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Typical socially responsible investors tilt their portfolios toward stocks of companies with high scores on social responsibility characteristics and shun stocks of companies associated with tobacco, alcohol, gambling, firearms, and military or nuclear operations. Analyzing 1992–2007 returns of stocks rated on social responsibility, this study found that this tilt gave such investors an advantage over conventional investors. The study also found that shunning resulted in a disadvantage for such investors relative to conventional investors. The advantage from tilting toward stocks of companies with high social responsibility scores is largely offset by the disadvantage from the exclusion of stocks of shunned companies. Socially responsible investors can thus do both well and good by adopting the best-in-class method in constructing their portfolios: tilting toward stocks of companies with high scores on social responsibility characteristics but refraining from shunning stocks of any company.

Socially responsible investments have attracted much money, many investors, and a great deal of research, including studies of socially responsible mutual funds, socially responsible indices, “sin” stocks, stocks with good and bad environmental records, and stocks with good and bad employee relations. But some parts of our knowledge are inconsistent with other parts, and some gaps in our knowledge remain. The goal of this study is to close the gap of knowledge about returns associated with such social responsibility characteristics as diversity and employee relations, as well as returns associated with such products as tobacco and firearms that are shunned by socially responsible investors.

The Social Investment Forum (2006)—a national not-for-profit organization that promotes the concept, practice, and growth of socially responsible investing—describes socially responsible investing as “an investment process that considers the social and environmental consequences of investments, both positive and negative, within the context of rigorous financial analysis” (p. 2).

Accounting for 68 percent of the money in socially responsible mutual funds in 2005, screening

is the most prevalent form of socially responsible investing, followed by shareholder advocacy and community investing. Negative screening excludes or reduces the portfolio weights of companies with weak environmental, social, or governance records, and positive screening includes or increases the portfolio weights of companies with strong records.

In 2005, negative screens that exclude tobacco companies were the most popular screens among socially responsible mutual funds, followed by screens that exclude companies associated with alcohol, gambling, and weapons. Negative and positive screens regarding community relations were next in popularity, followed by screens concerning the environment, labor relations, products and services, and equal employment.

Studies of the performance of mutual funds by Hamilton, Jo, and Statman (1993); Goldreyer and Diltz (1999); Statman (2000); and Bauer, Koedijk, and Otten (2005) showed no statistically significant difference between the returns of socially responsible mutual funds and those of conventional funds. Although these studies are useful, they teach us little about the relative returns of stocks of socially responsible companies because managerial skills and expenses create gaps between the returns of stocks and the returns of mutual funds that contain those stocks—and the gaps vary from fund to fund. We can learn more about the relationship between the returns of stocks of socially responsible companies and the returns of stocks of conventional companies by comparing indices of both kinds of stocks because such comparisons are not confounded by skills and expenses.

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Statman (2006) compared the returns of socially responsible indices and found no statistically significant differences between their returns and the returns of the S&P 500 Index, which consists of conventional companies. Although comparisons of the returns of indices are free of the confounding effects of managerial skills and expenses that plague comparisons of the returns of mutual funds, such comparisons do not provide a clear picture of differences between the returns of socially responsible stocks and those of conventional stocks, because much overlap exists between the lists of stocks in socially responsible indices and the lists of stocks in conventional indices. For example, differences between the returns of the Domini 400 Social Index (DS 400) and those of the S&P 500 likely understate the differences between the returns of socially responsible stocks and those of conventional stocks because the two indices share approximately 250 companies.

Moreover, social responsibility criteria and their relative weights vary among indices. The Calvert Social Index assigns relatively high weight to corporate governance, whereas the DS 400 assigns relatively high weight to the environment. The DS 400 excludes companies with any interests in nuclear power plants, whereas the Calvert Social Index excludes such companies only if their interests are substantial. And although the DS 400, Calvert Social Index, and Citizens Index exclude all tobacco companies, the Dow Jones Sustainability Index (DJSI) does not. The DJSI applies best-in-class rules in the selection of companies from all industries, including the tobacco, gambling, and alcohol industries.

Hypotheses about Stock Returns

Three alternative hypotheses address the relative returns of the stocks of both socially responsible companies and conventional companies.

“Doing Good but Not Well.” The first one is the “doing good but not well” hypothesis, whereby the expected returns of socially responsible stocks are lower than the expected returns of conventional stocks. This hypothesis might be true if the benefits of company actions that tilt it toward social responsibility fall short of the costs and the average investor knows that. For instance, Abowd (1989) found that increases in employee pay raise the costs borne by a company without increasing the benefits to shareholders; thus, employee gains come at the expense of shareholder returns. Jensen and Meckling (1976) and Bertrand and Mullainathan (2003) argued that managers might prefer to submit to

employee demands for higher pay because higher pay fosters a more pleasant working environment for the managers, even though the money comes from the pockets of shareholders, who gain nothing from the pay increase. Barnea and Rubin (2006) suggested that company insiders, such as managers, are willing to engage in socially responsible actions whose costs exceed the benefits to shareholders because they reap private benefits, such as awards and other expressions of appreciation, from those promoting social responsibility. The excess of costs over benefits is reflected in low returns to shareholders. Barnea and Rubin found empirical support for their argument in evidence that insiders in companies that rank high on social responsibility hold relatively small portions of their company’s shares and thus bear relatively little of the cost of the accolades they receive for their socially responsible actions.

In Barnea and Rubin’s scenario, ordinary shareholders are shortchanged by their companies’ socially responsible actions. But shareholders might not be shortchanged. Instead, socially responsible investors might be willing to sacrifice returns for social responsibility. Consider stocks of so-called sin companies that are associated with alcohol, tobacco, and gambling. The activities of such companies violate social norms, and some socially responsible investors avoid such stocks even if they yield higher returns than stocks in other industries. Indeed, Heinkel, Kraus, and Zechner (2001) developed an equilibrium model in which socially responsible investors refrain from investing in stocks of sin companies, thereby keeping the prices of sin companies’ stocks low and driving their expected returns higher. Consistent with the Heinkel et al. model, Hong and Kacperczyk (forthcoming) found that the realized returns of sin stocks were higher than the returns of other stocks.

