Do Social Responsibility Screens Really Matter?

A Comparison with Conventional Sources of Performance

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Abstract

On average, socially responsible (SR) funds have showed statistically similar performances to traditional funds. Does this mean SR screens make a negligible contribution to fund performance? In this paper, we propose a new decomposition of the variability of mutual fund returns. This allows us to measure the performance contributions of SR screening compared with the other traditional sources: market movement, asset allocation choices and active management. Our results, based on a large sample of equity mutual funds worldwide, show that SR screening does explain the variability in mutual fund performance, alongside asset allocation and active management. However, the sum of these three components accounts only for 30% of total performance. SR screens matter but, like active portfolio choices, they have a limited impact on total equity fund performance, heavily dominated by market movements.

Keywords: Socially Responsible Funds, Performance Attribution, Asset Allocation, Active Management, Mutual Funds

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1. Introduction

Socially responsible (SR) mutual funds have grown rapidly worldwide in just over a decade. They have become not only a major area of academic study but also a fast-growing market for the asset management industry. Back in 1995 US SR mutual funds were a niche investment, with 55 funds managing around $12 billion. By 2012 the number had grown to 333, with $640 billion under management (Social Investment Forum, 2012 Report). The same trend was observed slightly later in Europe, where the number of SR funds exploded from 159 in 1999 to 884 in 2012, while assets under management increased from €11 billion to €95 billion (Vigeo, 2012 Report).

In light of this fast growth, many studies have analyzed the performance of SR funds compared with their conventional counterparts and have concluded that the two are statistically similar on average (Hamilton et al., 1993; Bauer et al., 2005; Kreander et al., 2005; Renneboog et al., 2008 among others). In theory, however, if markets are efficient, then the use of Environmental, Social and Governance (ESG) screens ought to reduce the diversification potential of SR portfolios , and hence their risk-adjusted returns, compared with their conventional counterparts (Pouget, 2014).[1] On the contrary, advocates of SR investing argue that screening practices should allow fund managers to generate value-relevant non-public information on issues such as managerial competence and superior corporate governance (Renneboog et al., 2008). This would enable investors to take positions before markets completely price in this information, leading to abnormally positive SR fund performances.[2] In practice however, the differences between traditional and SR mutual fund performances are small and hardly significant. Does this mean the contribution of SR screening is negligible compared with other, traditional sources of performances and that the abovementioned theoretical debate has little practical relevance for investors in SR mutual funds? Previous studies have been unable to answer this question because their empirical evidence is based on average performances and may thus hide substantial dispersion through time and among funds (Kosowski, 2011; Avramov et al., 2013). Moreover, they do not provide an explicit comparison of the performance contribution of SR

[1] Moreover, the costs induced by the screening process may also affect the performance of SR portfolios (Gil-Bazo et al., 2010).

[2] Pouget (2014) discusses, for example, the performance of "engagement" strategies, i.e., investing in non-responsible firms and making them responsible.

screening compared with other, traditional sources such as market movements, conventional asset allocation choices and active management.

An abundant literature has already analyzed the role of asset allocation policy for mutual, hedge and pension funds. The earliest studies, including the pioneering paper by Brinson et al. (1986) set forth the crucial role of asset allocation policy in explaining the variability of total returns. These initial findings were subsequently amended by the recognition that market movements account for much of the explanatory power of asset allocation policy (Ibbotson and Kaplan, 2000; Vardharaj and Fabozzi, 2007). The most recent evidence (Xiong et al., 2010; Aglietta et al., 2012) restores the role of active management in explaining total fund returns. Indeed, by explicitly disentangling market movements from asset allocation returns, these studies demonstrate that active management[3] is as important as asset allocation policies when assessing the source of variability of funds' financial performance.

SR funds are special insofar as their managers have an additional decision level when allocating their portfolio. Like their traditional counterparts, SR managers first decide on the strategic asset allocation of their fund, choosing the weights assigned to asset classes, regions, sectors or styles. They then apply SR screening to their portfolio, incorporating non-financial criteria (usually environmental, social and governance concerns) into their investment process. Finally, they may decide to actively manage their portfolio.[4] To the best of our knowledge, this paper is the first to address the issue of decomposing SR funds' total performance and measuring the size of each component. Xiong et al. (2010) and Aglietta et al. (2012) decompose the total return of traditional funds into three components: market return, asset allocation policy return in excess of the market, and the return from active portfolio management. We extend this framework in our paper, adding a factor measuring the contribution of SR screening as a fourth source of performance. Contrary to previous studies, we are not interested in the "average" performance of a sample of SR funds but in the variability of this performance through time and across funds. We are thus able to compare the relative importance of the four components in explaining the total performance of SR funds.

