer concerns. A mutual fund’s rating in each category is the value-weighted average of its portfolio stock components’ ratings (using stock percentage of total asset of the fund). Other KLD categories is the sum of the score for product quality, human rights and corporate governance, obtained with the same methodology as the other categories. However, this variable is not included in the KLD ratings. Socially Responsible mutual funds are excluded. In columns from (1) to (5) in brackets are reported standard deviation. In columns from (6) to (7), heteroskedasticity-robust t-statistics are reported in brackets. In Panel B, ratings are rescaled by 100 to simplify the display. The sample consists of single-managed mutual funds from the first quarter of 2006 through the fourth quarter of 2014.

Variable	Aggressive Funds (1)	Above Av SC (2)	Below Av SC (3)	Top SC (4)	Bottom SC (5)	A-B (6)	T-B (7)
Panel A: Industry holdings							
<i>Holdings in SESI</i>	4.92 % [0.11 %]	5.00 % [0.15 %]	4.84 % [0.16 %]	4.09 % [0.35 %]	4.80 % [0.40 %]	0.15 % [0.69]	-0.71 % [-1.33]
<i>Tobacco</i>	0.49 % [0.04 %]	0.40 % [0.05 %]	0.57 % [0.05 %]	0.51 % [0.13 %]	0.69 % [0.24 %]	-0.17 % [-2.33]	-0.18 % [-0.69]
<i>Gun and Defense</i>	1.55 % [0.04 %]	1.73 % [0.06 %]	1.39 % [0.05 %]	1.43 % [0.13 %]	1.50 % [0.15 %]	0.33 % [4.08]	-0.08 % [-0.39]
<i>Natural Resources</i>	0.60 % [0.03 %]	0.49 % [0.04 %]	0.70 % [0.05 %]	0.34 % [0.09 %]	0.44 % [0.08 %]	-0.21 % [-3.13]	-0.10 % [-0.79]
<i>Alcohol</i>	1.18 % [0.04 %]	1.25 % [0.06 %]	1.12 % [0.06 %]	1.05 % [0.12 %]	1.40 % [0.20 %]	0.13 % [1.50]	-0.34 % [-1.51]
<i>Gaming</i>	1.09 % [0.04 %]	1.12 % [0.06 %]	1.06 % [0.07 %]	0.76 % [0.12 %]	0.76 % [0.15 %]	0.06 % [0.69]	-0.00 % [-0.30]
Panel B: KLD Social ratings							
<i>KLD social rating</i>	4.43 [0.20]	5.21 [0.34]	3.65 [0.21]	3.22 [0.42]	2.66 [0.61]	1.56 [3.82]	0.55 [0.75]
<i>Community activities</i>	0.78 [0.03]	0.91 [0.06]	0.65 [0.03]	0.60 [0.07]	0.52 [0.08]	0.26 [3.72]	0.07 [0.66]
<i>Diversity</i>	2.31 [0.095]	2.56 [0.14]	2.07 [0.11]	1.73 [0.20]	1.48 [0.42]	0.48 [2.56]	0.25 [0.53]
<i>Employee relations</i>	0.86 [0.07]	1.02 [0.11]	0.71 [0.08]	0.51 [0.19]	0.63 [0.20]	0.31 [2.16]	-0.12 [-0.43]
<i>Environmental records</i>	0.71 [0.05]	0.94 [0.08]	0.49 [0.07]	0.50 [0.13]	0.26 [0.17]	0.44 [3.99]	0.23 [1.06]
<i>Human rights</i>	-0.25 [0.01]	-0.22 [0.01]	-0.27 [0.02]	-0.13 [0.03]	-0.24 [0.08]	0.05 [1.56]	0.11 [1.30]
<i>Other KLD categories</i>	-1.55 [0.05]	-1.53 [0.07]	-1.56 [0.08]	-1.10 [0.15]	-1.44 [0.24]	0.03 [0.28]	0.33 [1.16]

5. Robustness Checks

Before drawing the overall conclusions coming from this study, is necessary to provide further tests in order to give strength to early findings. To this extend, firstly I perform some robustness check and then I move to test for possible alternative explanations.

Table 10. Regression of holdings in SESI and KLD social rating on manager level of Social Capital Index controlling for Aggressive/Speculative Funds.

Table 10 reports estimated coefficients from pooled OLS regressions of % holdings in SESI (tobacco, guns and defense, natural resources, alcohol and gaming) and average KLD social rating (sum of community activities, diversity, employee relations, environmental record scores and human rights) on the level of social capital. KLD Social rating variable is rescaled by 100. All other predictor variables are defined in Table 1. Dummy aggressive funds, assumes value of 1 if a mutual fund in the sample is defined as aggressive/speculative fund based on Lipper Objective Classification. In particular, funds that are classified as “Long/Short Equity Funds”, “Absolute Return Equity Funds”, “Capital Appreciation Funds” and “Growth Equity Funds” otherwise is zero. Each regression includes region dummy variables for each of the nine U.S. census regions, as well as time dummy variables. Heteroskedasticity-robust t-statistics allowing for clustering, by manager in specifications (1) and (3), or by fund family in specification (2) and (4) are reported in brackets. KLD social ratings are rescaled by 100 to simplify the display. The sample consists of single managed mutual funds from 2006 to 2014.