“Doing Good While Doing Well.” The second hypothesis is the “doing good while doing well” hypothesis, whereby the expected returns of socially responsible stocks are higher than those of conventional stocks. This outcome is possible if managers and investors consistently underestimate the benefits of being socially responsible or overestimate its costs. Edmans (2008) noted that managers might act as if they underestimate the value of intangible capital, such as employee satisfaction, because its cost is immediately obvious in reductions in current earnings whereas its benefits are less obvious and lie in the future. This finding is consistent with the finding of Lev, Sarath, and Sougiannis (2005) that investors focus on reported

profitability measures and underestimate the benefits of R&D expenditures, which are expensed immediately but enhance measured profitability only years later. Managerial myopia has been documented by Mas (2008), who found that labor unrest at Caterpillar reduced product quality, and it has been formalized in models by Narayanan (1985) and Stein (1988, 1989) and in a survey by Graham, Harvey, and Rajgopal (2005). Edmans (2008) found evidence consistent with managerial myopia and the “doing good while doing well” hypothesis in a study that showed that stocks of companies with highly satisfied employees earned higher returns than other stocks. Derwall, Gunster, Bauer, and Koedijk (2005) also found evidence consistent with managerial myopia and the “doing good while doing well” hypothesis in a study that showed that stocks of companies with good environmental records earned higher returns than other stocks. Kempf and Osthoff (2007) found that stocks of companies that ranked high overall on community, diversity, employee relations, environment, human rights, and products did better than stocks that ranked low on those measures.

“No Effect.” The third hypothesis is the “no effect” hypothesis, whereby the expected returns of socially responsible stocks are equal to the expected returns of conventional stocks. The “no effect” hypothesis might be true if company actions that tilt a company toward social responsibility are costless, such as when actions amount to no more than words. The “no effect” hypothesis might also be true if costly company actions, such as better employee relations, increase benefits by as much as they increase costs in such a way that company profitability is not affected. This outcome can happen, for instance, when the extra costs of higher employee pay are equal to the extra productivity of more-satisfied employees. The “no effect” hypothesis might be true even if the increase in costs exceeds the increase in benefits so long as investors, on average, continue to overestimate the benefits of socially responsible actions or underestimate their costs. Such overestimation of benefits or underestimation of costs might arise from “rosy scenarios” in the minds of socially responsible investors who are overly optimistic about the positive effects of employee satisfaction on productivity. The “no effect” hypothesis might also be true if aspects of social responsibility that are consistent with the “doing good while doing well” hypothesis are counterbalanced by other aspects that are consistent with the “doing good but not well” hypothesis.

Data

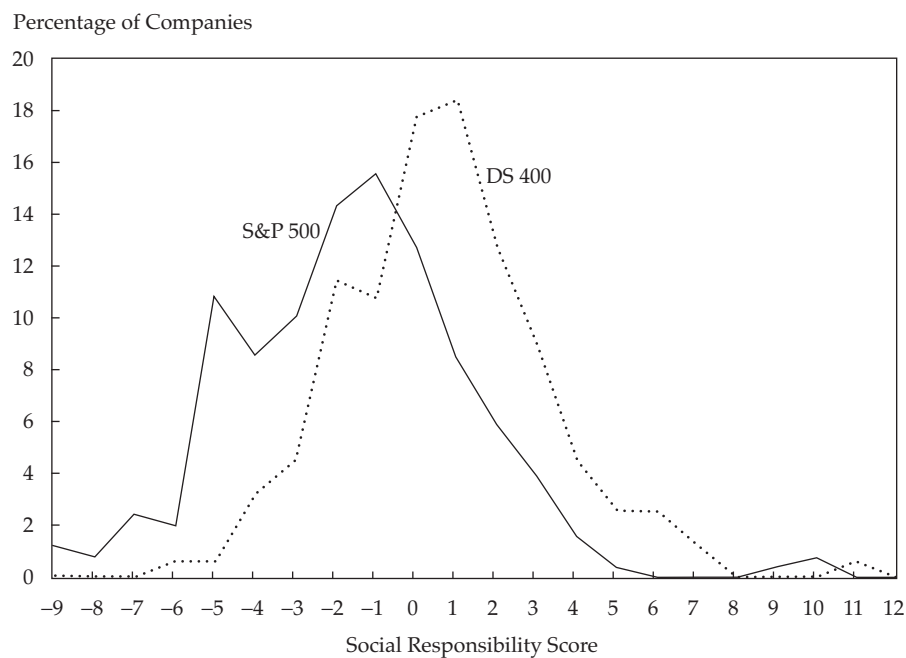
KLD Research & Analytics (KLD), a company that produces social investment research, rates companies on strengths and concerns in the following list of characteristics (for details of indicators of community strengths and concerns, see Appendix A):

- Corporate governance (e.g., limited compensation to executives and members of the board, lack of tax disputes)
- Community (e.g., generous giving, support for housing)
- Diversity (e.g., promotion of women and minorities, outstanding family benefits)
- Employee relations (e.g., strong union relations, cash profit sharing)
- Environment (e.g., pollution prevention, recycling)
- Human rights (e.g., labor rights in outsourcing, no operations in Myanmar)
- Products (e.g., product quality and safety, provision of products for the economically disadvantaged)

KLD analyzes information relevant to each indicator of strength and concern in the list of characteristics. It assigns a score of 1 when a company demonstrates strength on an indicator (e.g., charitable giving) and 0 if it does not. Similarly, it assigns a score of 1 when a company’s record raises a concern on an indicator (e.g., investment controversies) and 0 otherwise. The score of a company on a given characteristic is the difference between the number of its strength indicators and the number of its concern indicators.¹

In general, the scores of socially responsible companies in the DS 400 are higher than those of conventional companies in the S&P 500. At the end of 2006, scores ranged from a low of –9 for Wal-Mart Stores, which is included in the S&P 500 but excluded from the DS 400, to a high of 12 for the Hewlett-Packard Company, which is included in both indices. The mean score of the DS 400 companies was 0.65, compared with the –1.55 mean score of the S&P 500 companies.