[3] Aglietta et al. (2012) show that for some asset classes (fixed income and alternative investments), active management actually plays a greater role than asset allocation in explaining the funds' returns.

[4] Deviate tactically from strategic asset allocation in terms of regions, sectors, styles or choice of individual securities.

We apply our methodology to a sample of monthly returns for 278 SR equity mutual funds over 2006-2012. We study the importance of market movements, asset allocation policy, active management and SR screening in explaining total returns. Our results can be summarized in two major points. First, as reported by recent evidence on conventional (i.e. mutual and pension) funds, market movements clearly dominate all other sources of performances. They explain around 70% of the variability of the funds' total returns, a result in line with that for traditional equity funds (Vardharak and Fabozzi, 2007; Xiong et al., 2010; Aglietta et al, 2012). Second, on average, 6% of the variability of a typical fund's performances across time can be attributed to SR screens, while asset allocation choices and active management account for slightly more than 10% (around 12% on average). These findings provide useful insights for SR fund managers and investors, who can find answers to questions about the impact of ethical screening on total performance. The evidence shows that SR fund managers should care about SR screens as a source of performance, almost as much as they do about asset allocation and active management. Our results also shed new light on the lively debate about the performance of SR funds and explain why differences between traditional and SR equity mutual funds' performances are on average so small.

We start by describing our data (Section 2) and methodology (Section 3); we then present our results (Section 4). We end with concluding remarks and further extensions of our work (Section 5).

2. Data

Our data come from Bloomberg and consist of the total monthly returns (net of fees) of a panel of 1,041 SR funds covering different geographical areas worldwide. Due to data availability issues, namely the absence of fixed income SR benchmarks, we focused entirely on SR equity funds. This left us with 686 funds. Within the remaining panel, two additional screens were applied when building our final dataset: availability of historical data and availability of an SR geographical benchmark corresponding to the allocation policy declared by the fund. Accordingly, we left out all the funds with less than six years of historical data[5]

[5] Most of the papers applying the decomposition of funds' total returns use at least five years' historical data.

and all those for which the SR geographical benchmark corresponding to the fund's declared allocation policy was missing or had a short history. Our final database thus accounts for the monthly returns of 278 SR equity funds from January 2006 to August 2012.[6]

Not all of the funds in our database provide information about the strategic benchmark defining their policy allocation. Moreover, fund managers might declare a benchmark that is not strictly the one they apply. To determine SR benchmarks for the funds, we perform a return-based style analysis (Sharpe, 1992; Ibbotson and Kaplan, 2000; Vardharaj and Fabozzi, 2007).[7] This methodology allows us to point out the SR factors that best characterize the exposures of our SR funds[8]. Only regional benchmarks are available in the SR universe. In line with Xiong et al. (2010), also working on international mutual funds, we ignore other factors such as investment style and industry. Our chosen regional SR indexes are well-known references in the field (Curran and Moran, 2006; Zigler and Schröder, 2010) and have the longest available history. DJSI indexes (World, North America and Europe) practice a "best-in-class" approach.[9] The FTSE4Good indexes (UK and Japan) promote positive environmental, social and human rights criteria.[10] In addition, all indexes apply negative screening criteria to companies involved in "sin" activities, such as alcohol, gambling, tobacco, firearms, and nuclear energy. A robustness check using several other SR indexes, whether focused on other geographical areas or based on different screening practices, did not significantly alter our results.[11]

Finally, to measure the performance of the portfolio the fund manager would have constructed without SR screening, we take conventional indexes represented by the official benchmarks chosen by the suppliers of SR indexes. Our selected SR indexes focus on stocks

[6] The number of dead funds over the period under study is unknown, which may potentially induce a survivorship bias. However, empirical evidence suggests that SR funds have low attrition rates compared with conventional funds (Gregory and Whittaker, 2007; Kempf and Osthoff, 2008; Renneboog et al., 2008). We thus expect the impact of survivorship bias on our results to be limited.

[7] Fund returns are regressed on a number of chosen factors, with specific constraints (residual of the regression uncorrelated with the factors, each coefficient bounded in the [0,1] interval, sum of the coefficients equal to 1).