Independent Variable	Dep. Variable: % Holding in SESI		Dep. Variable: KLD social rating	
	(1)	(2)	(3)	(4)
<i>Social Capital Index</i>	0.29 % [3.75]	0.29 % [2.08]	0.12 [1.45]	0.12 [1.41]
<i>SRI status</i>	-0.97 % [-2.14]	-0.97 % [-1.28]	1.64 [2.50]	1.64 [1.50]
<i>SRI status* Social Capital Index</i>	-1.03 % [-1.07]	-1.03 % [-0.89]	1.17 [1.00]	1.17 [0.75]
<i>Dummy Aggressive</i>	0.66 % [5.63]	0.66 % [3.71]	0.57 [2.41]	0.57 [1.41]
<i>Dummy Aggressive*Social Capital Index</i>	0.19 % [1.68]	0.19 % [0.98]	0.78 [3.86]	0.78 [2.41]
<i>Age</i>	0.00 % [1.30]	0.00 % [0.65]	-0.00 [-0.14]	-0.00 [-0.08]
<i>Management Fee</i>	0.04 % [1.96]	0.05 % [1.59]	0.00 [0.02]	0.00 [0.01]
<i>Female</i>	-0.12 % [-0.86]	-0.13 % [-0.49]	-0.54 [-2.47]	-0.54 [-1.48]
<i>Bachelor degree</i>	-0.09 % [-0.52]	-0.10 % [-0.32]	-1.31 [-3.10]	-1.31 [-1.81]
<i>Advanced degree</i>	0.00 % [0.05]	0.00 % [0.03]	0.84 [4.28]	0.84 [2.27]
<i>Log fund size</i>	-0.00 % [-0.45]	-0.00 % [-0.29]	-0.14 [-3.93]	-0.14 [-2.49]
<i>Mean component log size</i>	0.72 % [19.54]	0.72 % [11.72]	1.43 [19.78]	1.43 [11.37]
<i>Mean component log B/M</i>	0.28 % [3.83]	0.28 % [2.40]	-0.21 [-1.53]	-0.21 [-0.91]
<i>Constant</i>	2.41 % [3.500]	2.41 % [2.04]	-3.40 [-2.76]	-3.40 [-1.66]
SRI fund Included?	Yes	Yes	Yes	Yes
Nat. Res. fund included?	Yes	Yes	Yes	Yes
Clustering	No	Managers	No	Managers
Year Dummy	Yes	Yes	Yes	Yes
Observations	-	506	-	482
Clusters	2,290	2,290	2,099	2,099

5.1 Robustness Tests

Besides the introduction in the main regressions of standard error clustering at different level, the yearly and location factors, I propose three further robustness test. Firstly, I simply introduce a broader definition of the KLD social rating measure, whereas in the second, following the literature,

I use a different procedure to take into account style discrepancies among mutual funds. Third, I check for potential effects due to the financial crisis, by splitting up the sample in different periods according to the recession peak. Both of these alternative formulations are tested using the multivariate regression framework developed along Section 4.

The construction of the KLD social rating measure used in the study, substantially considers only 5 dimensions out of the 7 available in the KLD database. In fact, I intentionally screen out corporate governance and product quality, as they appear not traditionally linked to any social, political, religious or ethical values. Particularly, they seem more accurately refer to technical and/or economic issues of certain company. However, these components more realistically could be considered as important determinants by a certain subset of investors and then, incorporated in their decisions. Therefore, I account for all the 7 components by creating the variable *All Components KLD social ratings*. This new independent variable is defined as the sum of the previous *KLD social rating* and the *Other KLD ratings variable*. Looking at Panel A of Table 11, the results for the canonical multivariate regression documents how this modification does not influence the results. Indeed, the coefficient for the Social Capital Index variable remains positive (0.29) and at the same level of significance as in Table 3, even after introducing standard errors clustering at manager level.

Regarding the second issue, style effects represent a great part of the heterogeneity observed in the mutual funds industry. For this reason, I decide to conventionally control for this effect in a more convenient way in the first regressions. By introducing directly the quarterly mean component log size and log book-to-market ratio of certain funds, I control for the cross-sectional variation in the exposure to size and value factors of holdings. However, following Hong and Kostovetsky (2008) and Daniel et al., (1997) use this measure in a separate regression to obtain the so-called “residual holdings” in PSI industries and the “residual KLD social ratings” winsorizing the independent variables from this effect. This separate regression, one for each social and ethical sensitive industry, allows to determine the residual holdings in gun & defense for fund i in quarter t as:

$$(3) \text{ Gun \& Defense}_i = \mu + \beta_1 * \text{Mean Component Log Size}_i + \beta_2 * \text{Mean Component Log B/M}_i + \varepsilon_i$$

for $i=1,..n$ different Funds

This procedure, in practice, uses the residuals coming from this regression to weight each observation. In this case, the residual holdings in gun & defense for fund i in quarter t is obtained by estimating the following cross-sectional regression within quarter t . Particularly, it also eliminates time-series variation in industry holdings since the residuals have means of zero within each quarter.

Table 11. Regression of all components KLD social rating, residual holdings in SESI and Residual KLD social rating on manager level of Social Capital Index.

Panel A reports estimated coefficients from pooled OLS regressions of average all components KLD social rating (sum of community activities, diversity, employee relations, environmental record scores, corporate governance and product quality) on a social capital measure. All other predictor variables are defined in Table 1. Each regression includes region dummy variables for each of the nine U.S. census regions, as well as time dummy variables. Panel B reports estimated coefficients from pooled OLS regressions of % Residual holdings in SESI (tobacco, guns and defense, natural resources, alcohol and gaming) and average residual KLD social rating (sum of community activities, diversity, employee relations, and environmental record scores, human rights) on the level of social capital index. All other predictor variables are defined in Table 1. Each regression includes region dummy variables for each of the nine U.S. census regions, as well as time dummy variables. Heteroskedasticity-robust t-statistics, allowing for clustering by manager in specifications (2), (4) and (6) are reported in brackets. KLD social ratings are rescaled by 100 to simplify the display. The sample consists of single managed mutual funds from the first quarter of 2006 through the fourth quarter of 2014.

