

# How and Why SRI Performance Differs from Conventional Strategies

Executive Summary of White Paper: Exploration  
of the Cross-Sectional Return Distributions of  
Socially Responsible Investment Funds

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## Introduction

In recent decades, institutional and individual investors have increasingly considered social consciousness as part of their overall investment program. Indeed, from 1995 through 2012 (the latest data available), the amount of assets under management in (SRI) strategies grew from \$639 billion to \$3.7 trillion, a gain of 486%. Over the same period, overall assets under management (including conventional, non-SRI assets) grew 376%. It is estimated that SRI assets now comprise approximately 11% of assets under management in the U.S.

Along with the growth of interest in SRI investing there has been an increase in the volume of research analyzing the impact that social investment policies have on portfolio performance. Advocates of SRI strategies would like to have confidence that constraining investment choice does not adversely impact portfolio performance; similarly, proponents of conventional strategies are interested in understanding if there may be some financial benefit to investing with values in mind.



### Finding #1

SRI and non-SRI fund performances are nearly identical at the mean, supporting the conclusion by SRI proponents that, on average, socially conscious investing does “no harm” relative to unconstrained, conventional investing.

## Results

In this paper, we set out to help address these types of questions by investigating the differences in SRI and non-SRI domestic equity mutual fund performance. We extend the analysis most frequently used in this paper by not only analyzing average (mean) performance, but also comparing total and risk-adjusted returns at points on the distributions away from the means (further out on the distributions, including the tails). Such an analysis allows us to compare the results of the above- and below-median for SRI and non-SRI fund return distributions.

Among our findings: First, similar to previous studies, we found that SRI and non-SRI fund performances are nearly identical at the mean, supporting the conclusion by SRI proponents that, on average, socially conscious investing does “no harm” relative to unconstrained, conventional investing.



### Exploration of the Cross-Sectional Return Distributions of Socially Responsible Investment Funds

#### Authors:

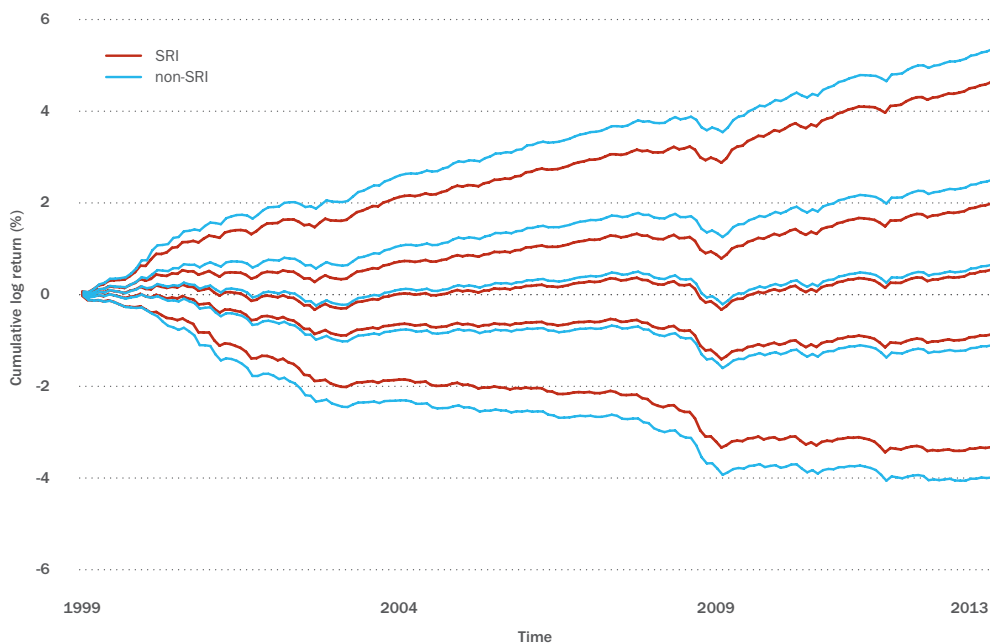
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- Janis Zvingelis, PhD, CFA – Director of Quantitative Research

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<sup>1</sup> USSIF Foundation - The Forum for Sustainable and Responsible Investment. Report on Sustainable and Responsible Investing Trends in the United States 2012. Retrieved from [http://www.ussif.org/files/publications/12\\_trends\\_exec\\_summary.pdf](http://www.ussif.org/files/publications/12_trends_exec_summary.pdf).

Second, our analysis of the entire cross-sectional return distributions demonstrated that both the total return and risk-adjusted (i.e., controlling for risk factors such as value, size and momentum) return of SRI funds are much more concentrated around the cross-sectional median than that of non-SRI funds. In other words, there is less of a difference between the total return performance of the best- and worst-performing SRI funds across various time periods than there is for the respective non-SRI funds. Another way to think about this result is that the above-median total return and risk-adjusted return are lower for SRI funds compared to the non-SRI funds, with the difference reversing below the median. These differences in performance are economically and statistically very significant and persistent. Figure 1 shows cumulative total return distributions and differences for various deciles of SRI and non-SRI funds.