[8] The explanatory power of our return-style analysis is high, with an average R-squared equal to 81%, a result in line with previous studies (Bauer et. al, 2005; Cortez et al., 2009).

[9] Based on the RobecoSAM Corporate Sustainability Assessment.

[10] Based on the ratings created by FTSE International Limited and Ethical Research Services (EIRIS). For a more detailed presentation of the different SR indices, refer to the Appendix.

[11] Several alternative specifications were tested, all of which are less powerful in explaining SR funds' returns. We also performed all our estimations using the DJSI US and DJSI Europe as proxies for the American and European SR equity indices respectively. In addition, we replaced the SR indices listed in our Appendix by their peers without sectorial exclusions. The alternative results are available upon request.

with large market capitalization. In consequence, the small-cap bias found in several papers, arising from the relatively high investment weight of stocks with low market capitalization (see Bauer et al., 2005 ; Schröder, 2007) is comparatively small in our study. Table 1 exhibits descriptive statistics of both the SR and the conventional benchmarks used in this study.

Insert Table 1 about here

Compared with their conventional peers, SR stock market indexes show slightly lower financial returns (on average, -1.90% and 0.60% respectively) but also lower volatility (19.28% vs. 19.99%). However, the differences are statistically insignificant at a 5% confidence level (except for Japan). These results are in line with previous empirical evidence underlining the similar financial performance of SR and conventional benchmarks (Sauer, 1997; Statman, 2006). Our preliminary findings also show that the Japanese SR index performed poorly compared with its conventional counterpart (-11.95% and -4.19% annualized return respectively). [12]

Insert Table 2 about here

Table 2 displays the main descriptive statistics of the funds' returns. Among SR equity funds, globally invested ones dominate our database, accounting for around 47% of the total number, followed by funds focusing on North America and Europe (20% and 17% respectively of our total number). On average, funds investing in North America are the top performers, with an annualized total return of 2.11%, whereas funds focusing on the Japanese market are the worst (-10.80%). The average volatility of the funds ranges between 17.01% (Global) and 19.45% (Japan). As such, global funds are the least volatile over time thanks to geographic diversification, while those focused on the Japanese market have the least appealing risk-return profile. Dispersion of fund performances is also comparatively high, showing that fund managers are free to depart from their benchmark. Funds investing globally form the most varied group (the annualized cross-sectional dispersion of annualized returns is 2.68%, dispersion of volatility is 7.92%), while those focusing on the UK market are the most uniform (the annualized dispersion of annualized returns is 2.11%, dispersion of

[12] Sectorial bias (especially the overweight of the so-called "positive" stocks, e.g. high tech and telecom, in SR indices) might partly explain the underperformance of the Japanese SR index compared with its conventional peer over the period (Hong and Kacperczyk, 2009 among others).

volatility is 4.23%). These figures underline the interest of focusing on the sources of observed variability in SR funds' returns.

3. Methodology

The total return of each SR fund can be decomposed into four components: (1) market return, (2) return from the conventional asset allocation policy (its deviation from the market), (3) return from SR screening (difference between SR and conventional-policy returns) and (4) return from active portfolio management (funds' ability to tactically overweight or underweight regions, sectors or stocks relative to the policy).

$$R_{it} = M_t + (CP_{it} - M_t) + (SRP_{it} - CP_{it}) + (R_{it} - SRP_{it}) \quad (1)$$

with R_{it} fund i's total return at date *t*, M_t the market return, CP_{it} the return of the conventional asset allocation policy, SRP_{it} the return of the SR asset allocation policy.

The definition of market return is far from obvious. In this paper, therefore, we use three alternative measures for market movements to cross-check the robustness of our results. First, we use the market capitalization weighted average return of our conventional stock market indices. Second, we consider the weighted average return of the conventional indexes in our sample, with the weights provided by the return-based style analysis mentioned previously. Third, following Xiong et al. (2010), we define market return as the equally weighted average return of all the SR equity funds in our sample.

The SR asset allocation policy return of a fund i at date t is computed as follows:

$$SRP_{it} = b_{SR1,i} F_{SR1,t} + b_{SR2,i} F_{SR2,t} + ... + b_{SRk,i} F_{SRk,t} \quad (2)$$

where $b_{SRj,i}$ measures fund i's exposure to its SR benchmark SR_j, $j = 1,...,k$, in Sharpe's (1992) style analysis regression, and $F_{SRj,t}$ as the benchmark return at date t.