Independent Variable	Panel A		Panel B			
	Dep. Variable: All Component KLD social rating		Dep Variable: % Residual Holdings in SESI		Dep Variable: Residual KLD social rating	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Social Capital Index</i>	0.29 [2.83]	0.29 [1.67]	0.32 % [1.25]	0.32 % [1.18]	0.75 [0.74]	0.75 [0.71]
<i>SRI status</i>	2.19 [3.26]	2.19 [1.89]	-0.30 % [-0.46]	-0.30 % [-0.37]	4.48 [1.26]	4.48 [1.20]
<i>SRI status* Social Capital Index</i>	1.76 [1.97]	1.76 [1.33]	0.49 % [0.47]	0.49 % [0.40]	1.11 [0.25]	1.11 [0.24]
<i>Age</i>	-0.00 [0.67]	-0.00 [-0.40]	0.09 % [3.96]	0.09 % [3.57]	0.33 [3.48]	0.33 [3.21]
<i>Management Fee</i>	0.01 [0.22]	0.01 [0.20]	0.22 % [2.52]	0.22 % [2.18]	0.37 [0.88]	0.37 [0.83]
<i>Female</i>	-0.40 [1.95]	-0.40 [-1.32]	-0.87 % [-1.10]	-0.87 % [-1.06]	-8.84 [-1.67]	-8.84 [-1.72]
<i>Bachelor degree</i>	-1.15 [1.91]	-1.15 [-1.74]	0.74 % [1.29]	0.74 % [1.00]	0.76 [0.32]	0.76 [0.25]
<i>Advanced degree</i>	0.89 [4.92]	0.89 [2.74]	0.04 % [0.11]	0.04 % [0.14]	-0.22 [-0.12]	-0.22 [-0.16]
<i>Log fund size</i>	-0.15 [4.16]	-0.15 [-2.67]	-0.37 % [-4.56]	-0.37 % [-3.89]	-1.10 [-3.86]	-1.10 [-3.83]
<i>Mean component log size</i>	0.94 [17.4]	0.94 [10.81]				
<i>Mean component log B/M</i>	-0.40 [3.44]	-0.40 [-2.14]				
<i>Constant</i>	-4.18 [-3.7]	-4.18 [-2.28]	3.44 % [3.35]	3.44 % [2.97]	-12.96 [-2.81]	-12.96 [-2.60]
SRI fund Included?	Yes	Yes	Yes	Yes	Yes	Yes
Nat. Res. fund included?	Yes	Yes	Yes	Yes	Yes	Yes
Clustering	No	Manager.	Manager	Fund Family	Manager	Fund Family
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,860	1,860	2,290	2,290	1,860	1,864
Clusters	-	-	506	125	506	152

Residual holdings in SESI is simply the sum of the residual industry holdings in tobacco, guns and defense, natural resources, alcohol and gaming. To obtain residual KLD social ratings the method is the same with the only difference that KLD component enters the regressions as dependent variable. Similarly, then, the residual KLD social rating is the sum of the 5 separate components. Moving to analyse the estimates in Panel B of Table 11, seems evident that the results are only slightly altered.

Specifically, whereas the coefficients point in the direction of what documented in Section 4, a reduction in the significance of the estimates cause weakens the results. However, this might be motivated, in part, by the limitations in the sample, which covers only the 55% of the entire single managed, equity, diversified, mutual fund universe. The estimates for the various control variables assumes approximately the same coefficients as in the main regressions. Although the sample features, is difficult to neglect that difference in the investing policy adopted captures great part of the cross-sectional variation in holdings of mutual funds.

The final robustness check controls for the potential biasing effects arising from the financial crisis in the sample. This period has led to a worldwide turmoil in the financial market, which might have altered in some way the investment decision-making process of professional investors. For this reason, I decide to split up the 10-years sampling period, isolating three different sub-clusters based on the US real GDP growth rate. I start considering the pre-financial crisis period from 2006 to 2007, a period characterized by positive GDP growth rate. Then, I move to the recession peaks of 2008 and 2009, with the dramatic fall in the GDP which contracted by 6.6% in the first quarter of 2009. Finally, I considers the post-crisis period with the progressive recovery of the US economy, displaying pre-crisis growth rates. Hence, if the results are particularly driven by the financial crisis I should observe a clustering of the relations in the recession period. To test this hypothesis, in Table 12 I run the regressions using the canonical specifications as in equations (1) and (2) within each sub-period. Panel A of Table 13 shows that in the pre-financial period the impact of the social capital on both holdings in SESI stocks and KLD social rating is slightly lower in magnitude and significance than the overall sample (0.21% and 0.20). However, these relations completely disappear in Panel B once I move to the financial crisis peak. In fact, the estimates for the social capital index are now 0.01 % and 0.17 with 0.06 and 1.00 as t-statistics. Therefore, the financial crisis would run counter our findings, weakening the relations rather than driving and biasing the results. This fact seems particularly important in further strengthening the effect of social capital index on holdings in SESI stocks and KLD social rating. Post-financial crisis peaks estimates for the social capital index, reported in panel C, are indeed significantly differing from zero (2.70 and 2.30 as t-stats). As shown in columns 5 and 6, a unit increase in the social capital index is associated with a shift in holdings in SESI of 0.44% and an average KLD social rating of 0.70 points, held fixed all the conditions. Overall, the results are mostly driven by both pre- and post-financial crisis periods wiping out the residual doubts on the role of the recession in diving the main relations.

5.2 Alternative Explanations

In order to provide further strength to the findings discussed in the previous section, I propose a direct comparison with few other traditional drivers of the investment decisions, extensively

documented in behavioral finance literature. These are respectively: clientele effects, the impact of political and religious beliefs and home-country bias. Regarding the methodology used, it is invariant relative to the path followed along this study, using almost the same specification as the previous multivariate regressions. Since the specific interested is to investigate whether or not the early relations are spurious, I simply add new controls and interaction terms proxying for the related phenomena.

