Socially Responsible Mutual Funds

(as corrected October 2000)

Meir Statman

Conversations about socially responsible investing are difficult because they combine facts with beliefs. Proponents of socially responsible investing believe that combining social goals with investments does good; opponents believe that such combinations are unwise or even illegitimate. In this article, I try to separate facts from beliefs. I report that the Domini Social Index, an index of socially responsible stocks, did better than the S&P 500 Index and that socially responsible mutual funds did better than conventional mutual funds over the 1990–98 period but the differences between their risk-adjusted returns are not statistically significant. Both groups of mutual funds trailed the S&P 500 Index.

According to the Social Investment Forum (1999), assets in socially responsible portfolios reached $2.2 trillion in 1999, up from $1.2 trillion in 1997. This amount might increase much more if U.S. Social Security funds are invested in the market and if stocks for the Social Security fund are screened for social responsibility. Ip (1999) reported that Social Security plans under discussion call for stock investments of $650 billion to $1.2 trillion over the next 15 years.

Some are delighted by the prospect of social screens for Social Security funds, whereas others are alarmed. Jesse Jackson is delighted. "I think we should not invest in gun manufacturing," he said to the U.S. House Ways and Means Committee, "and we shouldn't invest in liquor companies and shouldn't invest in tobacco companies" ("The Rubin-Jackson Raid" 1999). But Milton Friedman (1999) is alarmed by what he considers Social Security socialism. "Margaret Thatcher reversed Britain's drift to socialism by selling off government-owned enterprises," he wrote. "President Clinton now proposes that the U.S. government do the opposite: buy private equities, thereby becoming part-owner of U.S. enterprises."

I analyzed the performance of the Domini Social Index (DSI), an index of socially responsible companies, and the performance of socially responsible mutual funds in the 1990–98 period and conclude that their performance gives little reason for either delight or alarm.

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The Domini Social Index

The DSI is an index of stocks of socially responsible companies that was initiated in May 1990 by Kinder, Lydenberg, Domini & Company (KLD). The DSI is a capitalization-weighted index modeled on the S&P 500 Index. It consists of 400 stocks: approximately 250 S&P 500 companies, approximately 100 non-S&P 500 companies selected to provide industry representation, and approximately 50 non-S&P 500 companies with particularly strong social characteristics. KLD created the DSI as a benchmark for portfolios that practice social screening and constructed it with a combination of exclusionary and qualitative screens.

The exclusionary screens eliminate from the DSI companies that derive 2 percent or more of their sales from military weapons systems, derive any revenues from the manufacture of alcohol or tobacco products, or derive any revenues from the provision of gaming products or services. The screen that eliminated companies with equity interests in South Africa was dropped in 1993.

The qualitative screens are based on company records on diversity, employee relations, the environment, and similar causes. Considering both strengths and weaknesses, KLD judges companies by their entire records. For example, Compuware Corporation was added to the DSI in March 1999 because of its record on diversity and employee relationships, whereas CSX Corporation was deleted from the DSI in March 1998 because of its poor environmental and safety record (Kinder, Lydenberg, Domini & Company 1999).

I compared the returns to the DSI with returns to the S&P 500 from May 1990 through September 1998. As **Table 1** shows, the DSI beat the S&P 500

Table 1. The Performance of the DSI and Other Indexes, May 1990–September 1998
(*t*-statistics in parentheses)

Index	Annualized Arithmetic Mean Return[a]	Annualized Geometric Mean Return	Annualized Standard Deviation of Returns	Alpha of the DSI with Other Indexes as Benchmarks	*eSDAR* of the DSI with Other Indexes as Benchmarks
DSI	18.54%	19.02%	14.19%	na	na
S&P 500	16.95	17.31	13.23	0.94 pps	0.66 pps
				(1.01)	
CRSP 1-10	16.42	16.67	13.41	1.78	1.36
				(1.66)	

na = not applicable.

[a]The annualized mean return was calculated as 12 times the mean monthly return. (The reported arithmetic means are lower than the geometric means because monthly returns are multiplied by 12 rather than compounded.) The annualized standard deviation of returns was calculated as the monthly standard deviation multiplied by the square root of 12.

when performance was measured by raw returns or by risk-adjusted returns. Both measures of risk used for risk-adjusted returns, one based on beta and the other on standard deviation, indicate that the DSI is somewhat riskier than the S&P 500.

I also calculated Jensen's alpha, a performance measure that uses beta as a measure of risk, for the DSI. The S&P 500 was the benchmark, and the equation used was

$$R_{DSI} - R_F = \alpha_{DSI} + \beta_{DSI}\,(R_{SP} - R_F) + e_{DSI}, \qquad (1)$$

where

R_{DSI} = monthly return of the DSI
R_F = monthly return of 30-day U.S. T-bills
R_{SP} = monthly return of the S&P 500
e_{DSI} = residual

The beta of the DSI was found to be 1.05, indicating that the DSI is slightly riskier than the S&P 500. The alpha was a positive 0.94 percent a year but is not statistically significant.