Investors are likely to continue to debate which characteristics make a company socially responsible, but the distribution of the KLD scores of both the S&P 500 and the DS 400 companies, presented in **Figure 1**, highlights the observation that companies are arrayed in a range: No company is perfectly socially responsible or irresponsible. Moreover, companies with the same overall KLD score differ in their characteristics scores. For example, **Table 1** shows that Sunoco, a company with a low overall score, scored higher on human rights than did Hewlett-Packard, a company with

Figure 1. Distribution of Social Responsibility Scores of Companies in the DS 400 and S&P 500, 31 December 2006

a high overall score. Similarly, Green Mountain Coffee Roasters, a company with an overall score almost identical to that of Hewlett-Packard, outpaced Hewlett-Packard on corporate governance and human rights but lagged it on employee relations, community, and diversity.

KLD's database begins in 1991 and contains companies' end-of-year scores. The 1991 database comprises approximately 650 companies, which compose the DS 400 and the S&P 500. In 2001, KLD expanded its coverage to include all companies in

the Russell 1000 Index; in 2003, KLD further expanded its coverage to include all the companies in the Russell 3000 Index. Our sample includes scores between 1991 and 2006.

In the KLD database, the primary identifying information for a company is its historical ticker and CUSIP.² When ticker information was unavailable, we used historical CUSIP. When a company had several stocks, we selected the one with the largest market capitalization. For each company each year, we calculated the company's score in each of the

Table 1. Social Characteristic Scores of Companies in the S&P 500 and DS 400 with High and Low Overall Scores, 31 December 2006

	Wal-Mart	Anadarko Petroleum Corp.	Goodyear Tire & Rubber Co.	Sunoco	Hewlett- Packard	IBM	Green Mountain Coffee Roasters	Xerox Corp.
Social Characteristic	S&P 500	S&P 500; DS 400	S&P 500	S&P 500; DS 400	S&P 500; DS 400	S&P 500	DS 400	S&P 500; DS 400
Community	-1	-1	-1	-1	4	3	3	1
Corporate governance	-2	-1	-1	0	-2	-2	1	0
Diversity	2	0	-1	0	6	6	3	6
Employee relations	-3	-1	-2	-1	4	2	2	-2
Environment	-1	-2	-1	-4	1	1	2	3
Human rights	-1	-1	0	0	-1	-1	0	0
Products	-3	-1	-1	0	0	1	0	1
Overall score	-9	-7	-7	-6	12	10	11	9

Source: Scores are from KLD Research & Analytics.

seven characteristics of social responsibility (community, diversity, employee relations, environment, products, human rights, and governance) as the difference between the number of strength indicators and the number of concern indicators.

Table 2 provides a summary of the KLD data as of the end of 2006. KLD's dataset includes 2,955 companies. Among them are 220 with a positive community score, which implies that the number of community strength indicators exceeds the number of community concern indicators. Similarly, 184 companies have a negative community score. Among all the companies are 2,519 that have zero strength indicators and zero concern indicators; we refer to these companies as "no-indicators-zero" companies. In addition, 32 companies have an equal number, other than zero, of strength and concern indicators; we refer to these companies as "canceling-indicators-zero" companies.

The number of strength and concern indicators varies by characteristic. For example, the diversity characteristic has seven strength indicators but only two concern indicators, whereas the environment characteristic has five concern indicators but only three strength indicators. Consequently, the mean diversity score (0.28) is higher than the mean environment score (−0.81).

Among the 2,955 companies are 198 companies "shunned" because of an association with tobacco, alcohol, gambling, firearms, military, or nuclear operations. This group includes some companies that are members of the S&P 500 but not the DS 400. Anheuser-Busch Companies is faulted for its association with alcohol and gambling, General Electric Company is faulted for its

association with military and nuclear operations, and Altria Group is faulted for its association with tobacco and alcohol. Some companies, however, are in the DS 400 despite associations with shunned operations. This group includes the Coca-Cola Company and Starbucks Corporation, which are faulted for their association with alcohol, and Harley-Davidson, which is faulted for its association with gambling.

Our classification of shunned companies is broader than the classification of sin companies by Hong and Kacperczyk (forthcoming), and our classification methodology is different from theirs. Hong and Kacperczyk focused on the "triumvirate of sin" (alcohol, tobacco, and gaming companies), although they checked for robustness by including firearms manufacturers. They excluded the broader category of defense companies, however, because whether many U.S. citizens consider defense a sin industry is unclear. Moreover, Hong and Kacperczyk followed the Fama and French (1997) classification, but we followed KLD in our classification of shunned companies and included not only companies associated with defense or military operations but also companies associated with nuclear operations. In our study, shunned companies are those that KLD classifies as associated with at least one of the following: tobacco, alcohol, gambling, firearms, military, or nuclear operations.

Performance Benchmarks

Measures of performance vary by performance benchmark. For example, a positive alpha for

Table 2. Classification of Companies by KLD Data, 20 December 2006

KLD Characteristic	Number of Companies				Strength and Concern		Mean Score of Companies ^e
	Net Negative ^a	Net Positive ^b	Canceling Indicators Zero ^c	No Indicators Zero ^d	No. of Strength Indicators	No. of Concern Indicators	
Community	184	220	32	2,519	5	3	0.29
Diversity	1,046	967	98	844	7	2	0.28
Employee relations	1,024	299	156	1,476	4	4	−0.57
Environment	333	97	33	2,492	3	5	−0.81
Products	451	76	22	2,406	3	4	−0.96
Shunned ^f		198					
Accepted ^g		2,757					

^aCompanies with more concern than strength indicators.

^bCompanies with more strength than concern indicators.

^cCompanies with an equal number, other than zero, of strength and concern indicators.

^dCompanies with zero strength indicators and zero concern indicators.

^eThe mean score excludes companies with "no indicators zero."

^fCompanies with one or more indicators of association with tobacco, alcohol, gambling, firearms, military, or nuclear operations.

