

## Is There a Cost to Being Socially Responsible in Investing?

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Should an investor expect different returns in socially-screened and unscreened universes? Should a composite model combining traditional value factors with a consensus growth variable produce different returns for socially-screened and unscreened portfolios? We find that returns in socially-screened and unscreened universes do not differ significantly. We also find that a composite model using value and growth variables produces an expected return ranking list that generates equivalent excess returns in socially-screened and unscreened portfolios. There is literature in academic and professional investment journals that suggests socially responsible investing may produce higher (but not significantly higher) risk-adjusted portfolio returns than merely using all available stocks in the equity universe. Hamilton, Jo, and Statman (1993) found that 17 socially responsible mutual funds established prior to 1985 outperformed traditional mutual funds of similar risk for the 1986-1990 period. However, the relative monthly outperformance of 7 basis points was not statistically different from zero. It is also not obvious what criteria were used to determine the socially-responsible universe in the study.

In May of 1990, Kinder, Lydenberg, Domini & Co. (KLD) developed the Domini Social Index (DSI) by eliminating S&P 500 companies that failed to pass South Africa, product, environmental, military, nuclear power, and employee relations screens and including 50 non-S&P 500 stocks with "good" records on corporate citizenship, product quality, board representation of women and minorities. Luck and Pilotte, in a *Journal of Investing* (1993) study found that the Domini Social Index outperformed the S&P 500 Index during the May 1990-September 1992 period, primarily due to the higher growth sensitivity of the Domini Index. Luck and Pilotte used the BARRA Performance Analysis package (PAN) and found that the 400 securities in the DSI produced an annualized active return of 233 basis points relative to the S&P 500. However, specific asset selection relating to eliminating non-social companies and including "good" companies comprised 199 basis points of the active return. This provided evidence of the "green effect," as the outperformance was attributable to selecting socially responsible companies. Luck and Pilotte noted that the May 1990-September 1992 period was characterized by positive growth factor and size returns (smaller stocks outperformed larger-capitalized stocks as a rule during this period). Kurtz and DiBartolomeo in a *Journal of Investing* (1996) study found 19 basis points of monthly outperformance of the DSI relative to the S&P 500 for the May 1990-September 1993 period which was attributed to the higher price volatility and higher price-to-book ratios of the DSI stocks.

The College Retirement Equities Fund (CREF) Social Choice Account, also provides a real world example of how socially responsible funds can outperform. The Social

Choice Fund exceeded \$1.5 billion, as of December 1996, and is a balanced account of approximately 62 percent equity and 38 percent long-term bonds (as of December 31, 1995). The Social Choice Account earned an average annual return of 12.41 percent for the five years ending December 31, 1996. CREF's Stock Account, composed stocks representative of U.S. equities (66 percent), U.S. growth stocks (17 percent), and foreign stocks (17 percent), earned a 13.58 percent average annual return for the five-years ending December 31, 1996. The relative composition of the CREF Stock Account was given as of December 31, 1995. It is difficult to compare the equity performance of the CREF Social Choice Account with the CREF Stock Account because the various equity and asset compositions may create different risk levels; however, one does not find the substantial underperformance in the CREF Social Choice Account relative to the Stock Account. The CREF Social Choice experience lends credence to the theory that socially responsible funds can produce good performance.

J. Rothchild espoused a very different view as he labeled socially-screened investing a "dumb" idea in *Fortune*, May 1996. It is the case that 24 socially-screened mutual funds in the Morningstar universe have substantially underperformed the S&P 500 during the past five and ten years. However, the difference between the average return on socially-screened equity mutual funds and the 2034 unscreened equity mutual funds drops from -417 basis points over the past five years to -105 basis points over the past ten years, a less meaningful differential, particularly given the very small number of socially-screened equity mutual funds with long-term track records. There are only six socially-screened equity mutual funds with five-year track records in the Morningstar universe and only Dreyfus Third Century and Parnassus have ten year records.