In addition, I calculated a measure of risk called "excess standard-deviation-adjusted return," or *eSDAR*. This measure is a modified version of the Sharpe ratio (Statman 1987; Modigliani and Modigliani 1997) and is calculated as

$$eSDAR = R_F + \left(\frac{R_{DSI} - R_F}{SD_{DSI}}\right) SD_{SP} - R_{SP}, \qquad (2)$$

where SD_{DSI} is standard deviation of the return of the DSI and SD_{SP} is the standard deviation of the return of the S&P 500.

The *eSDAR* of the DSI is the excess return of the DSI over the return of the S&P 500, where the DSI is leveraged to have the S&P 500's standard deviation. It is shown in **Figure 1**. The mean annual return of the DSI in the studied period was higher than that of the S&P 500, but its standard deviation was also higher. The *eSDAR* of the DSI was 0.66 percentage points (pps) a year, indicating that the DSI's higher returns added to its performance more than its higher standard deviation added to it.[1]

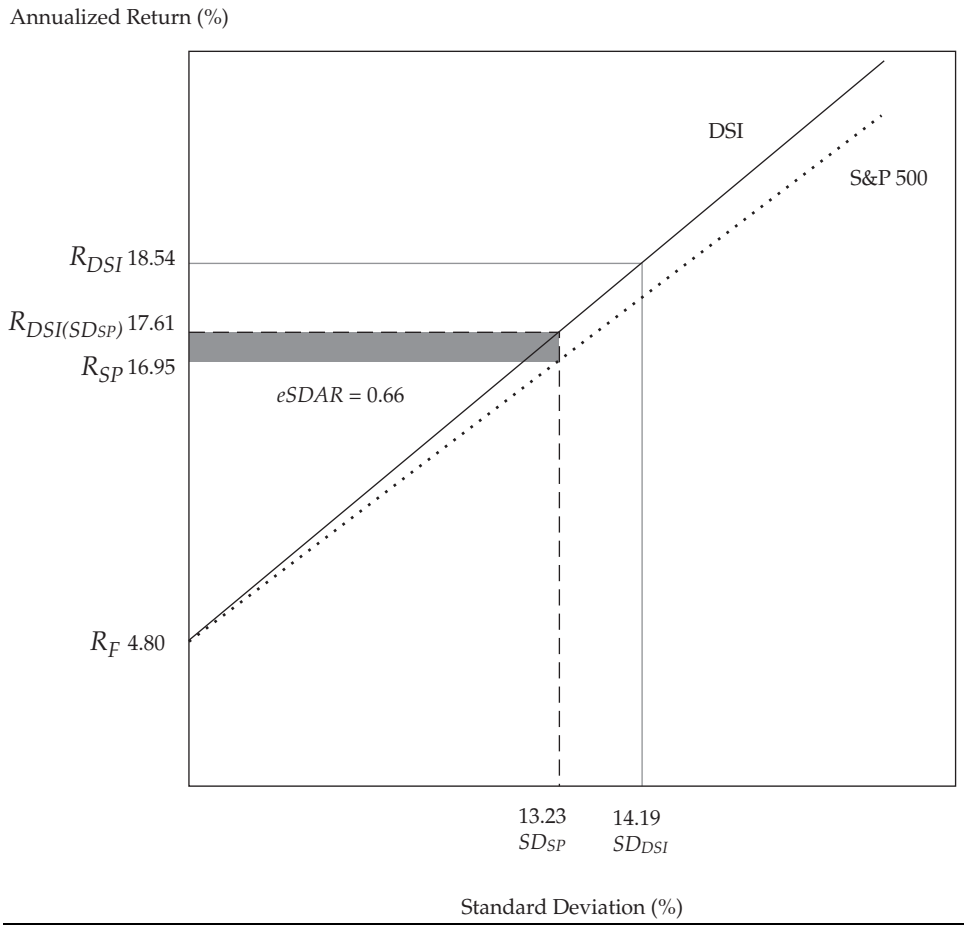
The 1990s have been good for large-cap stocks and bad for small-cap stocks. The mean arithmetic annualized return of the S&P 500, an index of large-cap stocks, was 16.95 percent, higher than the 16.42 percent mean of the CRSP 1–10 Index, an index of all stocks. As evident from Table 1, the risk-adjusted DSI returns were higher than those of the S&P 500 in the sample period and were even higher than those of the CRSP 1–10.

Socially Responsible Mutual Funds

The Domini Social Equity Fund is a DSI index fund, a mutual fund that aims to replicate the DSI, and it uses the DSI social screens. But not all socially responsible mutual funds use the DSI screens. The paradox of socially responsible investing, wrote Gasparino and Tam (1998), is that "one person's taboo is another person's sacred cow." The Social Investment Forum (1998) detailed the wide range of screens used by the 144 socially responsible mutual funds it counted in 1997. For example, American Trust Allegiance's screens reflect Christian Science beliefs, whereas Amana's screens reflect Islamic principles. Beacon screens out companies that harm animals, and Meyers Pride screens in companies that support gay rights.