^gCompanies with no indicators of association with tobacco, alcohol, gambling, firearms, military, or nuclear operations.

small-cap stocks or stocks of companies rated high on environmental responsibility might indicate superior performance or a flawed performance benchmark. We considered three performance benchmarks: the capital asset pricing model (CAPM), in which the “market factor” is the only factor and risk is measured by beta; the three-factor benchmark of Fama and French (1992), which adds the “small minus large” market capitalization and “value minus growth” factors to the market factor; and the four-factor benchmark of Carhart (1997), which adds “momentum” as the fourth factor. Although industry classification might affect measures of performance beyond the effect of the four factors, we controlled for it in our best-in-class methodology.

Although the three- and four-factor benchmarks have become the standard by which performance is measured, their rationale is the subject of debate. Fama and French (1992) argued that stocks of small value companies have higher objective risk than stocks of large growth companies, but much of the evidence is inconsistent with their argument. For example, Lakonishok, Shleifer, and Vishny (1994) found that value stocks outperformed growth stocks in three of the four recessions that occurred during the 1963–90 period, a finding that is inconsistent with the view that value stocks are riskier than growth stocks. Similarly, Skinner and Sloan (2002) found that the relatively high returns of value stocks result not from their higher risk but, rather, from large declines in the prices of growth stocks in response to negative earnings surprises.

Statman, Fisher, and Anginer (2008) argued that although the three- and four-factor benchmarks are indeed useful performance benchmarks, the factors of small minus large, value minus growth, and momentum proxy for “affect.” Affect is the feeling of “goodness” or “badness” that occurs rapidly and automatically, often without consciousness, and the affect heuristic has been described by Slovic, Finucane, Peters, and MacGregor (2002). Statman et al. used the Fortune surveys of company reputation to classify companies into an “admired” group of companies with high reputation and positive affect and another group of companies with low reputation and negative affect. Finding that companies with a negative affect tend to be small value companies with low momentum, Statman et al. argued that the negative affect of small value companies with low momentum is associated with high subjective risk of stocks, and that subjective risk augments the objective risk measured by beta. Like objective risk, subjective risk is compensated by higher expected returns.

Performance of Socially Responsible Portfolios

We formed year-end portfolios on the basis of KLD scores. For each year, we excluded from our analysis the group of companies that had no indicators of strength and no indicators of concern during the year because that group likely included companies that KLD had not examined even if they were on its list. By the nature of industries, companies in some industries have lower scores, on average, than companies in other industries. For example, in 2006, the mean environmental score of companies in the relatively “dirty” oil industry was -2.01 , whereas the mean environmental score of the relatively “clean” retail industry was 0.21 .³ Therefore, we classified companies by best-in-class industry-adjusted scores. We calculated each company’s best-in-class score in each characteristic for each year as the difference between its score and the mean score of all companies in its industry that year. Our methodology is different from that of Kempf and Osthoff (2007), who included companies with no indicators of strength and no indicators of concern. Companies with no indicators of strength or concern constitute the majority of companies. Rankings that include such companies are likely to place some of them in the high group and some in the low group, depending on the mean scores of their industries. But such placements are devoid of substance.

We examined whether stocks of companies with high best-in-class scores outperformed stocks of companies with low best-in-class scores in each characteristic. For example, we ranked all companies by their best-in-class environment scores as of the end of 1991. Next, we divided the companies into three groups of approximately the same number of companies. For each month of 1992, we calculated the returns of an equally weighted portfolio that was long the stocks of the companies in the top-third group by the environment characteristic and short the stocks of the companies in the bottom-third group. We refer to this portfolio as the “top-bottom” environment portfolio. We reconstituted that portfolio at the end of each subsequent year and recorded its returns in the months of the following year. Our returns data extend through the end of September 2007.

We present excess returns by each of three performance benchmarks: the CAPM benchmark and the three- and four-factor benchmarks. We also present information about statistical significance by particular p -values rather than classify statistical significance into the usual p -value groups of 0.01, 0.05, and 0.10. P -values are the probabilities that we would conclude that excess returns depart from

zero when, in truth, they equal zero. In their textbook *Introductory Statistics for Business and Economics*, Wonnacott and Wonnacott (1990) wrote:

Applied statisticians increasingly prefer p -values to classical testing because classical tests involve setting α arbitrarily (usually at 5 percent). Rather than introduce such an arbitrary element, it is often preferable just to quote the p -value, leaving readers to pass their own judgment on [the hypothesis]. (p. 302)

In general, we found that stocks of companies with high social responsibility scores yielded higher returns than stocks of companies with low scores. We present these results in **Table 3**. The excess returns of equally weighted top-bottom portfolios by the three- and four-factor benchmarks are positive and statistically significant at the common 0.01, 0.05, and 0.10 p -values for the community, employee relations, and environment characteristics but not for the diversity and products characteristics. The excess returns for the human rights and governance characteristics are negative, but their p -values are much higher than common statistically significant p -values.

Evidence on the relationship between corporate governance and stock returns is conflicting. Consistent with the “doing good while doing well” hypothesis, Gompers, Ishii, and Metrick (2003) found that strong governance brings high stock returns; consistent with the “no effect” hypothesis, however, Core, Guay, and Rusticus (2006) found no such relationship. Core et al. attributed the findings of Gompers et al. to the particular period they studied and to a correlation between their measure of governance and other factors, such as risk. Consistent with Core et al. and the “no effect” hypothesis, we found no statistically significant relationship between governance and stock returns. We also found no statistically significant relationship between the KLD measure of governance and that of Gompers et al.

P -values of excess returns by the CAPM benchmark are considerably higher than common statistically significant p -values for all characteristics other than employee relations, where the p -value is 0.04. The CAPM does not account for the effects of small minus large, value minus growth, and momentum tilts, and these tilts explain differences in the inferences from the three- and four-factor benchmarks and from the CAPM benchmark. Companies that rank high on community, employee relations, environment, and products tend to be growth companies, whereas those that rank high on diversity, human rights, and governance tend to be value companies. Companies that rank high on community, employee relations, and

diversity tend to be relatively large, whereas those that rank high on environment, products, human rights, and governance tend to be small. Companies that rank high on all social responsibility characteristics tend to tilt toward high momentum, but such tilts are far from statistically significant.