J. D. Diltz presented a third, more neutral, point of view in two recent studies in which he found no statistically significant difference in returns for 14 socially screened stock portfolios vs. 14 unscreened stock portfolios generated from a universe of 159 securities during the 1989-1991 period. Diltz found that only the environmental and military business screens created a statistically significant difference in returns at the five percent confidence level during the 1989-1991 period.

The literature on the impact of social screening on returns provides mixed conclusions. At a minimum, the studies of the DSI and the CREF Social Choice Account suggest that it does not cost investors to invest socially. Vantage Global Advisors (Vantage) subscribes to the position that a socially-screened portfolio does not produce different returns than an unscreened portfolio. Vantage's experience indicates that it is not "dumb" to be a socially conscious investor. How a manager implements the investment process impacts returns, not social screening. We will examine the returns of Vantage's 1,300 stock unscreened universe and a 950 stock screened universe and determine if the returns are different at the 5% level of significance. In addition, we will explore how the characteristics of those universes may differ, resulting in short term return differences. Finally, we will provide evidence suggesting an investment process that adds value using an unscreened universe is not impacted by social screening.

We find that there is no significant difference between the average monthly returns of the screened and unscreened universes during the 1987-1994 period. Indeed, from January 1987 to December 1994, there is less than a 15 basis point differential in equally-weighted annualized stock returns. The screens used in this analysis are

provided by Kinder, Lydenberg, and Domini (KLD) and are as follows: Military, Nuclear Power, Product (Alcohol, Tobacco and Gambling), and Environment. The Vantage unscreened 1300 stock universe produced a 1.068 percent average monthly return during the January 1987-December 1994 period, such that a \$1.00 investment grew to \$2.77. A corresponding investment in the socially-screened universe would have grown to \$2.74, representing a 1.057 percent average monthly return. There is no statistically significant difference in the respective return series, and more important, there is no economically meaningful difference in the return differential. The variability of the two return series is almost equal during the 1987-1994 period. One can test for statistically significant differences in the two return series using the F-test which examines the differences in series mean (returns) relative to the standard deviations of the series. When one applies the F-test, one finds that series are not statistically different from one another.

If there is no long term return difference, short term variations are due to style and size biases of a screened portfolio. As an example, let us examine the financial characteristics of the stocks in Vantage's unscreened and socially-screened universes as of December 1994. The unscreened Vantage universe of 1300 stocks had BARRA growth and book-to-price sensitivities of 0.185 and 0.306, whereas the socially-screened Vantage universe had corresponding BARRA growth and book-to-price sensitivities of 0.269 and 0.279, respectively. The unscreened universe had an average market capitalization of \$3.433 billion in December 1994 whereas the socially-screened universe had a mean capitalization of \$2.796 billion. The average BARRA growth and book-to-price sensitivities of the excluded securities were -0.164 and 0.414, respectively, and the average market capitalization of the excluded stocks exceeded \$6.1 billion.

Thus, socially-screened-out stocks had higher market capitalizations and were more value-oriented than the unscreened universe, a condition noted by Lloyd Kurtz and Dan DiBartolomeo in their Journal of Investing study previously mentioned. There was a statistically significant difference between the unscreened Vantage universe's lower price-to-book ratio and the higher price-to-book ratio of the Vantage screened universe. Professors Fama and French at the University of Chicago found that smaller stocks with lower price-to-book ratios tended to outperform larger stocks with higher price-to-book ratios in the very long-run. The higher price-to-book ratio of the screened universe represents a risk exposure to a socially responsible investor. The screened universe is more sensitive to BARRA growth factor return than the Vantage unscreened universe and this exposure should help relative performance for socially responsible investors when the BARRA growth factor return out-performs the BARRA value factor (as measured by the book-to-price, bp) return.