Starting by considering clientele effects, is not difficult to understand the rationale behind this robustness check. In fact, new mutual funds are basically initiated to meet, at least in the case of retail funds, the preference of as many investors as possible, proving flexible investment solutions. In spite of the evidence of a tendency to follow past performance in allocating flows to mutual funds (Frazzini and Lamont, 2008), professional money managers have to primarily appeal the shareholders when choosing a strategic allocation strategy. This, in turn, might produce strong incentive to the managers to meet the investor's expectations while deviating from personal values and principles. In this context, compensations based on total assets under management have the potential to magnify further the external influences when allocating capital across firms. To test directly this hypothesis, I consider a measure of the average cumulative net flows over the past and future 12 months period as the fund appear in the sample. This measure, in particular, is obtained using the difference in total net assets held by the mutual funds at time t and time $t \pm 12$. As further check, I examine the differences over 6 months time window. By considering the estimates in Table 13, the effect of past and future flow seems substantial confined and limited. Specifically, the positive relations between social capital index and both holdings in SESI stocks and KLD social scores appear substantially not affected by the variations in clienteles. While the t -statistics are slightly higher in significance for the first specifications, overall the estimated coefficients are very close to zero and almost negligible. This might suggest that different shareholders preferences can have an impact on the level of investment in SESI industries rather than driving the level of social responsibility of the holdings.

Moving to the second aspect, the literature on the impact of individual values on investment decisions has traditionally approach this issue by considering religious and political values. In fact, following Hong and Kostovetsky (2012), professional money managers appear to be influenced by their political affiliation. Regarding the effect of religious principles, Hood et al. (2014) show clearly their potential in influencing the ownership of sin stocks and the level of social responsibility in investor's portfolio. So in order to test the real impact of the social capital I need to account for these dimensions in the regressions. However, as opposed to the flow measure obtained using differences in total net asset, political and religious data on fund managers are particularly difficult to generate and collect, as generally not easily disclosed by the subjects. Nevertheless, a way to approach the

issue, might be consider county religious and political affiliation. These continuous variables, obtained as share of the total population living in the county, can be interpreted roughly as proxy of the likelihood of being a member of either a religious confession or a specific political party. Using data publicly disclosed by the U.S Federal Election Committee and U.S. Census Bureau, I obtain

Table 12. Regression of holdings in SESI and KLD social rating on manager level of Social Capital Index, sorted by sub periods according to financial crisis peaks.

Panel A considers only pre financial crisis peak observations (2006-2007), reporting estimated coefficients from pooled OLS regressions of % holdings in SESI (tobacco, guns and defense, natural resources, alcohol and gaming) and average KLD social rating (sum of community activities, diversity, employee relations, and environmental record scores, human rights) on the level of social capital index. All other predictor variables are defined in Table 1. Panel B considers observations at the peak of the recent financial crisis (2008-2009), reporting estimated coefficients from pooled OLS regressions of % holdings in SESI (tobacco, guns and defense, natural resources, alcohol and gaming) and average KLD social rating (sum of community activities, diversity, employee relations, and environmental record scores, human rights) on the level of social capital index. All other predictor variables are defined in Table 1. Panel C, takes into consideration observation after the peak of the recent financial crisis (2008-2009), reporting estimated coefficients from pooled OLS regressions of % holdings in SESI (tobacco, guns and defense, natural resources, alcohol and gaming) and average KLD social rating (sum of community activities, diversity, employee relations, and environmental record scores, human rights) on the level of social capital index. All other predictor variables are defined in Table 1 Each regression includes region dummy variables for each of the nine U.S. census regions. Heteroskedasticity-robust t-statistics, allowing for clustering by manager in all specifications, are reported in brackets. KLD social ratings are rescaled by 100 to simplify the display The sample consists of single managed mutual funds from the first quarter of 2006 through the fourth quarter of 2014

Independent Variable	Panel A 2006-2007		Panel B 2008-2009		Panel C 2010-2014	
	Dependent Var:		Dependent Var:		Dependent Var:	
	% Holdings in SESI	KLD Social Rating	% Holdings in SESI	KLD Social Rating	% Holdings in SESI	KLD Social Rating
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Social Capital Index</i>	0.21 % [1.34]	0.20 [1.49]	0.01 % [0.06]	0.17 [1.00]	0.44 % [2.71]	0.70 [2.30]
<i>SRI status</i>	-3.79 % [-6.03]	0.22 [0.12]	1.77 % [1.82]	1.37 [1.26]	-1.88 % [-2.25]	3.28 [2.37]
<i>SRI status* Social Capital Index</i>	-1.52 % [-0.95]	0.66 [0.21]	-1.06 % [-0.33]	-5.34 [-1.06]	-2.87 % [-2.35]	4.24 [2.21]
<i>Age</i>	0.01 % [1.08]	0.03 [0.75]	0.02 % [1.17]	0.01 [0.49]	0.01 % [1.05]	-0.00 [-0.27]
<i>Management Fee</i>	0.06 % [2.63]	-0.08 [-1.04]	-0.11 % [-1.29]	0.13 [1.54]	0.02 % [0.16]	0.18 [0.53]
<i>Female</i>	-0.15 % [-0.42]	-1.32 [-2.2]	-0.18 % [-0.57]	-0.51 [-1.70]	-0.25 % [-0.53]	-1.03 [-1.59]
<i>Bachelor degree</i>	-0.58 % [-1.08]	-3.72 [-2.07]	-0.47 % [-1.18]	-0.31 [-0.54]	0.67 % [1.80]	-0.44 [-0.59]
<i>Advanced degree</i>	-0.00 % [-0.01]	1.00 [1.86]	0.16 % [0.66]	0.24 [0.76]	0.03 % [0.12]	0.97 [1.69]
<i>Log fund size</i>	0.02 % [0.77]	-0.25 [-2.44]	-0.03 % [-0.86]	-0.08 [-1.57]	-0.08 % [-1.79]	-0.09 [-1.10]
<i>Mean component log size</i>	1.04 % [15.43]	1.12 [7.19]	0.57 % [7.67]	0.94 [10.93]	0.89 % [9.67]	2.30 [12.01]
<i>Mean component log B/M</i>	-0.00 % [-0.01]	-0.17 [-0.44]	0.30 % [1.97]	-0.44 [-2.50]	0.08 % [0.43]	-0.31 [-0.82]
<i>Constant</i>	-0.75 % [-0.66]	-1.39 [-0.38]	2.70 % [1.74]	-4.53 [-2.76]	0.02 % [0.02]	-5.75 [-1.69]
Observations	578	578	653	653	1,133	1,133

Table 13. Regression of holdings in SESI and KLD social rating on manager level of Social Capital Index controlling for past and future funds inflows.