To measure the portfolio performance that the fund manager would have achieved without SR screening, we replace SR factors with their corresponding conventional benchmarks. Similarly, the conventional asset allocation policy return of a fund i at date t is given by:

$$CP_{it} = b_{SR1,i}F_{C1,t} + b_{SR2,i}F_{C2,t} + ... + b_{SRk,i}F_{Ck,t} \quad (3)$$

with $F_{Cj,t}$ the return of benchmark index C_j (conventional counterpart of SR_j) at date t.

In line with Xiong et al. (2010) and Aglietta et al. (2012), and according to our objective of disentangling the returns due to SR screening from the other sources of performance, we run four separate univariate time-series regressions. We regress the total SR fund's return R_{it} on a constant and each of the four components of total performance: market return M_t, asset allocation policy return in excess of the market return $(CP_{it} - M_t)$, SR policy return $(SRP_{it} - CP_{it})$, and active management return $(R_{it} - SRP_{it})$. $\beta_{iM}, \beta_{iCP}, \beta_{iSRP}$ and β_{iS} denote the estimated coefficients of the univariate regressions. As such, the total return of each SR fund is decomposed as follows:

$$R_{it} = \alpha + \beta_{iM}M_t + \beta_{iCP}(CP_{it} - M_t) + \beta_{iSRP}(SRP_{it} - CP_{it}) + \beta_{iS}(R_{it} - SRP_{it}) + \varepsilon_{it} \quad (4)$$

where ε_{it} stands for the residual term, i.e., the difference between the actual, observed total return of the SR fund and the return predicted by the model.

To capture the percentage of total variance of each SR fund explained by each of the four components, as suggested by Xiong et al. (2010), we take the covariance with R_{it} on both sides of the previous equation and divide it by the variance of R_{it}. We thus obtain for each fund *i* :

$$R^2_{iM} + R^2_{iCP} + R^2_{iSRP} + R^2_{iS} + R^2_{i\varepsilon} = 1 \quad (5)$$

where $R^2_{iM}, R^2_{iCP}, R^2_{iSRP}$ and R^2_{iS} are the R-squared of the univariate regressions and $R^2_{i\varepsilon}$ is a balancing term, also called "interaction effect" (Xiong et al., 2010). This last term is computed as the difference between 1 and the sum of the four R-squared values. It measures the percentage of total variance of each SR fund that is explained by the

interaction between market returns, asset allocation policy, SR policy and active management. We finally report the average R-squared as well as several percentiles.

4. Empirical evidence

Table 3 and Figure 1 summarize the contribution of each component to the variability of SR funds' total returns, as measured by the average across funds of time-series R-squared.

Insert Table 3 and Figure 1 about here

On average, market movements explain more than two thirds of the variability of the funds' total performance[13] across time, substantially outweighing all the other sources of performance. This result is consistent with several previous studies on conventional funds (Vardharaj and Fabozzi, 2007; Xiong et al., 2010; Aglietta et al., 2012). Together, asset allocation policy, SR policy and active management explain on average around one third of the fund's total return volatility. As such, SR screening explains around 12% of total performance variability, while SR screening and active management contribute respectively 6% and 12% on average (between 10% and 14% depending on the market movement definition). Our results remain robust whatever the measure used for market movements (see panels A, B and C of Table 3).[14]

Table 4 displays the 5%, 25%, 50%, 75% and 95% percentiles of the four R-squared components (panels A, B and C provide robustness checks for different definitions of market movements). The range of R-squared values reveals differences across funds in the contribution made by the different sources of SR fund performance, but it also confirms the modest contribution from SR screens in most of the funds. For 50% of the funds, SR screens

[13] Unsurprisingly, the highest contribution from market movements in explaining the variability of SR total return is observed in Panel C. This result naturally comes from the measure used for market returns, namely the equally weighted average return of all the SR funds in our sample. As such, this measure may implicitly include, besides "pure" market movements, the returns of SR asset allocation and, to some extent, of active management, thus leading to a larger share of the market compared with the other components.

[14] In practice, asset management companies use an internal non-financial rating system that can depart significantly from the public systems used by index providers. As a consequence, SR portfolio managers may depart from benchmarks when making their SR screening. As such, active portfolio management may appear not only as a tactical allocation practice aimed at reaching the highest return-risk profile, but also as a way to introduce internal rating recommendations into the funds.

explain only 3% of return variability (and for 25% of them, only 3%). But a small minority of funds also show a large contribution from SR screening, with 5% of them having a contribution higher than 19%. A similar dispersion across funds is visible for the conventional sources of performances. For example, 25% of the funds have an active management contribution of less than 3% (50% less than 7%), but 5% have a contribution higher than 36%, a result consistent with Xiong et al. (2010). Comparable results hold for asset allocation policy.