Should these differences in portfolio characteristics impact a manager's ability to add value? Although we have noted that much of the recent socially-responsible literature has been concerned with the impact of screening on BARRA growth and value exposures, in a forthcoming study in the Journal of Investing, we found no statistically significant differences in the expected return ranking procedure to select stocks within socially-screened and unscreened universes. Let us examine the information coefficients (ICs) for a composite model in the Vantage unscreened 1300 stock universe and its corresponding socially-screened universe. ICs measure the correlation between ranked composite scores and ranked subsequent total return. The ranked composite score is generated from a larger universe of 3000 stocks. That score is then used to forecast returns in the individual screened and unscreened universes. The composite model produces statistically significant ICs (as measured

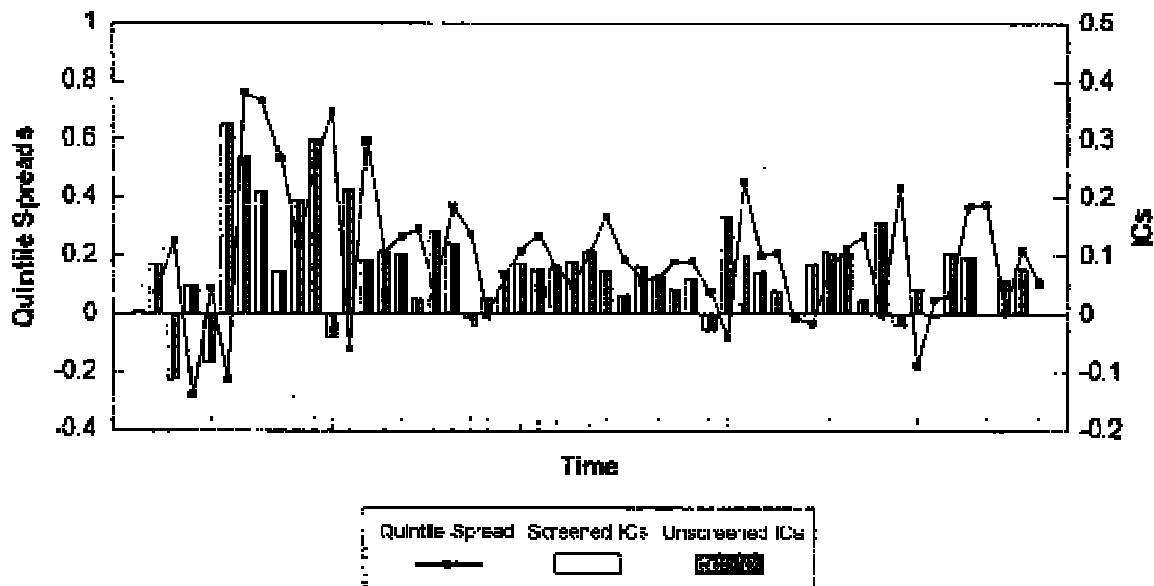
by an average t-value) in both socially-screened and unscreened universes. The most preferred stocks in the socially-screened and unscreened universe outperform the respective benchmarks. The least preferred stocks consistently underperform the benchmarks. The regression-weighted model combined value (using Compustat data) and growth (estimated using I/B/E/S data) factors. The ICs of the unscreened and socially-screened universes are shown in the chart on the following page.

The information coefficients for both the screened and unscreened universes are statistically significant and the quintile spread, defined to be the return of the most preferred securities less the return of the least preferred securities using the composite model, is significantly positive. Thus, the ICs are consistently positive and the differences in the ICs between screened and unscreened universes are not statistically significant.

There has been no statistically significant difference between the average returns of a socially-screened and unscreened universe during the 1987-1994 period. One should be attentive when selecting a socially-screened mutual fund or manager. Performance can vary dramatically across managers, but should not vary due to social screening over the long term.

## Socially-Screened and Unscreened ICs and Quintile Spreads

Top 3000 Securities, 1982-94



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