Table 13 reports estimated coefficients from pooled OLS regressions of % holdings in SESI (tobacco, guns and defense, natural resources, alcohol and gaming) and average KLD social rating (sum of community activities, diversity, employee relations, environmental record scores and human rights) on the level of social capital. The Flow measures are defined using Flow variable defined in Table 7. In particular, Lagged K Net Flow are obtained as difference between fund Total Net Asset at time T minus the Total Net Asset at time T-K. Future H Net Flow are defined as difference between fund Total Net Asset at T+H minus Total Net Asset at time T. Past 12 Month flows, is the yearly average fund net flow lagged by 12 months. Future 12 months net flows, is the yearly average fund future net flows over the 12 months after the fund appears in the sample. Past 6 months net flows, is the yearly average fund net flow lagged by 6 months. Future 6 months net flow is the yearly average mutual fund net flows over the 6 months after the fund appears in the sample. All other predictor variables are defined in Table 2. Each regression includes region dummy variables for each of the nine U.S. census regions, as well as time dummy variables. Heteroskedasticity-robust t-statistics, allowing for clustering, by manager in all the specifications are reported in brackets. KLD social ratings are rescaled by 100 to simplify the display. The sample consists of single managed mutual funds from 2006 to 2014.

Independent Variable	Dep. Variable: % Holdings in SESI				Dep. Variable: KLD social rating			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Social Capital Index</i>	0.24 % [1.92]	0.21 % [1.65]	0.30 % [2.02]	0.21 % [1.65]	0.13 [0.81]	0.26 [1.31]	0.08 [0.42]	0.27 [1.39]
<i>SRI status</i>	-0.40 % [-0.66]	-0.48 % [-0.84]	-0.21 % [-0.32]	-0.47 % [-0.81]	1.86 [1.82]	1.43 [1.50]	2.91 [2.90]	1.46 [1.47]
<i>Past 6M net flows</i>	0.00 % [-1.24]				0.00 [0.59]			
<i>Future 6M net flows</i>		0.00 % [-1.34]				0.00 [0.17]		
<i>Past 12 M net flows</i>			0.00 % [-1.30]				0.00 [0.86]	
<i>Future 12M net flows</i>				0.00 % [-1.88]				0.00 [-0.99]
<i>Management Fee</i>	0.05 % [0.85]	0.05 % [1.54]	0.11 % [1.47]	0.05 % [1.55]	0.18 [2.47]	-0.00 [-0.07]	0.13 [1.40]	-0.01 [-0.12]
<i>Age</i>	0.01 % [0.91]	0.01 % [1.04]	0.02 % [1.08]	0.01 % [1.07]	-0.02 [-1.13]	0.00 [0.14]	-0.01 [-0.71]	0.00 [0.24]
<i>Female</i>	-0.32 % [-1.2]	-0.28 % [-1.07]	-0.30 % [-0.94]	-0.28 % [-1.08]	-0.44 [-1.3]	-0.56 [-1.43]	-0.79 [-1.62]	-0.58 [-1.43]
<i>Bachelor degree</i>	-0.11 % [-0.35]	-0.04 % [-0.11]	0.24 % [0.67]	-0.04 % [-0.12]	-0.88 [-1.53]	-1.44 [-1.93]	-0.97 [-1.29]	-1.43 [-1.93]
<i>Advanced degree</i>	-0.02 % [-0.1]	0.03 % [0.18]	-0.06 % [-0.32]	0.04 % [0.21]	0.65 [2.07]	0.93 [2.5]	0.52 [1.41]	0.91 [2.45]
<i>Log fund size</i>	-0.01 % [-0.42]	-0.01 % [-0.46]	-0.01 % [-0.30]	0.00 % [-0.15]	-0.11 [-2.55]	-0.15 [-2.35]	-0.14 [-2.56]	-0.11 [-1.81]
<i>Mean component log size</i>	0.80 % [13.7]	0.79 % [14.1]	0.83 % [13.25]	0.78 % [14.15]	1.54 [16.03]	1.42 [13.76]	1.58 [13.22]	1.41 [13.52]
<i>Mean component log B/M</i>	0.23 % [1.94]	0.18 % [1.52]	0.13 % [1.06]	0.18 % [1.55]	-0.53 [-2.93]	-0.18 [-0.8]	-0.84 [-4.60]	-0.18 [-0.79]
<i>Constant</i>	2.10 % [1.72]	1.59 % [1.34]	0.83 % [0.61]	1.65 % [1.38]	-5.36 [-3.29]	-2.96 [-1.43]	-7.66 [-4.65]	-2.98 [-1.44]
Observations	2,197	2,197	2,197	2,197	1,740	1,743	1,743	1,743

two measures of political affiliation, one for the level of Democratic electorate and another for the Republicans. In order to avoid any time bias, I consider six of the most recent U.S presidential elections from 1992 to 2012. In addition, I create a dummy variable describing the political affiliation of the US president in the sample period. The variable assumes value of 1 when the US president is a Democratic candidate, otherwise, when the president is a Republican party's member, is zero. This