Insert Table 4 about here

These results shed fresh light on the debate about the performance of SR mutual funds compared with their conventional peers. Previous empirical evidence showed that on average, SR fund performances are very close to those of traditional funds. Looking at the sources of variability of these performances, we confirm that the contribution of SR screening is relatively modest for most funds, but comparable in size to other active portfolio choices. Market movements dominate all sources of equity market performance.

5. Conclusion

Our paper decomposed SR fund returns into four components: market movements, asset allocation policy, SR policy and active management on a sample composed of the monthly returns of 278 SR equity funds over 2006-2012. We answered a crucial question for SR fund managers and investors: what does SR screening contribute to explaining the financial performance of SR funds? Several conclusions emerge. First, market movements dominate the other components, explaining more than two thirds of the variability of SR equity funds over time. As such, market movements account for a much larger share of total return variation than do asset allocation policy, SR screening and active management taken together. This is consistent with previous empirical results such as Vardharaj and Fabozzi (2007), Xiong et al. (2010) or Aglietta et al. (2012) for conventional funds. Second, among the active sources of performance, SR screens do matter. They explain 6% on average of the variability of a fund's returns, representing around 20% of the contribution of active portfolio decisions.

This paper sets forth some interesting findings that could fuel further research. Since the available SR indexes are not particularly diverse, we had to use SR equity funds and focus on their geographical asset allocation policy. It is well-known that, ideally, style and industry factors[15] should also be taken into account (Vardharaj and Fabozzi, 2007). As such, our approach may be replicated and extended when SR style and industry benchmarks are available. Aglietta et al. (2012) have shown that market movements play a far smaller role in explaining funds' performances in the fixed income universe than in equity markets, which leaves more room for asset allocation and active management.[16] While SR screening makes a limited contribution to explaining the performance of equity mutual funds, it may play a greater role for fixed income funds – a topic that warrants further investigation.

References

Aglietta M., Brière M., Rigot S., Signori O., 2012, "Rehabilitating the role of active management for pension funds", *Journal of Banking & Finance*, 36(9), 2565-2574.

Avramov D., Barras L., Kosowski R., 2013, "Hedge fund predictability under the magnifying glass: the economic value forecasting individual fund returns", *Journal of Financial and Quantitative Analysis*, Forthcoming.

Bauer R., Koedijk K., Otten R., 2005, "International evidence on ethical mutual fund performance and investment style", *Journal of Banking & Finance*, 7(29), 1751- 1767.

Brière M., Szafarz A., 2008, "Crisis robust bond portfolios", *Journal of Fixed Income*, 18(2), Fall, 57-70.

Brinson G.P., Hood L.R., Beebower G.L., 1986, "Determinants of portfolio performance", *Financial Analysts Journal*, 42(4), 39–44.

Cortez M.C., Silva F., Areal N., 2009, "The performance of European socially responsible funds", *Journal of Business Ethics*, 87(4), 573-588.

Curran M., Moran D., 2007, "Impact of the FTSE4Good Index on firm price: An event study", *Journal of Environmental Management*, 82(4), 529-537.

[15] As illustrated in the Appendix, besides geographical focus, the SR indices used in this paper also take into account industry exclusions. The robustness checks we performed using different SR indices led to the conclusion that SR indices with industry exclusions do a better job of explaining the returns of the SR funds in our sample.

[16] There are significant opportunities for diversification inside the fixed income asset class (Brière and Szafarz, 2008).

Gil-Bazo J., Ruiz-Verdu P., Portela A.A.P., 2010, “The performance of socially responsible mutual funds: the role of fees and management companies”, *Journal of Business Ethics*, 94(2), 243–263.

Gregory A., Whittaker J., 2007, “Performance and performance persistence of ethical unit trusts in the UK”, *Journal of Business, Finance and Accounting,* 34(7–8), 1327–1344.

Hamilton S., Joe H., Statman M., 1993, “Doing well while doing good? The investment performance of socially responsible mutual funds”, *Financial Analysts Journal*, 49(6), 62-66.

Hong H., Kacperczyk M., 2009, “The price of sin: the effects of social norms on markets”, *Journal of Financial Economics*, 93(1), 15-36.