**Figure 1** Cross-Sectional SRI/Non-SRI Differences



**Finding #2**

There is less of a difference between the total return performance of the best- and worst-performing SRI funds across various time periods than there is for the respective non-SRI funds.

Third, differences in SRI and non-SRI risk-adjusted performance were much more pronounced for bear markets than bull markets for the below-the-median quantiles of the cross-sectional risk-adjusted return distribution. In bear markets, the lowest decile of the risk-adjusted return for SRI funds outperformed the lowest-decile for non-SRI funds by approximately 0.66% per month, whereas in bull markets, the difference was substantially lower, but still economically and statistically significant at 0.33% per month. What this means in practical terms is that SRI funds tend to outperform non-SRI funds for below-the-median outcomes, and this outperformance is especially strong during bear markets. Figure 2 highlights these differences.

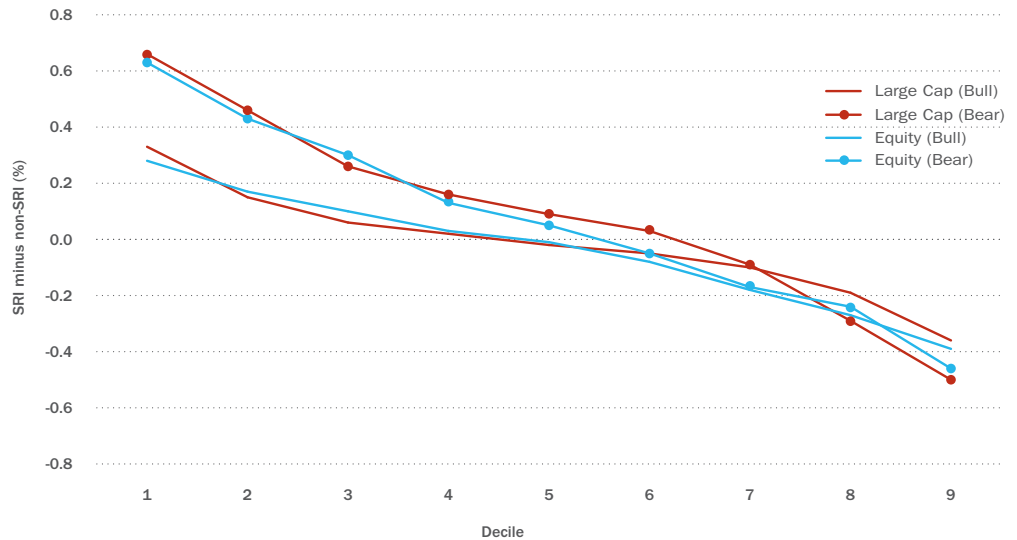


### Finding #3

SRI funds tend to outperform non-SRI funds for below-the-median outcomes, and this outperformance is especially strong during bear markets.

Figure 2

Cross-Sectional SRI/Non-SRI Differences



We also investigated a potential reason why we observe that the SRI fund total and risk-adjusted return distributions have thinner tails than the corresponding non-SRI distributions, and that this difference in distributions is more pronounced during bear markets than bull markets. We hypothesized that at least part of the reason for these performance differences is the differences in the universes of investments accessible to SRI and non-SRI funds. To test our hypothesis, we analyzed the respective holdings universes. Similar to our cross-sectional findings at the fund level, while the SRI and non-SRI holdings universes' total and risk-adjusted return distributions are nearly identical at the median, we found economically and statistically significant evidence that the non-SRI holdings distribution exhibits much heavier tails, as can be seen in Figure 3.

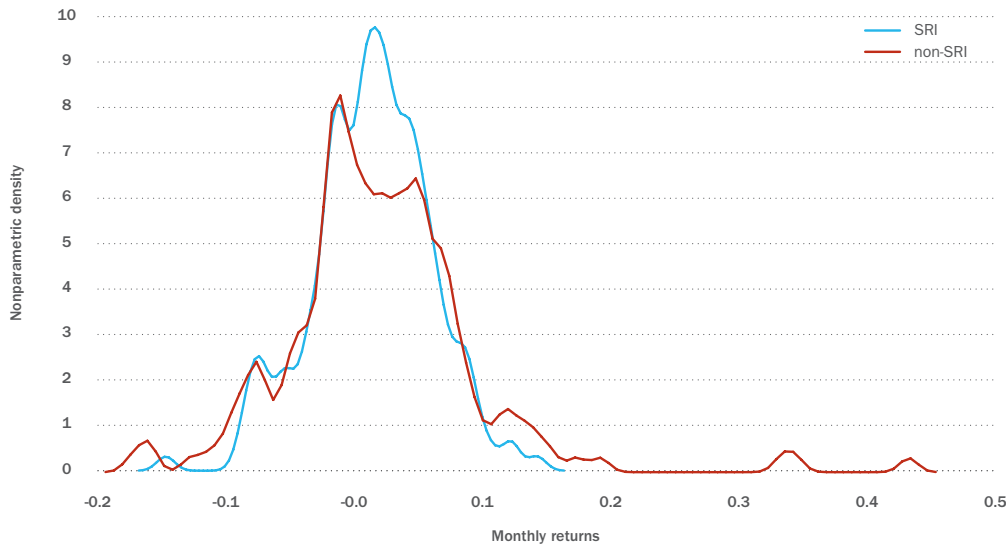
In addition, in terms of risk factor exposures (i.e., exposure to value, size, and momentum), the SRI holdings universe exhibits greater homogeneity across the distribution than the non-SRI holdings universe. These results tend to support our hypothesis that the more concentrated return distributions for SRI funds are due in part to a more limited and homogenous universe of available investment options from which to select.