should control roughly for the mainstream political opinion across the country. Regarding the religious proxy, I use the level of the people adhering to either religious confessions or faith organizations active each year from 2006 to 2014, divided by the total population in each county in the same year. Potential multi-collinearity problems due to their simultaneous introduction are marginal, since the correlation among dependent and independent variables are comprised in the interval $[-0.10; 0.10]$. Starting to analyse the simplest specifications in Table 14, the covariates added appear to confirm the goodness of the early relations. Both the magnitude and the significance in the coefficients associated to social capital index seem not change. They are both positive (0.28 %) and significantly different from zero. However, while the effect of continuous political measures is broadly null in both the specifications, the level of religiosity appears related to the holdings. Specifically, the sign of values poses that an higher probability for the manager to be involved in religious organization is associated to an increase in the level of holdings in SESI (1.60%) and to a decrease on the average KLD social ratings of the mutual funds portfolio (-1.96). This runs counter to what we would normally expect from religiosity, as naturally associated to charitable activity, helpfulness and collectivism. Nevertheless, it appears consistent to the evidence provided by McGuire et al., (2012), which documents a negative relation between manager religiosity and company investments in corporate social responsibility (CSR). Turning to the formulations which incorporate interaction terms, only the political component appears to alter the relation with social capital index. Specifically, the generic proxy for the democratic affiliation seems contributing to the relation between SESI holdings and social capital index, assuming value of 1.89 % and 2.29 as t-stat. Despite this rough result points in the direction of a political influence, more specific measures of manager's political attitude point towards zero/null effect of political values. Indeed, the interaction term between the fund manager's likelihood to be a Democrats voter and social capital index is positive (0.03%) and significant (2.29), this is cancelled out by the coefficient in the triple interaction term, once the president is a Democrat (-0.03%). Likewise, the effects is noticeable in column 7, with the respect of KLD social rating. The interactions terms substantially confirm that the individual political component does not affect the overall positive relations between the main regressor and the KLD social rating. Contrary to the holdings in SESI formulation, the US president being a democrat is positively associated with the KLD social ratings, with a coefficient of 2.47 and 5.31 as t-stat. As well as, the same variable also interacts with the level of social capital, fostering the common idea that democrats are traditionally more sensitive to social issues. In the end, almost the same conclusions can be drawn when looking specifically at column 4 and 7, which consider the analysis using proxy for republican affiliation. Besides the political and religion proxies are quite far from the detailed managerial characteristics, the main relations appear maintained in their strength and

significance. Despite some clustering at manager level and great part of the relations dependent by the latest observations, the effect of social capital index remains and is probably different from political and religious personal attitude.

Finally, the last alternative explanation regards to the cultural and spatial proximity of the companies selected by fund managers. The local influence is a very common regularity in behavioral finance and traditionally known as home bias. This is defined as tendency of investors to overweight assets that have close connections to where the investors lives or works, in a way inconsistent to what warranted by normative portfolio theory. As reported in Pool et al. (2012), this effect is common to both professional managers and retail investors showing a propensity to invest in companies headquartered in their local country and with which they have shared origins or other cultural aspects. Therefore, in order to control for this factor. I calculate the average share of holding invested in company operating in the same country as the managers' location. To avoid specific biases due to the extension of the counties, I decide to match manager and company location using U.S. federal states. Afterwards, the variables obtained is introduced as controller in the specification. As can be seen from Table 15, the main coefficients, also in this case, do not change neither in magnitude nor in significance, respectively 0.26% and 0.37. Specifically, the t-stats increase even further the strength of early findings. The home bias effect seems solid, although limited. The coefficients are positively associated to the share of holdings invested in SESI (0.07%) and the overall KLD ratings (0.03). To test further the political component, I introduce few interaction terms which combine the two dimensions. Consistent with previous findings, the estimates point out that political values appear in a very limited way influencing the main coefficients. Only in the case of SESI holdings, an higher share of Democrats (Republicans) is associated to a decrease (increase) in the home bias effect.

Overall, both consistency checks and alternative explanations appear to support largely the main empirical conclusions proposed in this study. Therefore, the initial hypothesis can be confirmed at least partially as already discussed in the previous section. Although the limitations in the period considered and the specific choice made might restrict the generalizing potential of this contribution, the personal values influence on investment decisions appear substantial and difficult to justify simply as a part of other competing regularities.

6. Conclusions

The aim of this study is to contribute to the investigations asking whether individual values can influence the behaviour of professional money manager. In particular, the main research question asks if managers that lives in higher socially altruistic communities are more likely to tilt their

Table 14. Regression of holdings in SESI and KLD social rating on manager level of Social Capital Index controlling for level of religiosity, political affiliation and electorate.

Table 14 reports estimated coefficients from pooled OLS regressions of holdings in SESI (tobacco, guns and defense, natural resources, alcohol and gaming) and average KLD social rating (sum of community activities, diversity, employee relations, environmental record scores and human rights) on the level of social capital. Level of religiosity is a continuous variables the share of participants in all religious congregations in a county, as percentage of the population in the period between 2006 and 2014. Democratic Electorate is a continuous variable proxying for the average share of Democratic voters in the US Presidential elections between 1992 and 2012, as percentage of the all voters. Republican Electorate is a continuous variable proxying for the average share of Republican voters in the US Presidential elections between 1992 and 2012, as percentage of the all voters. US President Democrat, is a dummy variable which assumes value of 1 when the US president is politically affiliated to Democrats, otherwise, when the president is a Republican candidate, is zero. All other predictor variables are defined in Table 2. Each regression includes region dummy variables for each of the nine U.S. census regions, as well as time dummy variables. Heteroskedasticity-robust t-statistics, allowing for clustering, by manager for all specifications are reported in brackets. KLD social ratings are rescaled by 100 to simplify the display The sample consists of single managed mutual funds from 2006 to 2014.