The generally higher returns of stocks of companies with high social responsibility scores are especially evident in a long-short portfolio of top-overall and bottom-overall companies (**Table 4**). We defined a top-overall company as one in the top third of companies by two or more social responsibility characteristics and not in the bottom third by any characteristic. Similarly, we defined a bottom-overall company as one in the bottom third of companies by two or more social responsibility characteristics and not in the top third by any characteristic. We excluded governance because it was added to the KLD list only in 2002.

The annualized excess return of the “top-overall minus bottom-overall” portfolio is 6.12 percent, with a 0.00 p -value, by the three-factor benchmark; 5.54 percent, with a 0.00 p -value, by the four-factor benchmark; and 3.18 percent, with a 0.08 p -value, by the CAPM benchmark. The portfolio is tilted toward growth stocks and stocks with high momentum. The sign of the coefficient of the value minus growth factor in the four-factor benchmark is negative, with a 0.00 p -value; the sign of the coefficient of the momentum factor is positive, with a 0.11 p -value. But no significant tilt exists toward large- or small-cap stocks. The coefficient of the small minus large factor is negative, but its p -value is 0.65.

Hong and Kacperczyk (forthcoming) found that stocks of companies in sin industries (e.g., tobacco, alcohol, and gambling) had higher returns than stocks of companies in other industries over the 1980–2003 period. Specifically, they found that an equally weighted long-short portfolio of sin company stocks and other company stocks had positive and statistically significant returns. Many socially responsible investors shun stocks of companies associated with alcohol, tobacco, and gambling, but many also shun stocks of companies associated with firearms and military or nuclear operations. We refer to companies in these six groups as “shunned” companies and to companies outside these groups as “accepted” companies. We found results similar to those of Hong and Kacperczyk. We constructed a long-short portfolio of stocks of accepted and shunned companies as of the end of 1991, reconstituted it at the end of each subsequent year, and recorded its monthly returns through the end of September 2007. Our results are reported in Table

Table 3. The Performance of Equally Weighted Top-Bottom Portfolios by Social Responsibility Characteristic, January 1992–September 2007

Performance Benchmark	Annualized Excess Returns	Market Factor	Small–Large Factor	Value–Growth Factor	Momentum Factor	Adjusted R^2
<i>Community</i>						
CAPM	1.43% (0.38)	–0.04 (0.30)				0.00
3-Factor	4.26% (0.01)	–0.15 (0.00)	–0.09 (0.02)	–0.29 (0.00)		0.18
4-Factor	3.96% (0.02)	–0.15 (0.00)	–0.10 (0.01)	–0.29 (0.00)	0.02 (0.40)	0.18
<i>Employee relations</i>						
CAPM	3.00% (0.04)	–0.06 (0.16)				0.14
3-Factor	4.43% (0.00)	–0.12 (0.00)	–0.02 (0.60)	–0.15 (0.01)		0.07
4-Factor	3.73% (0.02)	–0.10 (0.00)	–0.03 (0.00)	–0.14 (0.01)	0.06 (0.14)	0.09
<i>Diversity</i>						
CAPM	–0.05% (0.98)	–0.03 (0.30)				0.00
3-Factor	1.00% (0.51)	–0.03 (0.39)	–0.22 (0.00)	0.09 (0.09)		0.17
4-Factor	0.34% (0.84)	0.01 (0.74)	–0.23 (0.00)	0.08 (0.00)	0.05 (0.25)	0.19
<i>Environment</i>						
CAPM	0.42% (0.81)	0.002 (0.97)				–0.01
3-Factor	2.69% (0.06)	–0.14 (0.00)	0.14 (0.00)	–0.25 (0.00)		0.31
4-Factor	2.47% (0.11)	–0.13 (0.00)	0.14 (0.00)	–0.25 (0.00)	0.02 (0.64)	0.31
<i>Products</i>						
CAPM	–0.35% (0.86)	0.09 (0.06)				0.02
3-Factor	2.05% (0.17)	–0.06 (0.13)	0.17 (0.00)	–0.27 (0.00)		0.36
4-Factor	2.02% (0.18)	–0.06 (0.13)	0.17 (0.00)	–0.27 (0.00)	0.00 (0.90)	0.36
<i>Human rights</i>						
CAPM	–1.50% (0.69)	0.01 (0.89)				–0.010
3-Factor	–2.99% (0.40)	0.04 (0.69)	0.25 (0.01)	0.16 (0.21)		0.04
4-Factor	–2.57% (0.51)	0.02 (0.81)	0.26 (0.01)	0.16 (0.23)	–0.03 (0.73)	0.04
<i>Governance</i>						
CAPM	–0.76% (0.77)	–0.12 (0.08)				0.04
3-Factor	–2.00% (0.48)	–0.17 (0.03)	0.29 (0.00)	0.06 (0.62)		0.20
4-Factor	–2.65% (0.34)	–0.09 (0.25)	0.26 (0.00)	0.02 (0.90)	0.12 (0.90)	0.24

Notes: Portfolios are long the stocks of companies in the top third by characteristic and short the stocks of companies in the bottom third. KLD added the governance characteristic in 2002. The p -values of statistical significance are in parentheses.

Table 4. The Performance of Equally Weighted Portfolios by Top-Overall minus Bottom-Overall, Accepted minus Shunned, and DS 400 minus S&P 500, January 1992–September 2007

Performance Benchmark	Annualized Excess Returns	Market Factor	Small–Large Factor	Value–Growth Factor	Momentum Factor	Adjusted R^2
<i>Top-overall minus bottom-overall</i>						
CAPM	3.18% (0.08)	–0.01 (0.84)				–0.01
3-Factor	6.12% (0.00)	–0.14 (0.00)	–0.02 (0.78)	–0.31 (0.00)		0.19
4-Factor	5.54% (0.00)	–0.13 (0.00)	–0.03 (0.65)	–0.30 (0.00)	0.05 (0.11)	0.19
<i>Accepted minus shunned</i>						
CAPM	–3.34% (0.02)	0.1583 (0.00)				0.13
3-Factor	–2.62% (0.07)	0.1090 (0.01)	0.07 (0.15)	–0.08 (0.07)		0.19
4-Factor	–2.27% (0.13)	0.0996 (0.02)	0.07 (0.13)	–0.09 (0.06)	–0.03 (0.45)	0.19
<i>DS 400 minus S&P 500</i>						
CAPM	0.48% (0.52)	0.0370 (0.01)				0.02
3-Factor	1.32% (0.11)	–0.0002 (0.99)	0.00 (0.97)	–0.09 (0.00)		0.09
4-Factor	1.20% (0.15)	0.0030 (0.87)	0.00 (0.95)	–0.08 (0.00)	0.01 (0.49)	0.09