## Conclusion

In this paper, we compared the cross-sectional performance (total return, risk-adjusted return, risk exposures, and their differences) of SRI and non-SRI mutual funds. Our approach diverged significantly from the usual approach of performance analysis, which focuses on comparing the performance of these two groups of funds at the mean. Instead, we focused on comparing the performance of SRI and non-SRI funds at the performance deciles away from the mean and the median. We established that there exist economically and statistically significant and persistent differences in the cross-sectional performance between SRI and non-SRI

Figure 3

SRI/non-SRI stock return densities



funds when comparisons are made at the quantiles away from the median. These differences increase dramatically deeper in the tails of these distributions.

Among our findings: first, we demonstrated that the cross-sectional total return distribution of SRI funds is markedly less extreme than that of the non-SRI funds. That is, below-the-median quantiles of the SRI fund total return distribution tend to be higher than those of the non-SRI funds, with this relationship reversing for above-the-median quantiles. This relationship is persistent through time.

Second, similar to the results for the total returns, we established that the cross-sectional distribution of risk-adjusted returns for SRI funds also tend to be more concentrated around the median when compared to non-SRI funds. These differences are economically as well as statistically significant, and are much more pronounced during bear markets than bull markets.

Finally, we investigated the potential sources of the total return and risk-adjusted return differences between SRI and non-SRI funds by focusing on the respective universes of stocks in which they invest.

We found strong suggestive evidence, which is economically and statistically significant, that the total return and risk-adjusted return distributions of the SRI and non-SRI fund holdings are different, with the SRI stock holdings having a distribution with thinner tails compared to the distribution of the non-SRI holdings. In addition, the distributions of the risk factor exposures are much less dispersed for the SRI holdings universe, which means that the SRI holdings universe is more homogeneous not only from the point of view of total and risk-adjusted returns, but also from the point of view of its risk exposures.



#### Finding #4

The more concentrated return distributions for SRI funds are due in part to a more limited and homogenous universe of available investment options from which to select.

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## Author Bios

### Jianan Du

Quantitative Research Analyst

Mr. Du works on a wide variety of quantitative finance projects, such as manager performance persistence, performance attribution, ETF evaluation, Socially Responsible manager performance, and yield simulation. He uses his experience in quantitative finance, statistics, mathematics and programming to propose and implement project solutions.

Du holds a Master of Mathematical Finance degree from Illinois Institute of Technology. He obtained his Bachelor of Science degree in mathematics and applied mathematics from the University of Science and Technology of China.

### Brandon Thomas

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Mr. Thomas is responsible for all aspects of PMC's investment management capabilities. Primary among those responsibilities include the development of PMC's investment policy, implementation of the firm's investment management offerings, and the development of new investment products. Thomas is a member of the PMC Investment Committee.

Thomas received an A.B. in Economics from Brown University, an M.B.A. in Finance and Accounting from the University of Chicago and a J.D. from DePaul University.

### Janis Zvingelis, PhD, CFA

Senior Vice President, Director of Quantitative Research

As Head of PMC's Quantitative Research Group, Mr. Zvingelis is responsible for leading Envestnet | PMC's research efforts involving quantitative finance, such as capital market forecasts, asset allocation strategies, portfolio implementation and tax optimization. He brings knowledge of a variety of quantitative and statistical techniques to the analysis of financial research projects. Zvingelis is a member of both the PMC and Envestnet Retirement Solutions Investment Committees.

Prior to joining Envestnet Asset Management, Zvingelis was a research consultant with Mesirow Financial and Ibbotson Associates.

Zvingelis earned his Ph.D. in finance from The University of Iowa. He also holds a MA degree in economics/econometrics and an MSc degree in statistics, both from the University of Iowa as well as an MSc in Financial Mathematics from The University of Chicago. Zvingelis obtained his Bachelor of Arts degree summa cum laude in economics from Central College in Pella, Iowa. He has written and published several research papers in finance and theoretical statistics and is a CFA charterholder.

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