Ibbotson R.G., Kaplan P.D., 2000, “Does asset allocation policy explain 40, 90, or 100 percent of performance?”, *Financial Analysts Journal*, 56(1), 26–33.

Kempf A., Osthoff P., 2008, “SRI funds: nomen est omen”, *Journal of Business, Finance and Accounting*, 35(9-10), 1276–1294.

Kosowski R., 2011, “Do Mutual Funds Perform When It Matters Most to Investors? US Mutual Fund Performance and Risk in Recessions and Expansions”, *Quarterly Journal of Finance*, 1(3), 607-664.

Kreander N., Gray R.H., Power D.M., Sinclair C.D., 2005, “Evaluating the performance of ethical and non ethical funds: A matched pair analysis”, *Journal of Business, Finance and Accounting*, 32(7-8), 1465-1493.

Pouget S., 2014, “On the financial performances of Socially Responsible Investments”, *Bankers Markets and Investors*, 128, January-February, Forthcoming.

Renneboog L., Ter Horst J., Zhang C., 2008, “The price of ethics and stakeholder governance: The performance of socially responsible mutual funds”, *Journal of Corporate Finance*, 14(3), 302-322.

Sauer D.A., 1997, “The impact of social-responsibility screens on investment performance: evidence from the Domini 400 Social Index and Domini equity mutual fund”, *Review of Financial Economics*, 6(2), 137-149.

Schröder M., 2007, "Is there a difference? The performance characteristics of SRI equity indexes", *Journal of Business Finance & Accounting*, 34(1-2), 331-348.

Sharpe W.F., 1992, “Asset allocation: Management style and performance measurement”, *Journal of Portfolio Management*, 18(2), 7-19.

Statman M., 2006, “Socially responsible indexes: composition, performance and tracking error”, *Journal of Portfolio Management*, 32(3), 100-109.

Vardharaj R., Fabozzi F.J., 2007, “Sector, style, region: Explaining stock allocation performance”, *Financial Analysts Journal*, 63(3), 59–70.

Xiong J.X., Ibbotson R.G., Idzorek D.M., Chen P., 2010, “The equal importance of asset allocation and active management”, *Financial Analysts Journal*, 66(2), 1-9.

Ziegler A., Schröder M., 2010, "What determines the inclusion in a sustainability stock index? A panel data analysis for European firms", *Ecological Economics*, 69(4), 848-856.

Table 1: Descriptive statistics of monthly returns of SR and conventional benchmarks, January 2006 – August 2012

This table presents the SR indexes used to compute the funds' SR asset allocation policy, along with their corresponding conventional counterparts. Columns "Ann. Mean" and "Ann. St. Dev." refer to the annualized means and standard deviations of the monthly returns of the indexes from January 31, 2006 to August 31, 2012.

Geographical Focus	SR Benchmarks	Ann. Mean %	Ann. St. Dev. %	Conventional Benchmarks	Ann. Mean %	Ann. St. Dev. %
Global	DJSI World ex US ex All	1.84	22.43	FTSE ALL World ex US	3.09	22.59
North America	DJSI North America ex All	2.72	17.50	FTSE North America	4.14	17.58
Europe	DJSI Eurozone ex All	-1.63	20.01	Euro STOXX	-0.67	27.31
United Kingdom	FTSE 4 Good UK Index	-0.49	15.58	FTSE ALL Share	0.65	15.91
Japan	FTSE 4 Good Japan Index	-11.95*	20.89	FTSE Japan	-4.19*	16.54
Average		-1.90	19.28		0.60	19.99

* stands for significance of the performance difference between conventional and SR benchmarks at the 5% conventional risk level.

Table 2: Descriptive statistics of SR equity funds' monthly returns, January 2006 – August 2012

This table presents the descriptive statistics of the funds' monthly returns from January 31, 2006 to August 31, 2012. Columns "Ann. Mean" and "Ann. St. Dev." refer to the annualized means and standard deviations of SR funds' returns. Numbers between brackets refer to the cross-sectional standard deviations (among funds). The line "All" refers to the whole sample of 278 funds while the other five lines report the results by sub-samples, based on the funds' geographical focus.