Screens do share some common themes. The Social Investment Forum (1998) reported that 84 percent of socially screened portfolios exclude tobacco, 72 percent exclude gambling, 69 percent exclude weapons, and 68 percent exclude alcohol.

Figure 1. The *eSDAR* of the DSI Relative to the S&P 500



Note: When the DSI return was delevered so that its standard deviation equaled 13.23 percent (the standard deviation of the S&P 500), the DSI return dropped to 17.61 percent, 0.66 pps higher than the 16.95 percent return of the S&P 500.

One additional screen enjoys wide acceptance among socially responsible investors, but it is not a social screen: Most socially responsible investors aim to screen out portfolios with low returns. A Yankelovich survey reported that 80 percent of investors would not consider investing in socially responsible mutual funds unless their returns were at least equal to those of conventional mutual funds (Krumsiek 1997). Do socially responsible mutual funds meet the returns screen?

Hamilton, Jo, and Statman (1993) compared the returns of socially responsible mutual funds with the returns of conventional funds over the 1981–90 period and found no statistically significant difference between the risk-adjusted returns of the two groups. They also found that both groups trailed the CRSP 1–10.

To compare the returns of socially conscious and conventional funds, Hamilton, Jo, and Statman used Jensen's alpha as the measure of performance. I used both alpha and *eSDAR* as performance measures in this study. For performance benchmarks, I used the S&P 500 and the DSI. The period studied was May 1990 through September 1998, and funds for the study were those on Morningstar's list as of the end of September 1998.[2]

John Rekenthaler, research director of Morningstar, wrote that Morningstar classifies "socially conscious" mutual funds as funds that impose *major* socially conscious constraints on their investment practices.[3] So, for example, a limited exclusionary screen, such as "we don't invest in tobacco companies," would not earn the socially conscious classification. Also, Morningstar excludes from the socially conscious classification funds that are sold to socially conscious affinity groups, such as Lutherans, but follow conventional investment practice. Differences in classification criteria lead to differences in the lists of socially responsible mutual funds. Hamilton, Jo, and Statman used Lipper's classification, and their list of pre-1985 socially responsible mutual funds consisted of 17 funds.

Only four of those funds, however, were on Morningstar's list of socially conscious funds.

The Morningstar list of socially conscious funds was free of survivorship bias for the period of this study. Rekenthaler covered the socially conscious group of funds at Morningstar from 1989 through the mid-1990s and was succeeded in this task by Laura Lallos. He wrote, "Neither Laura nor I are aware of a single socially conscious fund that has disappeared (through merger, liquidation, change of charter, whatever) over the past 10 years."

Morningstar listed 64 funds as socially conscious as of the end of September 1998. Some of the listed funds were duplicates—that is, different classes of the same fund. For example, Delaware Social Awareness appeared in three fund classes. I included only the first-established class fund. (I chose the class fund with the most assets if two or more class funds were established simultaneously.) I included only equity funds, defined as those with no more than 30 percent in bonds and cash. These criteria left 31 distinct socially responsible mutual funds.

The characteristics of the 31 funds at the end of September 1998 are presented in **Table 2**. Assets ranged from the $1.4 million of the Bridgeway Social Responsibility Fund to the $841.3 million of the Dreyfus Third Century Fund. The expense ratio ranged from a low 0.60 percent of the Neuberger &

Table 2. Characteristics of Socially Responsible Mutual Funds, September 1998

Mutual Fund	Assets (millions)	Expense Ratio	Front-End Load	12b-1 Charge	Deferred Load
Amana Growth	$ 8.90	1.54%	0.00%	0.00%	0.00%
Amana Income	20.00	1.36	0.00	0.00	0.00
Aquinas Equity Growth	37.70	1.49	0.00	0.00	0.00
Aquinas Equity Income	56.70	1.37	0.00	0.00	0.00
Ariel Appreciation	213.80	1.33	0.00	0.25	0.00
Ariel Growth	162.30	1.25	0.00	0.25	0.00
Bridgeway Social Responsibility	1.40	1.50	0.00	0.00	0.00
Calvert Capital Accumulate	68.80	1.86	4.75	0.35	0.00
Calvert Social Inv. Equity A	122.10	1.20	4.75	0.35	0.00
Calvert World Value Intl Equity A	206.00	1.76	4.75	0.35	0.00
Catholic Values Equity Individual Shares	3.20	2.24	0.00	1.00	1.00
Citizens Emerging Growth	76.70	1.99	0.00	0.25	0.00
Citizens Global Equity	47.90	2.10	0.00	0.25	0.00
Citizens Index	325.00	1.59	0.00	0.25	0.00
Cruelty Free Value	1.70	1.95	0.00	0.25	0.00
Delaware Social Awareness A	29.10	1.50	4.75	0.30	0.00
Devcap Shared Return	9.90	1.75	0.00	0.25	0.00
Domini Social Equity	448.30	0.98	0.00	0.25	0.00
Dreyfus Third Century	841.30	0.97	0.00	0.00	0.00
Meyers Pride Value	3.00	NA	0.00	0.25	0.00
MMA Praxis Growth	125.10	1.74	0.00	1.00	4.00
Neuberger & Berman NYCDC SocResponsive	186.70	0.60	0.00	0.00	0.00
New Alternatives	31.60	1.15	4.75	0.00	0.00
Noah	2.30	1.42	0.00	0.25	0.00
Parnassus	206.00	1.11	3.50	0.00	0.00
Parnassus Income Equity	33.10	1.05	0.00	0.00	0.00
Rightime Social Awareness	13.40	2.35	4.75	0.50	0.00
Security Social Awareness A	7.60	0.67	5.75	0.25	0.00
Smith Barney Concert Social Awareness B	171.20	2.03	0.00	1.00	5.00
Timothy Plan A	10.60	1.60	5.50	0.25	0.00
Women's Equity	6.90	1.50	0.00	0.25	0.00
Mean	112.20	1.50	1.40	0.26	0.32