Independent Variable	Dep. Variable: % Holdings in SESI				Dep. Variable: KLD social rating			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Social Capital Index</i>	0.28 % [2.24]	0.28 % [2.21]	-1.08 % [-1.05]	1.46 % [1.78]	0.25 [1.38]	0.25 [1.36]	-1.64 [0.98]	0.75 [0.57]
<i>SRI status</i>	-0.80 % [-1.02]	-0.81 % [-1.02]	-0.80 % [-1.02]	-0.81 % [-1.03]	1.91 [1.78]	1.90 [1.78]	1.94 [1.79]	1.92 [1.78]
<i>SRI status* Social Capital Index</i>	-1.26 % [-1.12]	-1.26 % [-1.11]	-1.14 % [-1.01]	-1.14 % [-1.01]	1.46 [0.95]	1.46 [0.96]	1.60 [1.03]	1.57 [1.01]
<i>Democratic Electorate</i>	0.00 % [-0.18]		0.00 % [-0.01]		-0.00 [-0.30]		0.00 [-0.09]	
<i>Republican Electorate</i>		0.00 % [0.01]		0.00 % [-0.18]		0.00 [0.13]		0.00 [-0.06]
<i>US President Democrat</i>	-0.20 % [-0.81]	-0.20 % [-0.78]	-0.14 % [-0.55]	-0.13 % [-0.52]	2.42 [5.55]	1.97 [5.50]	2.47 [5.31]	2.48 [5.33]
<i>Level of religiosity</i>	1.60 % [1.81]	1.64 % [1.84]	1.60 % [1.71]	1.73 % [1.84]	-1.95 [-1.24]	-1.88 [-1.19]	-1.74 [-1.09]	-1.57 [-0.98]
<i>Democratic electorate*Social Capital Index</i>			0.03 % [1.92]				0.03 [1.36]	
<i>Republican electorate *Social Capital Index</i>				-0.03 % [-1.99]				-0.03 [-1.15]
<i>US President Democrat* Social Capital Index</i>			1.89 % [2.27]	-1.09 % [-2.31]			1.74 [1.56]	-0.86 [-1.01]
<i>Level of Religiosity* Social Capital Index</i>			-0.67 % [-0.53]	-0.46 % [-0.37]			0.23 [0.11]	0.57 [0.26]
<i>Democratic electorate*US President Democrat* Social Capital Index*</i>			-0.03 % [-2.29]				-0.03 [-1.40]	
<i>Republican electorate*US President Democrat* Social Capital Index*</i>				0.04 % [2.45]				0.03 [1.35]

Table 14. - (Continued)

<i>Age</i>	0.01 % [0.84]	0.01 % [0.84]	0.01 % [0.81]	0.01 % [0.78]		0.00 [0.03]	0.00 [0.03]	0.00 [0.02]	0.00 [0.01]
<i>Management Fee</i>	0.05 % [1.57]	0.05 % [1.56]	0.04 % [1.27]	0.04 % [1.27]		-0.00 [-0.06]	-0.00 [-0.06]	-0.01 [-0.12]	-0.01 [-0.11]
<i>Female</i>	-0.22 % [-0.81]	-0.22 % [-0.82]	-0.23 % [-0.83]	-0.23 % [-0.85]		-0.66 [-1.76]	-0.67 [-1.77]	-0.69 [-1.85]	-0.70 [-1.87]
<i>Bachelor degree</i>	-0.08 % [-0.27]	-0.08 % [-0.26]	-0.08 % [-0.26]	-0.09 % [-0.27]		-1.29 [-1.77]	-1.29 [-1.76]	-1.26 [-1.69]	-1.26 [-1.69]
<i>Advanced degree</i>	0.05 % [0.27]	0.05 % [0.28]	0.05 % [0.30]	0.05 % [0.31]		0.80 [2.19]	0.81 [2.19]	0.81 [2.19]	0.82 [2.19]
<i>Log fund size</i>	-0.02 % [-0.53]	-0.02 % [-0.54]	-0.02 % [-0.60]	-0.02 % [-0.59]		-0.16 [-2.55]	-0.16 [-2.55]	-0.16 [-2.58]	-0.16 [-2.58]
<i>Mean component log size</i>	0.82 % [14.65]	0.82 % [14.65]	0.82 % [14.76]	0.82 % [14.78]		1.46 [13.57]	1.46 [13.55]	1.46 [13.51]	1.46 [13.5]
<i>Mean component log B/M</i>	0.18 % [1.58]	0.18 % [1.56]	0.19 % [1.60]	0.19 % [1.61]		-0.24 [-1.14]	-0.25 [-1.15]	-0.25 [-1.12]	-0.25 [-1.13]
<i>Constant</i>	0.77 % [0.47]	0.64 % [0.50]	0.69 % [0.41]	0.69 % [0.53]		-2.00 [-0.76]	-2.41 [-0.98]	-2.33 [-0.85]	-2.46 [-0.99]
Observations	2,290	2,290	2,290	2,290	2,290	2,099	2,099	2,099	2,099
Clusters	506	506				482	482	482	482

Table 15. Regression of holdings in SESI and KLD social rating on manager level of Social Capital Index controlling for home bias local bias.

Table 15 reports estimated coefficients from pooled OLS regressions of SESI (tobacco, guns and defense, natural resources, alcohol and gaming) and average KLD social rating (sum of community activities, diversity, employee relations, environmental record scores and human rights) on the level of social capital. Home-country Holdings is a continuous variable, which measures the average percentage of the total asset in the fund portfolio in company located in the same US federal state of the fund manager current residential area. Democratic Electorate and Republican Electorate are defined as in Table 11. All other predictor variables are defined in Table 2. Each regression includes region dummy variables for each of the nine U.S. census regions, as well as time dummy variables. Heteroskedasticity-robust t-statistics, allowing for clustering, by manager in all specifications are reported in brackets. KLD social ratings are rescaled by 100 to simplify the display. The sample consists of single managed mutual funds from 2006 to 2014.