Geographical focus	# SR funds	Ann. Mean %	Ann. St. Dev. %	Median %	Max %	Min %
Global	131	-0.48	17.01	-0.43	6.44	-7.80
		(2.68)	(7.92)			
North America[1]	56	2.11	18.34	1.98	7.30	-2.64
		(2.51)	(6.63)			
Europe	47	-1.71	18.03	-2.00	3.89	-5.72
		(2.35)	(5.58)			
United-Kingdom	33	1.08	17.06	1.02	5.94	-2.50
		(2.11)	(4.23)			
Japan	11	-10.80	19.45	-11.00	-4.01	-14.33
		(3.46)	(6.78)			
All	278	-0.25	17.52	0	-0.07	-0.14
		(3.55)	(8.22)			

[1] Among which 47 funds focusing on the US market, 4 on the Canadian market and 5 on North America as a whole.

Table 3: Decomposition of funds' total return variability in terms of average R-squared, January 2006 – August 2012

This table depicts the decomposition of the total return variability of SR funds. Market return is computed as: (1) the market capitalization weighted average return of the conventional stock market indexes in Panel A (40% FTSE All-World ex US, 33% FTSE North America, 17% Euro STOXX, 4% FTSE All-Share and 6% FTSE Japan), (2) the weighted average return of the conventional stock market indices using the weights provided by the Sharpe-style return analysis in Panel B (5% FTSE ALL World ex US, 29% FTSE North America, 3% Euro STOXX, 51% FTSE All Share and 12% FTSE Japan) and (3) the equally weighted average return of all the funds in the sample.

Panel A : Market return = market capitalization weighted average return of the conventional stock market indices	
	Average R^2
Market movement : $R_{i,t}$ vs. M_t	67%
Asset allocation policy : $R_{i,t}$ vs. $CP_{i,t}$ - M_t	14%
SR screening : $R_{i,t}$ vs. $SRP_{i,t}$ - $CP_{i,t}$	6%
Active management : $R_{i,t}$ vs. $R_{i,t}$ - $SRP_{i,t}$	12%
Interaction effect	1%
Total	100%

Panel B : Market return = weighted average return of the conventional indices (weights provided by the average of the SR asset allocation policies of SR equity funds)	
	Average R^2
Market movement : $R_{i,t}$ vs. M_t	71%
Asset allocation policy : $R_{i,t}$ vs. $CP_{i,t}$ - M_t	13%
SR screening : $R_{i,t}$ vs. $SRP_{i,t}$ - $CP_{i,t}$	6%
Active management : $R_{i,t}$ vs. $R_{i,t}$ - $SRP_{i,t}$	12%
Interaction effect	-1%
Total	100%

Panel C : Market return = equally-weighted average return of all the SR equity funds	
	Average R^2
Market movement : $R_{i,t}$ vs. M_t	79%
Asset allocation policy : $R_{i,t}$ vs. $CP_{i,t}$ - M_t	10%
SR screening : $R_{i,t}$ vs. $SRP_{i,t}$ - $CP_{i,t}$	6%
Active management : $R_{i,t}$ vs. $R_{i,t}$ - $SRP_{i,t}$	12%
Interaction effect	-7%
Total	100%

Table 4: Time series distributions of SR funds returns decomposition, January 2006 – August 2012

Panel A : Market return = market capitalization weighted average return of the conventional stock market indices

Percentile	Market movement	Asset allocation policy	SR screening	Active management
5	38%	1%	0%	0%
25	57%	7%	1%	3%
50	72%	13%	3%	7%
75	79%	18%	7%	17%
95	89%	39%	19%	36%