NA = not available.

Source: Morningstar.

Berman NYCDC Social Responsibility Fund to a high 2.35 percent of the Rightime Social Awareness. Of the 31 funds, 9 imposed front-end charges and 21 had 12b-1 charges.

Many socially responsible mutual funds are of recent vintage. In my sample, only 9 of the funds were established before May 1990. My approach was to compare the performance of each fund during its life through September 1998 with the performance of the indexes during the same period. So, for example, the 8.88 percent annualized return of Amana Growth, in existence since March 1994, was compared with the 20.28 percent annualized return of the S&P 500 during the same period, whereas the 11.33 percent annualized return of Amana Income, in existence by May 1990, was compared with the 16.95 percent annualized return of the S&P 500 during the longer period. The risk-adjusted returns of funds were similarly measured relative to the indexes. **Table 3** shows the results.

Only two socially responsible funds, Citizens Index and Noah, had higher raw returns than the S&P 500. The Domini Social Equity Fund, the DSI index fund, trailed the S&P 500 by 0.14 pps, but its performance was approximately equal to that of the Vanguard Index 500 fund. On average, the raw returns of socially responsible funds trailed the returns of the S&P 500 by 6.26 pps. They trailed the DSI by 8.03 pps.

Only one socially responsible fund, Citizens Index, had a positive alpha relative to the S&P 500. The mean annual alpha was a negative 5.02 pps, implying a mean 5.02 pps annual risk-adjusted lag relative to the S&P 500. Only three of the alphas, however, were statistically significant.[4] The mean *eSDAR* of socially responsible funds relative to the S&P 500 in the period was a negative 6.73 pps.

A comparison of the returns of socially responsible funds with those of the S&P 500 could be biased because the "style" of a socially responsible fund might be different from the "style" of the S&P 500. To correct for such bias, I compared the socially responsible funds to the DSI, an index that shares the style of socially responsible investing. The returns of all socially responsible funds trailed the DSI index. For example, the Domini Social Equity fund trailed the DSI by 1.69 percent and it trailed the DSI in risk-adjusted returns as well. The eSDAR of the Domini Social Equity fund was a negative 1.48 percent and its alpha was a negative and statistically significant 1.42 percent. The mean alpha of the socially responsible funds relative to the DSI was a negative 5.76 pps, and the mean *eSDAR* was a negative 8.00 pps. These numbers indicate that the performance of socially responsible funds relative to the DSI was worse than their performance relative to the S&P 500 in the period but, on average, socially responsible funds trailed both indexes.

Most socially responsible investors insist on funds that match the performance of conventional funds. And they get their wish. I compared the performance of socially responsible funds with the performance of conventional mutual funds of equal asset size. Matching by asset size was chosen because many other fund characteristics, such as costs, are related to size (Malhotra and McLeod 1997). Specifically, I compared the performance of the group of 31 socially responsible funds with that of a group of 62 conventional funds selected by matching each socially responsible fund with two conventional funds that were nearest to it in asset size. The 1.50 percent mean expense ratio of the group of socially responsible funds closely matched the 1.56 percent mean expense ratio of the group of conventional funds.

The mean performance of the socially responsible funds was better than that of the conventional funds. The socially responsible funds' negative mean alpha (–5.02 pps) was smaller than the conventional funds' negative mean alpha (–7.45 pps). Similarly, the negative mean 6.73 pps *eSDAR* for socially responsible funds was smaller than the negative mean 7.79 pps for conventional funds. The difference in performance between the two fund groups was not, however, statistically significant. (The *t*-statistic of the difference between the means of alpha was 1.84; the *t*-statistic of the differences for *eSDAR* was 0.87.) In short, the mean performance of socially responsible funds was negative but no worse than the mean performance of conventional funds.

Mutual funds, on average, have tended to tilt their portfolios toward small-cap stocks. In the period of this study, May 1990 to September 1998, small-cap stocks underperformed large-cap stocks. The mean arithmetic annualized return of the S&P 500 was 16.95 percent during the period, whereas the return to the CRSP 1–10, an index of all stocks, was 16.42 percent and the return of the CRSP 6–10, an index of the bottom five capitalization deciles, was only 14.16 percent.