Notes: The DS 400 and the S&P 500 are value weighted. The social responsibility characteristics are community, employee relations, diversity, environment, products, and human rights. A top-overall company is in the top third of companies by two or more social responsibility characteristics and not in the bottom third by any characteristic; a bottom-overall company is in the bottom third of companies by two or more social responsibility characteristics and not in the top third by any characteristic. Portfolios are long the stocks of top-overall companies and short the stocks of bottom-overall companies. Shunned companies are associated with alcohol, tobacco, gambling, firearms, military, or nuclear operations. Accepted companies are all other companies. Portfolios are long the stocks of accepted companies and short the stocks of shunned companies. The p -values of statistical significance are in parentheses.

4. We found that the “accepted minus shunned” portfolio has a –2.62 percent annualized excess return, with a 0.07 p -value, by the three-factor benchmark; a –2.27 percent annualized return, with a 0.13 p -value, by the four-factor benchmark; and a –3.34 percent annualized return, with a 0.02 p -value, by the CAPM benchmark. The portfolio is tilted toward small growth stocks. The sign of the coefficient of the value minus growth factor in the four-factor benchmark is negative, with a 0.06 p -value; the sign of the coefficient of the small minus large factor is positive, with a 0.13 p -value. But not much tilt exists either toward or away from momentum stocks. The coefficient of the momentum factor is negative, but its p -value is 0.45.

The effect on returns of the “positive screen” of tilting toward stocks of companies with high social responsibility scores offsets somewhat the effect on returns of the “negative screen” of exclud-

ing stocks of shunned companies. In Table 4, we see that offset in the performance of a portfolio long the socially responsible DS 400 and short the S&P 500. That portfolio has a positive excess return by each of the three benchmarks, which indicates that the tilt toward stocks of companies with high social responsibility scores increases the return of the DS 400 relative to the return of the S&P 500 by more than the exclusion of shunned companies from the DS 400 decreases it. But the excess returns of the DS 400–S&P 500 long–short portfolio have smaller magnitudes than the excess returns of the top-overall minus bottom-overall portfolio or the accepted minus shunned portfolio. The annualized excess return of the DS400–S&P 500 long–short portfolio is 1.32 percent, with a 0.11 p -value, by the three-factor benchmark; 1.20 percent, with a 0.15 p -value, by the four-factor benchmark; and 0.36 percent, with a 0.52 p -value, by the CAPM benchmark.

We checked for the robustness of excess returns and p -values by dividing the overall January 1992–September 2007 period into two subperiods: January 1992–December 1999 and January 2000–September 2007. **Table 5** shows the excess returns of equally weighted long–short portfolios by characteristic. In general, we see that excess returns remain positive for the two subperiods, although p -values for the subperiods are generally lower than p -values for the overall period. The major exceptions are diversity, where the signs of excess returns are positive for the first subperiod but negative for the second subperiod, and human rights, where the signs of excess returns are positive in the first subperiod but negative in the second subperiod.

As we did in Table 5, we checked for the robustness of excess returns and p -values in **Table 6** by dividing the overall January 1992–September 2007 period into two subperiods: January 1992–December 1999 and January 2000–September 2007. Table 6 presents the excess returns of the equally weighted and value-weighted top-overall minus bottom-overall and accepted minus shunned portfolios. It also shows the excess returns of the DS 400 minus S&P 500 portfolio (both indices are value weighted). Stable for the overall period and subperiods, the signs of the excess returns are positive for the top-overall minus bottom-overall and DS 400 minus S&P 500 portfolios and negative for the accepted minus shunned portfolio. The only exceptions are the value-weighted top-overall minus bottom-overall portfolio and the DS 400 minus S&P 500 portfolio by the CAPM benchmark. The top-overall minus bottom-overall portfolio has a negative excess return by the CAPM benchmark for the overall period and for 2000–2007 but a positive excess return for 1992–1999. The DS 400 minus S&P 500 portfolio has a negative excess return by the CAPM benchmark for 2000–2007 but a positive excess return for 1992–1999 and the overall period.

Management of Socially Responsible Portfolios

Our findings suggest that portfolio managers who wish to construct high-performing socially responsible portfolios should construct best-in-class portfolios tilted toward stocks with high social responsibility ratings. Practical portfolios, however, deviate from the portfolios we analyzed in several ways. First, practical portfolios are likely to be value weighted or close to value weighted, whereas the portfolios we analyzed are equally weighted. Second, practical portfolios deviate from the portfolios we analyzed because managers want portfolios with a high likelihood of positive excess returns, but they usually do not insist that such likelihood be higher than common statistically significant levels

of 95 percent or even 90 percent. A 60 percent likelihood of positive excess returns is good, 70 percent likelihood is better, and 95 percent likelihood is even better. Third, managers of practical portfolios want to assure themselves that excess returns are robust and are not the result of positive excess returns for the first half of an overall period and negative excess returns for the second half.

As shown in Tables 5 and 6, we found that the excess returns of value-weighted portfolios are generally lower than the excess returns of equally weighted portfolios and that their p -values indicate lower statistical significance. The two major exceptions are the human rights and governance portfolios, whose excess returns are negative in equally weighted portfolios but positive in value-weighted portfolios. As Table 6 shows, the excess return of the top-overall minus bottom-overall equally weighted portfolio is 6.12 percent, with a 0.00 p -value, by the three-factor benchmark; the corresponding numbers for the value-weighted portfolio are 2.76 percent and 0.32. Excess returns by the four-factor benchmark follow the pattern of excess returns by the three-factor benchmark, but the pattern is different by the CAPM benchmark. The excess return is positive by the CAPM benchmark in the equally weighted top-overall minus bottom-overall portfolio, but it is *negative* in the value-weighted portfolio.