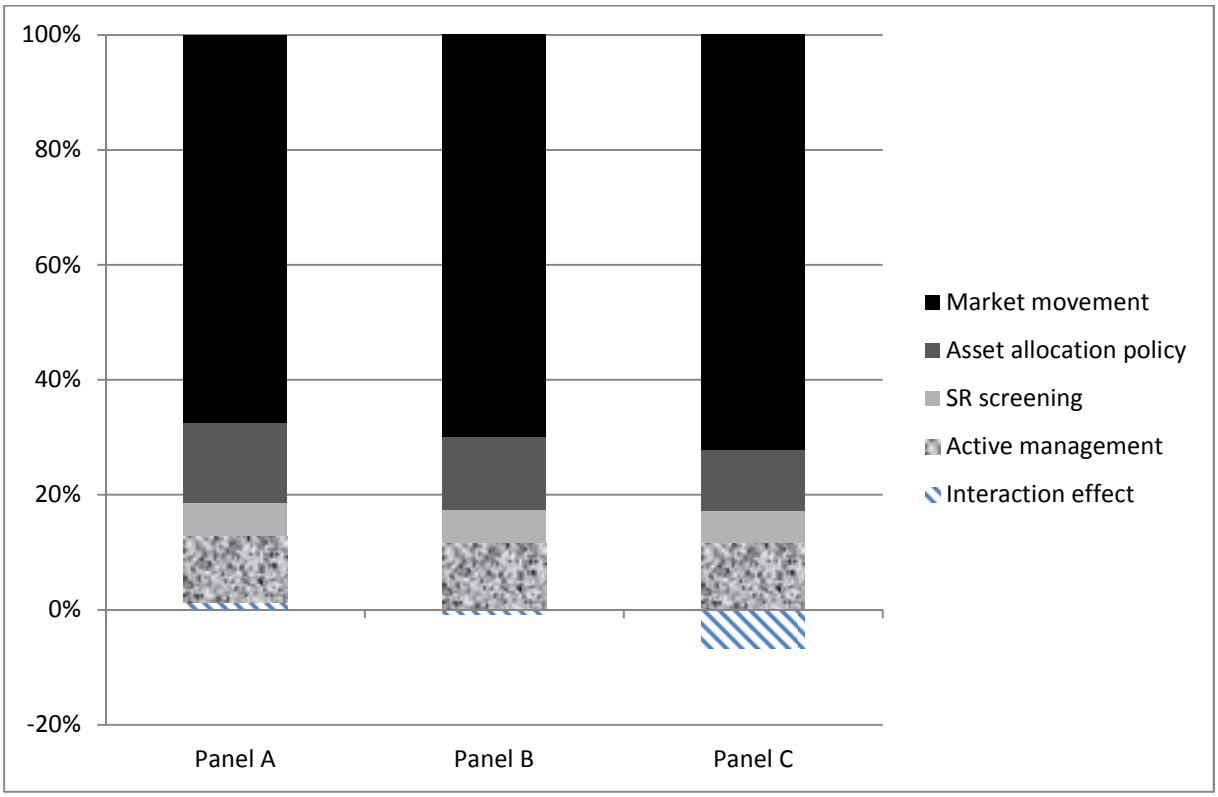
Panel B : Market return = weighted average return of the conventional indices (weights provided by the average of the SR asset allocation policies of SR equity funds)

Percentile	Market movement	Asset allocation policy	SR screening	Active management
5	44%	0%	0%	0%
25	61%	2%	1%	3%
50	75%	7%	3%	7%
75	84%	16%	7%	17%
95	89%	51%	19%	36%

Panel C : Market return = equally-weighted average return of all the SR equity funds

Percentile	Market movement	Asset allocation policy	SR screening	Active management
5	57%	0%	0%	0%
25	77%	2%	1%	3%
50	83%	7%	3%	7%
75	85%	17%	7%	17%
95	91%	38%	19%	36%

Figure 1: Decomposition of time-series total return variations in terms of average R-squared, January 2006 – August 2012



Appendix: SR index characteristics

Name of the index	Creation date	Universe	Number of components	SR methodology	Revision
Dow Jones Sustainability Index World ex US ex All	1999	2500 companies composing the Dow Jones Global Stock Market except for American companies	278	· Exclusion of assets involved in alchohol, gambling, tobacco and firearms · Best in class approach (top 10% of the companies with the best extra financial ratings for each industry)	Quarterly
Dow Jones Sustainability Index North America ex All	2005	600 largest Canadian and American companies composing the Dow Jones Global Stock Market	140	· Exclusion of assets involved in alchohol, gambling, tobacco and firearms · Best in class approach (top 20% of the companies with the best extra financial ratings for each industry)	Quarterly
Dow Jones Sustainability Index Eurozone ex All	2005	600 largest Euro zone companies composing the Dow Jones Global Stock Market	96	· Exclusion of assets involved in alchohol, gambling, tobacco and firearms · Best in class approach (top 20% of the companies with the best extra financial ratings for each industry)	Quarterly
FTSE 4 Good UK Index	2001	630 English companies composing the FTSE ALL Share Index	50	· Exclusion of assets involved in tobacco, firearms and nuclear energy · Selected companies must promote environmental protection, human rights and develop positive relationships with all the stakeholders	Semi annually
FTSE 4 Good Japan Index	2001	460 Japanese companies composing the FTSE Japan Index	50	· Exclusion of assets involved in tobacco, firearms and nuclear energy · Selected companies must promote environmental protection, human rights and develop positive relationships with all the stakeholders	Semi annually