Investment Action and Political Action

Some socially responsible investors want no more than portfolios that are consistent with their beliefs. Domini (1992) described a Quaker college that screened out stocks of armament manufacturers. Did the board think it was going to stop the armament buildup? the provost was asked. "No," he responded, "our board isn't out to change the

Table 3. Performance of Socially Responsible Mutual Funds, May 1990–September 1998

			S&P 500 as Benchmark					DSI as Benchmark				
Mutual Fund	Period	Fund Annualized Return	S&P 500 Annualized Return	Excess Fund Return	Alpha	Beta	*eSDAR*	DSI Annualized Return	Excess Fund Return	Alpha	Beta	*eSDAR*
Amana Growth	3/94–9/98	8.88%	20.28%	–11.40 pps	–8.66 pps	0.82	–11.57 pps	21.41%	–12.52 pps	–8.91 pps	0.78	–12.56 pps
Amana Income	5/90–9/98	11.33	16.95	–5.62	–1.99	0.70	–3.67	18.54	–7.21	–2.09	0.63	–4.66
Aquinas Equity Growth	1/94–9/98	14.92	19.71	–4.79	–5.42	1.04	–6.14	20.83	–5.91	–5.83	1.00	–6.98
Aquinas Equity Income	1/94–9/98	14.09	19.71	–5.62	–3.47	0.86	–4.95	20.83	–6.74	–3.55	0.80	–5.75
Ariel Appreciation	5/90–9/98	14.05	16.95	–2.90	–1.12	0.85	–3.22	18.54	–4.49	–1.89	0.81	–4.17
Ariel Growth	5/90–9/98	12.35	16.95	–4.60	–2.55	0.83	–5.06	18.54	–6.19	–3.23	0.79	–6.15
Bridgeway Social Responsibility	9/94–9/98	18.20	21.91	–3.71	–1.90	0.89	–4.18	23.41	–5.21	–2.64	0.86	–5.19
Calvert Capital Accumulate A	11/94–9/98	19.15	22.87	–3.72	–5.07	1.08	–8.33	24.56	–5.41	–6.24	1.04	–9.65
Calvert Social Inv. Equity A	5/90–9/98	8.15	16.95	–8.80	–8.14 ***	0.95	–9.00	18.54	–10.39	–8.78***	0.88	–10.37
Calvert World Value Intl Equity A	8/92–9/98	8.19	17.43	–9.25	–5.61	0.72	–9.41	18.88	–10.69	–5.45	0.64	–10.71
Catholic Values Equity Individual Shares	6/97–9/98	1.65	17.25	–15.61	–14.89	0.94	–15.44	19.92	–18.28	–16.75	0.90	–18.22
Citizens Emerging Growth	3/94–9/98	18.12	20.28	–2.16	–3.34	1.08	–5.60	25.25	–7.13	–3.77	1.03	–6.36
Citizens Global Equity	3/94–9/98	11.29	20.28	–8.99	–5.14	0.75	–8.72	21.41	–10.12	–5.27	0.71	–9.60
Citizens Index	4/95–9/98	25.14	23.53	1.61	0.16	1.08	–0.35	25.25	–0.11	–0.99	1.04	–1.25
Cruelty Free Value	5/97–9/98	1.52	20.57	–19.06	–16.13	0.81	–19.24	22.59	–21.08	–17.05	0.77	–21.37
Delaware Social Awareness A	3/97–9/98	15.30	19.55	–4.25	–5.01	1.05	–5.00	22.25	–6.95	–6.98	1.00	–7.28
Devcap Shared Return	11/95–9/98	21.62	22.53	–0.91	–1.26	1.02	–1.39	24.27	–2.66	–2.30***	0.98	–2.34
Domini Social Equity	6/91–9/98	16.30	16.44	–0.14	–0.29	1.01	–0.51	17.99	–1.69	–1.42***	0.98	–1.48
Dreyfus Third Century	5/90–9/98	14.97	16.95	–1.98	–2.23	1.02	–2.95	18.54	–3.57	–3.12	0.97	–3.88
Meyers Pride Value	7/96–9/98	12.26	22.06	–9.80	–9.28	0.97	–10.27	24.77	–12.51	–10.63	0.90	–12.66
MMA Praxis Growth	2/94–9/98	13.13	19.34	–6.21	–4.64	0.89	–5.95	20.64	–7.51	–5.07	0.84	–6.96
Neuberger & Berman NYCDC SocResponsive	4/94–9/98	17.44	21.62	–4.19	–4.50	1.02	–5.15	22.80	–5.36	–4.55	0.95	–5.89
New Alternatives	5/90–9/98	6.55	16.95	–10.40	–8.11***	0.81	–10.32	18.54	–11.99	–8.46***	0.74	–11.78
Noah	6/96–9/98	23.17	21.45	1.72	–0.29	1.12	–1.10	23.99	–0.82	–2.19	1.07	–2.89
Parnassus	5/90–9/98	12.42	16.95	–4.53	–6.52	1.16	–7.51	18.54	–6.12	–7.51	1.10	–8.77
Parnassus Income Equity	9/92–9/98	10.27	18.00	–7.74	–2.69	0.63	–6.28	19.38	–9.11	–2.90	0.58	–7.33
Rightime Social Awareness	5/90–9/98	10.51	16.95	–6.44	–0.07	0.48	–4.65	18.54	–8.03	–0.73	0.47	–5.71
Security Social Awareness A	12/96–9/98	13.89	19.64	–5.75	–5.96	1.01	–6.13	22.51	–8.62	–7.93	0.96	–8.56
Smith Barney Concert Social Awareness B	5/90–9/98	12.67	16.95	–4.28	–0.75	0.71	–1.58	18.54	–5.87	–1.09	0.65	–2.42
Timothy Plan A	4/94–9/98	3.33	21.62	–18.30	–15.14***	0.81	–18.31	22.80	–19.47	–15.07***	0.75	–19.55
Women's Equity	10/93–9/98	12.99	19.19	–6.20	–5.56	0.96	–6.83	20.14	–7.15	–6.31	0.95	–7.53
Mean		13.03	19.28	–6.26	–5.02	0.91	–6.73	21.06	–8.03	–5.76	0.86	–8.00
Standard deviation		5.61	2.18	5.00	4.34	0.16	4.70	2.41	4.97	4.39	0.16	4.98