As shown in Table 6, the annualized excess return of the accepted minus shunned equally weighted portfolio is –2.62 percent, with a 0.07 p -value, by the three-factor benchmark; the corresponding numbers for the value-weighted portfolio are –2.02 percent and 0.31. This pattern holds for the four-factor and CAPM benchmarks. We note that Hong and Kacperczyk (forthcoming) provided an analysis of an equally weighted long–short “accepted minus sin” portfolio, but they did not provide an analysis of the corresponding value-weighted portfolio.

Some of the difference in the statistical significance of the excess returns of equally weighted and value-weighted portfolios is attributable to the higher standard deviation of the returns of value-weighted portfolios. In effect, value-weighted portfolios are less diversified than equally weighted portfolios. For example, the annualized standard deviation of the value-weighted top-overall minus bottom-overall portfolio is 12.18 percent; the annualized standard deviation of the equally weighted top-overall minus bottom-overall portfolio is 6.98 percent.

In sum, our results indicate that the excess returns of value-weighted portfolios are lower and less reliable than the excess returns of equally weighted portfolios. The excess returns and p -values of value-weighted portfolios, however, continue to

Table 5. The Performance of Top-Bottom Portfolios by Social Responsibility Characteristic, January 1992–September 2007, January 1992–December 1999, and January 2000–September 2007

Performance Benchmark	Annualized Excess Returns and <i>p</i> -Values for Equally Weighted Portfolios			Annualized Excess Returns and <i>p</i> -Values for Value-Weighted Portfolios		
	1992–2007	1992–1999	2000–2007	1992–2007	1992–1999	2000–2007
<i>Community</i>						
CAPM	1.43% (0.38)	2.52% (0.25)	1.20% (0.62)	–0.68% (0.72)	1.56% (0.52)	–2.40% (0.43)
3-Factor	4.26% (0.01)	4.08% (0.05)	4.92% (0.05)	1.70% (0.38)	2.52% (0.30)	1.44% (0.65)
4-Factor	3.96% (0.02)	4.08% (0.08)	4.80% (0.05)	2.66% (0.17)	3.84% (0.16)	1.68% (0.61)
<i>Employee relations</i>						
CAPM	3.00% (0.04)	4.08% (0.02)	1.56% (0.49)	–0.92% (0.73)	5.40% (0.09)	–5.64% (0.16)
3-Factor	4.43% (0.00)	5.04% (0.01)	3.84% (0.11)	4.20% (0.09)	8.88% (0.00)	1.20% (0.74)
4-Factor	3.73% (0.02)	3.96% (0.04)	3.72% (0.13)	4.62% (0.06)	5.52% (0.07)	1.44% (0.70)
<i>Diversity</i>						
CAPM	–0.05% (0.98)	2.64% (0.24)	–3.00% (0.16)	0.02% (0.99)	3.24% (0.13)	–3.60% (0.21)
3-Factor	1.00% (0.51)	2.88% (0.16)	–1.08% (0.63)	2.41% (0.15)	2.52% (0.22)	2.40% (0.31)
4-Factor	0.34% (0.84)	2.52% (0.28)	–1.20% (0.58)	2.77% (0.11)	3.48% (0.13)	2.52% (0.31)
<i>Environment</i>						
CAPM	0.42% (0.81)	0.36% (0.87)	0.48% (0.85)	–1.61% (0.57)	0.96% (0.77)	–3.48% (0.43)
3-Factor	2.69% (0.06)	2.16% (0.28)	2.88% (0.20)	1.15% (0.67)	2.64% (0.43)	–0.96% (0.80)
4-Factor	2.47% (0.11)	1.92% (0.33)	2.88% (0.21)	2.06% (0.42)	2.88% (0.43)	–0.72% (0.84)
<i>Products</i>						
CAPM	–0.35% (0.86)	–1.20% (0.65)	1.44% (0.61)	–4.39% (0.09)	–4.44% (0.20)	–2.88% (0.42)
3-Factor	2.05% (0.17)	1.68% (0.42)	3.24% (0.14)	–2.00% (0.39)	–1.32% (0.66)	–1.20% (0.71)
4-Factor	2.02% (0.18)	1.92% (0.39)	3.24% (0.14)	–1.26% (0.57)	0.24% (0.93)	–1.16% (0.72)
<i>Human rights</i>						
CAPM	–1.50% (0.69)	3.07% (0.61)	–7.30% (0.03)	7.24% (0.14)	11.86% (0.15)	1.40% (0.72)
3-Factor	–2.99% (0.40)	1.96% (0.74)	–7.89% (0.02)	7.33% (0.15)	14.20% (0.09)	–0.54% (0.88)
4-Factor	–2.57% (0.51)	2.34% (0.72)	–7.86% (0.03)	4.93% (0.29)	9.34% (0.22)	0.22% (0.95)
<i>Governance</i>						
CAPM	–0.76% (0.77)			0.56% (0.84)		
3-Factor	–2.00% (0.48)			1.56% (0.63)		
4-Factor	–2.65% (0.34)			0.95% (0.77)		

Note: See notes to Table 3.