Independent Variable	Dep. Variable: % Holdings in SESI			Dep. Variable: KLD social rating		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Social Capital Index</i>	0.26 % [2.11]	0.28 % [2.28]	0.29 % [2.28]	0.37 [1.94]	0.36 [1.92]	0.37 [1.98]
<i>SRI status</i>	-0.82 % [-1.00]	-0.68 % [-0.89]	-0.67 % [-0.88]	1.69 [1.81]	1.67 [1.84]	1.71 [1.84]
<i>SRI status* Social Capital Index</i>	-1.32 % [-1.15]	-1.23 % [-1.11]	-1.22 % [-1.10]	1.11 [0.85]	1.09 [0.85]	1.13 [0.86]
<i>Home State Holdings</i>	0.02 % [1.70]	0.07 % [1.78]	-0.01 % [-0.52]	0.04 [3.61]	0.04 [1.23]	0.05 [0.68]
<i>Democratic Electorate* Home State Holdings</i>		-0.02 % [-1.44]			0.00 [-0.13]	
<i>Republican Electorate* Home State Holdings</i>			0.01 % [1.38]			0.00 [-0.11]
<i>Age</i>	0.01 % [0.96]	0.01 % [0.94]	0.01 % [0.95]	0.00 [0.23]	0.00 [0.23]	0.00 [0.24]
<i>Management Fee</i>	0.05 % [1.51]	0.04 % [1.46]	0.05 % [1.48]	0.00 [0.01]	0.00 [0.00]	0.00 [0.01]
<i>Female</i>	-0.24 % [-0.88]	-0.18 % [-0.65]	-0.19 % [-0.68]	-0.64 [-1.68]	-0.63 [-1.64]	-0.65 [-1.68]
<i>Bachelor degree</i>	-0.08 % [-0.24]	-0.10 % [-0.31]	-0.09 % [-0.30]	-1.26 [-1.76]	-1.27 [-1.74]	-1.26 [-1.73]
<i>Advanced degree</i>	0.01 % [0.06]	0.02 % [0.13]	0.02 % [0.11]	0.84 [2.30]	0.84 [2.32]	0.83 [2.31]
<i>Log fund size</i>	-0.03 % [-0.85]	-0.02 % [-0.84]	-0.02 % [-0.84]	-0.16 [-2.81]	-0.16 [-2.81]	-0.16 [-2.81]
<i>Mean component log size</i>	0.81 % [14.59]	0.81 % [14.80]	0.81 % [14.76]	1.44 [13.62]	1.44 [13.48]	1.44 [13.47]
<i>Mean component log B/M</i>	0.18 % [1.58]	0.18 % [1.60]	0.18 % [1.59]	-0.28 [-1.34]	-0.28 [-1.34]	-0.28 [-1.34]
<i>Constant</i>	1.60 % [1.33]	1.60 % [1.34]	1.61 % [1.35]	-4.05 [-2.03]	-4.05 [-2.03]	-4.05 [-2.02]
Observations	2,290	2,290	2,290	2,099	2,099	2,099
Clusters	506	506	506	473	473	473

holdings away from (toward) socially irresponsible (responsible) stocks compared to managers living in counties with lower social capital. By considering the holdings of a large host of equity, single-managed, well-diversified U.S mutual funds over a 10-years period, the effect of individual values appear to be quite substantial. In fact, what emerges from data is a positive and significant relation between the level of social capital index and the share of total holdings invested in companies with

high KLD social ratings. This allows to conclude that higher level of social capital, proxying for the level of collectivism, altruistic behaviour and helpfulness in a specific community, prompts the managers to tilt their holdings more towards responsible stocks. On the other side, the results for the percentage invested in social and ethical sensitive industries appear to point in the opposite direction, with higher social capital funds investing more in sin stocks. Possible motivations might be performance, given the historical outperformance of SESI relative to the whole market, and the specific time window, which includes the recent financial crisis. In this context, managers might consider social values as second order determinant of their behaviour, forcing them to invest in SESI firms but at the same moment with maintaining higher KLD social score. This intuition seems confirmed by the positive coefficients associated to the percentage invested in SESI in both the regression with net returns and KLD social score as dependent variable. Whereas the performance differences among subgroups does not allow to determine a clear superiority between non pecuniary and pecuniary motives as reason to employ individual values when investing, further strength is provided by the analysis of a subset of aggressive/speculative mutual funds. In fact, they display the same relations documented for the full sample, increasing even in their significance. Final robustness checks and alternative explanations further confirm how the effect of managers' social capital represents a good proxy of individual ethical and social individual values. Clientele effects, political and religious principles and cultural proximity, are well-established effects that appear not to influence the social capital.

Overall, isolating the effect of social values in investment decision of money managers is traditionally a difficult task and most of the time researchers are largely sceptical about the real impact of these values. This study following the methods proposed in the literature trying to shed some light on the potential relations between social capital and mutual funds holdings. Despite the strength of the results highlighted, this contribution naturally has its limitations that would warrant prudence in generalizing it to the entire universe of professional managers. For instance, this study makes specific choices in modelling the social capital index measure which represent the central point of this study, In fact, a different formulation could crucially bring to different conclusions. Another crucial issue is represented by the various limitations in the self-constructed fund/manager sample considered. The short time period considered, which includes the recent financial crisis, might be not the optimal setting for testing values impact, with most of the investors in dare need of positive return than merely pursuing high level of responsibility in selecting stocks. Due to data availability, the spatial dimension can be also a significant detrimental factor in the study, as the sample considers only US equity mutual funds. Possibly, merging mutual fund information coming from multiple markets might allow to provide further robustness to the results, accounting for differences among countries. Finally,

enlarging the spectrum of equity funds included in the sample to the non-equity oriented funds might be valuable to understand the approach followed in selecting stocks.

In the end, further research that introduce these aspects is warranted. More promising investigation might also cover more directly aspects of performance, clarifying the role of social values in relationship to both pecuniary and non-pecuniary motives. Only through this future speculation, we will be able to conclude whether or not the impact of individual values should be confine to a small niche of influence or more corporate governance structures limiting the manager discretion are needed. What appears clear is that investors seems strongly influenced by their social an ethical values when making financial decisions, as allocating capital to firms. This effect contextualized in the increasing tendency to invest more ethically and to follow investment policies more towards values than return, has the potential not only to influence capital markets and stock prices but also to radically change the standards of professional asset allocation practice.

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