***Statistically significant at the 1 percent level.

Source: Morningstar; Domini Social Investments.

world. We're seeking a oneness between ourselves and our Lord."

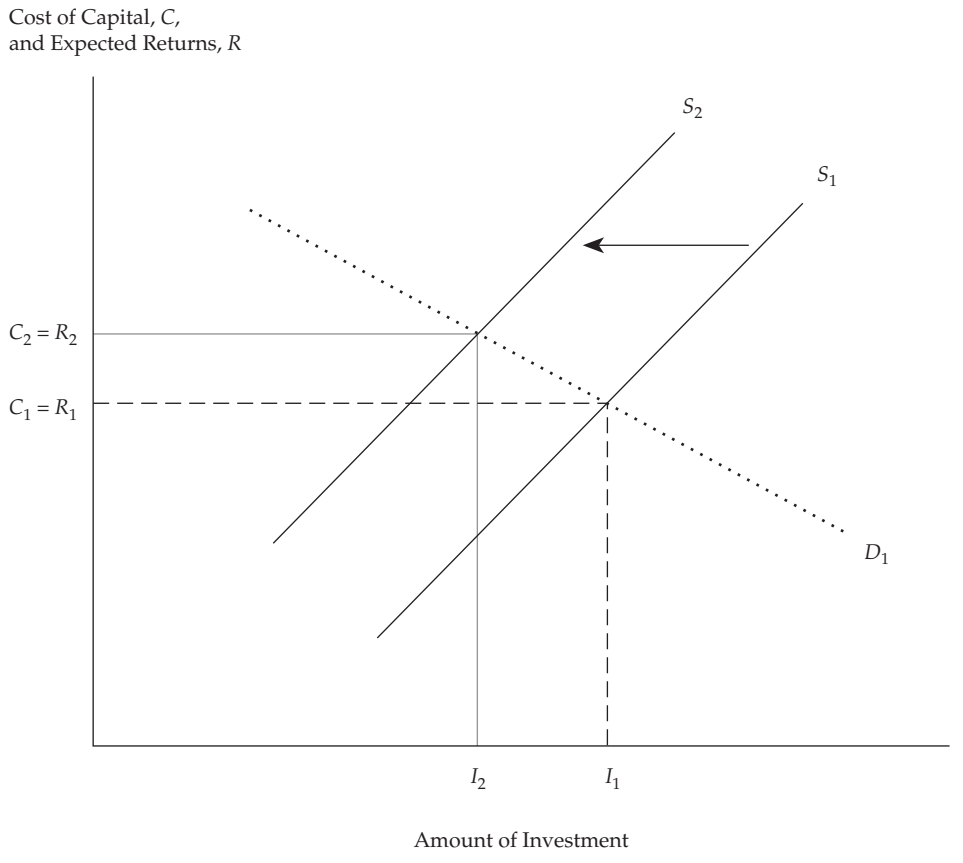
Other investors want to change the world. Socially responsible investors who fight to change the world can use investment actions or political actions in their battle. Investment actions are swords in the social responsibility battle when by themselves they force companies to change their activities. Investment actions are banners in the battle when they rally people who use political actions as swords. Political actions include laws, regulations, taxes, and consumer boycotts.

Investment actions act as swords by withdrawing capital from socially irresponsible companies—tobacco companies, for example. Tobacco companies evaluate investment projects ranging from the introduction of cigarette brands to the construction of manufacturing facilities. Their demand for capital depends on the profitability of investment projects and on the cost of capital. When socially responsible investors sell or refrain from buying the shares of a tobacco company, they shift the company's capital supply function in **Figure 2** from S_1 to S_2. A withdrawal of capital raises the cost of capital; now, a manufacturing project, for example, may be abandoned because it is no longer profitable.[5] The supply function of capital slopes upward if higher expected returns induce investors to increase the supply of capital.