Table 6. The Performance of Portfolios by Top-Overall minus Bottom-Overall, Accepted minus Shunned, and DS 400 minus S&P 500, January 1992–September 2007, January 1992–December 1999, and January 2000–September 2007

Performance Benchmark	Annualized Excess Returns and Associated <i>p</i> -Values for Equally Weighted Portfolios			Annualized Excess Returns and Associated <i>p</i> -Values for Value-Weighted Portfolios		
	1992–2007	1992–1999	2000–2007	1992–2007	1992–1999	2000–2007
<i>Top-overall minus bottom-overall</i>						
CAPM	3.18% (0.08)	5.29% (0.02)	1.57% (0.55)	–2.68% (0.38)	2.58% (0.40)	–5.22% (0.27)
3-Factor	6.12% (0.00)	7.56% (0.00)	5.74% (0.02)	2.76% (0.32)	5.90% (0.04)	2.82% (0.50)
4-Factor	5.54% (0.00)	5.87% (0.00)	5.63% (0.02)	4.99% (0.05)	5.98% (0.05)	3.20% (0.40)
<i>Accepted minus shunned</i>						
CAPM	–3.34% (0.02)	–3.13% (0.10)	–3.43% (0.12)	–1.63% (0.41)	–2.26% (0.33)	–2.17% (0.48)
3-Factor	–2.62% (0.07)	–2.33% (0.22)	–3.24% (0.18)	–2.02% (0.31)	–1.79% (0.45)	–4.56% (0.15)
4-Factor	–2.27% (0.13)	–2.04% (0.28)	–3.14% (0.19)	–2.56% (0.18)	–1.74% (0.49)	–4.58% (0.14)
<i>DS 400 minus S&P 500</i>						
CAPM				0.48% (0.52)	1.20% (0.22)	–0.24% (0.87)
3-Factor				1.32% (0.11)	1.92% (0.03)	0.48% (0.74)
4-Factor				1.20% (0.15)	1.20% (0.19)	0.48% (0.73)

Note: See notes to Table 4.

favor best-in-class portfolios tilted toward stocks with high social responsibility ratings.

Conclusion

Typical socially responsible portfolios, such as the DS 400, are tilted toward stocks of companies with high scores on such social responsibility characteristics as community, employee relations, and the environment. We analyzed the 1992–2007 returns of stocks rated on social responsibility characteristics by KLD and found that this tilt gave socially responsible portfolios an advantage over conventional portfolios. This finding is consistent with the “doing good while doing well” hypothesis, whereby the expected returns of stocks of socially responsible companies are higher than those of conventional companies.

Typical socially responsible portfolios, however, also shun stocks of companies associated with tobacco, alcohol, gambling, firearms, and military or nuclear operations. We found that such shunning results in a disadvantage for socially responsible portfolios relative to conventional portfolios. This finding is consistent with the “doing good but

not well” hypothesis, whereby the expected returns of socially responsible stocks are lower than those of conventional stocks.

For socially responsible portfolios, the advantage from the tilt toward stocks of companies with high social responsibility scores is largely offset by the disadvantage from excluding stocks of shunned companies. The net effect is consistent with the “no effect” hypothesis, whereby the expected returns of socially responsible stocks are approximately equal to the expected returns of conventional stocks. This finding is consistent with a world in which the social responsibility feature of stocks has no effect on returns. But it is also consistent with the world we found, in which the advantages of some social responsibility criteria are offset by the disadvantages of other social criteria.

Socially responsible investors can do both well and good by adopting the best-in-class method for the construction of their portfolios. That method calls for tilts toward stocks of companies with high social responsibility scores on such characteristics as community, employee relations, and the environment, but it also calls for refraining

from shunning the stocks of any company. Not all socially responsible investors, however, are likely to agree that this best-in-class method qualifies as doing good. The fact that best-in-class portfolios are also tilted toward companies with high ratings on such characteristics as employee relations is unlikely to comfort investors who abhor tobacco companies. Such investors might choose to do well by including the stocks of the best of the tobacco companies in their best-in-class portfolios, but they would probably be unable to ignore their choice to trade doing good for doing well.

This article qualifies for 1 CE credit.

Appendix A. Community Strengths and Concerns

KLD's list of indicators of community strengths includes the following:

Charitable giving. The company has consistently given more than 1.5 percent of its trailing three-year net earnings before taxes to charity or has otherwise been notably generous in its giving.

Innovative giving. The company has a notably innovative giving program that supports not-for-profit organizations, particularly those promoting self-sufficiency among the economically disadvantaged.

Non-U.S. charitable giving. The company has made a substantial effort to make charitable contributions abroad, as well as in the United States. To qualify, a company must make at least 20 percent of its giving or have taken notably innovative initiatives in its giving program outside the United States.

Support for housing. The company is a prominent participant in public/private partnerships that support housing initiatives for the economically disadvantaged (e.g., the National Equity Fund or the Enterprise Foundation).

Support for education. The company either has been notably innovative in its support for primary or secondary school education, particularly for those programs that benefit the economically dis-

advantaged, or has prominently supported job-training programs for youth.

Indigenous peoples relations. The company has established relations with indigenous peoples in the areas of its proposed or current operations that respect the sovereignty, land, culture, human rights, and intellectual property of the indigenous peoples.

Volunteer programs. The company has an exceptionally strong volunteer program.

Other strength. The company either has an exceptionally strong in-kind giving program or engages in other notably positive community activities.

KLD's list of indicators of community concerns includes the following:

Investment controversies. The company is a financial institution whose lending or investment practices have led to controversies, particularly ones related to the Community Reinvestment Act.

Negative economic impact. The company's actions have resulted in major controversies concerning its economic impact on the community. These controversies can include issues related to environmental contamination, water rights disputes, plant closings, "put-or-pay" contracts with trash incinerators, or other company actions that adversely affect the quality of life, tax base, or property values in the community.

Indigenous peoples relations. The company has been involved in serious controversies with indigenous peoples that indicate the company has not respected the sovereignty, land, culture, human rights, and intellectual property of indigenous peoples.

Tax disputes. The company has recently been involved in major tax disputes involving federal, state, local, or non-U.S. government authorities or is involved in controversies over its tax obligations to the community.

Other concern. The company is involved in a controversy that has mobilized community opposition or is engaged in other noteworthy community controversies.

Notes

1. The first company to provide socially responsible investment ratings, KLD offers data that reach further into the past than the data of other providers, such as Innovest, ASSET4, Trucost, SiRi Company, EIRIS, and oekom research AG.
2. In some cases, the ticker and CUSIP information as of the end of the calendar year is stale because of a lag between

KLD's receiving the corporate action information and its "publishing" KLD STATS. We manually corrected those cases to ensure the appropriate linking with CRSP.

3. We used the 20-industry SIC-based classification of Moskowitz and Grinblatt (1999).

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