What to the company is a cost of capital is to the investors who supply the capital the expected return. The downward shift of the supply function increases the cost of capital to the company, C, and the expected return to its remaining shareholders, R, shifts from $C_1 = R_1$ to $C_2 = R_2$ unless the company's demand function for capital, D_1, is perfectly horizontal (that is, perfectly elastic). If the company's cost of capital increases, it invests less; the increase in the cost of capital leads the company to reduce its capital investment from I_1 to I_2.

Socially responsible investors can raise the cost of capital of tobacco companies only in the absence of numerous conventional investors who stand ready to provide substitute capital at the same cost. In other words, socially responsible investors can raise the cost of capital of tobacco companies only if the capital supply function is less than perfectly

Figure 2. Effect of Investment Action



elastic. There is evidence that the capital supply function is indeed less than perfectly elastic.[6] But the capital supply function, if not perfectly elastic, is probably *very* elastic. Teoh, Welch, and Wazzan (1999) found that the boycott of stocks of companies doing business in South Africa during the apartheid era had no detectable effect on their returns.

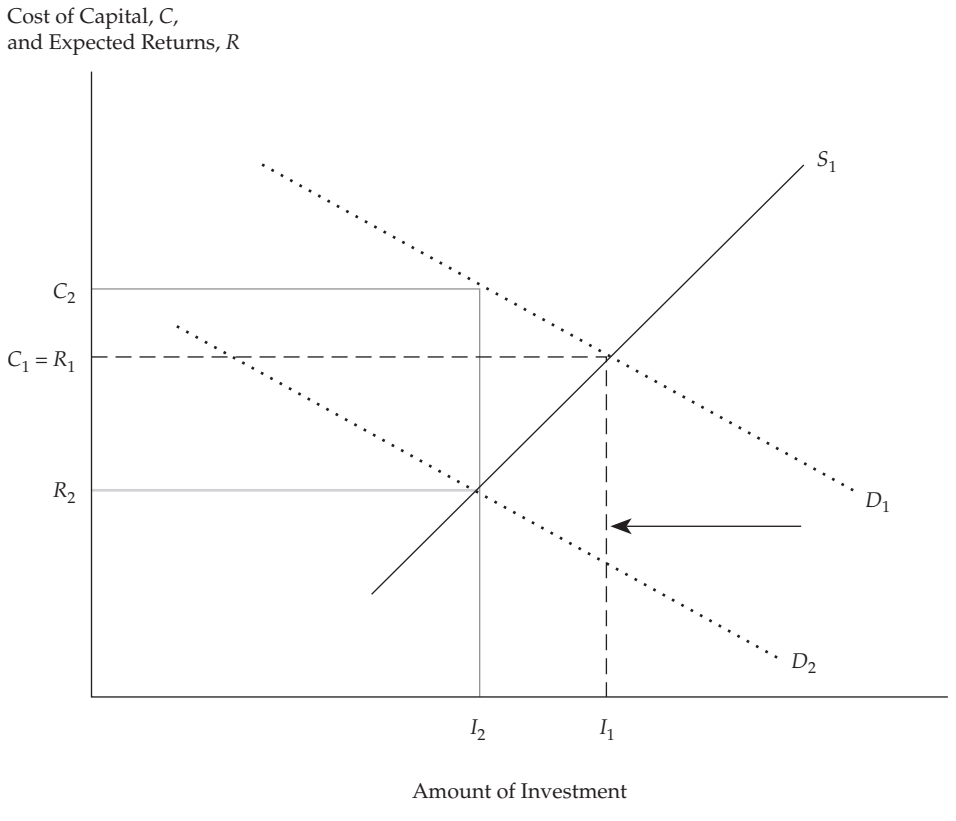
Kinder and Domini (1997), prominent members of the socially responsible investing (SRI) movement, do not consider the effects of investment actions on the cost of capital to be effective swords in the battle for social responsibility. They wrote:

> No one involved in SRI would argue that it has as its objective increasing a company's cost of capital. Even if this objective were attainable, few social investors would consider it as effective as the political action or lobbying that screening entails. Social screening and SRI generally reach an audience far beyond capital markets. (p. 14)

In Kinder and Domini's terminology, investment actions serve only as banners; political actions are the swords. Consider again the tobacco industry. Calls for divestment of tobacco stocks have served as prominent banners; for example, the Episcopal Church, the Interfaith Center on Corporate Responsibility, the American Medical Association, and many others have urged investors, especially the health industry, to divest themselves of tobacco stocks. "For a health-care company like Columbia/HCA, owning tobacco equities while treating the victims of tobacco is simply immoral," said Harry Van Buren, a representative of the Episcopal Church at a Columbia/HCA stockholder meeting (Seipel 1997). Such banners have rallied the faithful to successful political actions. The political actions of tobacco foes resulted in taxes and settlements in the many billions.

Taxes and settlements diminish the number of investment projects that tobacco companies undertake. The reduction of investment is depicted in **Figure 3**. When the government imposes taxes or settlement payments on a tobacco company, it shifts the company's demand for capital from D_1 to D_2. The company's cost of capital increases from C_1 to C_2 while the expected return to the shareholders decreases from R_1 to R_2. (The difference between C_2 and R_2 reflects a drain from the company in the form of taxes or settlement payments.) The increase in the cost of capital leads the company to reduce its capital investment from I_1 to I_2.

Figure 3. Effect of Political Action



Both political actions and investment actions can reduce the number of investment projects undertaken by tobacco companies. A downward shift in the supply of capital to tobacco companies through investment actions reduces the number of investment projects they can undertake, but it also increases the expected returns for conventional investors who remain loyal to tobacco stocks. A downward shift in the demand for capital through political actions, however, reduces the number of investment projects tobacco companies can undertake without increasing the expected returns for conventional investors. The extra returns go to the government instead.

Conclusions

"Socially responsible investing can be a tool for dialogue between corporations and society," said Amy Domini in an interview (Burton 1998b). She continued:

> It's more than investing in companies you like. It's about corporations behaving in a way that will benefit today's and future shareholders. (p. 48)

Clark (1998), the editor of the *Dow Jones Investment Advisor*, did not like Domini's statement. He responded under the heading "Anti-Social Investing":

> [D]o we really want people pooling their investing power for the avowed purpose of achieving some specific end, other than making more money?

From the findings presented here, the conclusion is that pooling investing power for something other than making money is no worse at making money than pooling it for money alone. I found that the Domini Social Index, a socially responsible version of the S&P 500, performed better than the S&P 500. The raw returns of the DSI were higher than those of the S&P 500 during the 1990–98 period and so were their risk-adjusted returns. The difference, however, was not statistically significant.

Socially responsible investors want to do well, not merely do good; they want socially responsible mutual funds with returns that do not fall short of conventional funds. I found that socially responsible investors get their wish. The socially responsible mutual funds in this study performed better than conventional funds of equal asset size, although the difference was not statistically significant. On average, however, both the socially responsible and conventional funds trailed the S&P 500 by wide margins—5.02 pps a year for the socially responsible funds and 7.45 pps for the conventional funds when risk was measured by beta, 6.73 pps for the socially responsible funds and 7.79 pps for the conventional funds when risk was measured by standard deviation.

Inflows of cash into socially responsible portfolios might decrease the funds' expected returns. If so, socially responsible investors would receive pleasant surprises in addition to ample warning of impending decreases in expected returns; the first step to lower expected returns for socially responsible portfolios would be higher realized returns brought about by high cash inflows.

The socially responsible investment movement is galling to some investment professionals because it mixes the utilitarian features of money with the value-expressive features of social responsibility. The resistance to incorporating value-expressive features in investing is odd given that most products, from automobiles to wine, share utilitarian and value-expressive features. Anyone who has ever bought a car or a bottle of wine knows that cars are more than utilitarian transportation and wines are more than utilitarian beverages.

Acceptance of the importance of the value-expressive features of socially responsible mutual funds would provide more than a better framework for fund analysis; it would open the door to insights about the value-expressive features of all investments, from municipal bonds to hedge funds and Internet stocks. Acceptance of the importance of the value-expressive features of investments would also take us along the road to a future "behavioral asset pricing model," which has been described by Statman (1999), in which both utilitarian and value-expressive features determine the demand for investments and expected returns. Sharpe, in an interview with Burton (1998a), described an "extended" capital asset pricing model in which expected returns would be determined by beta, taxes, liquidity, dividend yield, and other features that investors care about. Investors care about social responsibility and other value-expressive features, so a future behavioral asset pricing model would build on Sharpe's extended CAPM by including value-expressive features together with utilitarian features as determinants of investment demand and expected returns.

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Notes

1. The DSI is less diversified than the S&P 500, in part because it contains only 400 stocks, but little of the low eSDAR of the DSI resulted from the smaller number of stocks. On average, the standard deviation of a 500-stock portfolio is 99.86 percent of the standard deviation of a 400-stock portfolio (see Elton and Gruber 1984, p.35, and Statman 1987, Table 1). Thus, a 500-stock DSI would have had a standard deviation of 14.17 percent rather than its actual 14.19 percent. Adjustment would have left the eSDAR estimate virtually unchanged.
2. Some funds were established after May 1990, and Morningstar's data reflect the later date.
3. Personal correspondence of September 8, 1999.
4. The case for underperformance of socially responsible funds is stronger than revealed in the statistical significance of the alphas of individual funds. Bayesian analysis of performance takes into account the mean alpha of all socially responsible funds, and that mean was negative.
5. A lower stock price makes future equity offerings more expensive. It also increases the cost of borrowing.
6. For example, Goetzmann and Massa (1999) found that flows of funds into S&P 500 stocks were associated with long-term increases in their returns, and Bagwell (1992) found that companies face upward-sloping supply curves when they repurchase shares in Dutch auctions.

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