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Socially Responsible Investing vs. Vice Investing

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ABSTACT

We examine the performance of socially responsible investing (SRI) vs. vice investing through sin funds. Our research shows while the annualized return of SRI through Domini Social Index (DS 400 Index) from 1990 to 2009 has been higher than that of S&P 500, the relative 5 and 10-year returns are more favorable in S&P 500. We also find that while SRI through Domini Social Equity Mutual Fund (DSEFX) outperformed vice investing through vice fund (VICEX) over the most recent one year, VICEX has outperformed DSEFX over the long term. Presumably, U.S. investors sacrifice returns by investing in social responsibility.

Keywords: Socially responsible investing, vice investing, sin fund

INTRODUCTION

There has been ongoing debate about the performance of socially responsible investing (SRI) during the last twenty years. Previous studies suggest that the findings on SRI reveal insignificantly different results from conventional funds (Hamilton, Jo, ans Statman, 1993; Statman, 2000). A growing number of academic studies have demonstrated that SRI mutual funds perform competitively with non-SRI conventional funds over time. The recent growth of SRI indicates that investment communities prefer to combine SRI's comparable return with their concerns on social responsibility. SRI investing has become part of the mainstream, and as a result, a number of conventional companies now offer SRI products to their clients. More investors adopt and use SRI strategies not only because such investment approach focuses on companies with socially responsible principle and avoids "sinful" businesses, but also because return are comparable to those of more conventional investments.

While recent study of Lobe and Roithmeier (2008) and Hong and Kacperczyk (2009) examine sin stocks, there is no research focusing on sin mutual funds. In this paper, we examine the performance of SRI vs. vice investing through sin mutual funds. Specifically, we examine performance metrics of the Kinder, Lydenberg, and Domini's (KLD's) Domini Social Index (DS400 Index) to find evidence regarding comparability of SRI returns with respect to conventional Index of S&P 500. We also investigate the performance of Domini Social Equity Mutual Fund (DSEFX), a proxy of SRI, with VICEX mutual fund, only available sin fund. We further provide rationale what contributes to the higher performance of sin fund over the long term.

Recent research indicates a higher performance of sin stocks (Lobe and Roithmeier, 2008; Hong and Kacperczyk, 2009). Sin funds comprise of stocks from companies that are associated with (or are directly involved in) activities that are widely considered to be unethical or immoral. The belief for better performance of sin stocks recently is that people might drink, smoke or even gamble a bit more during tough rather than good times which leads to recent better performance of sin stocks when compared to SRI (Brush, 2003). This finding, however, is not universally accepted in investment communities. For instance, Social Investment Forum (SIF) (2010) suggest that a review of 160 socially responsible mutual funds from 22 members of the SIF finds that the vast majority of the funds, about 65 percent, outperformed their benchmarks in calendar year 2009, most by significant margins.

Our research suggests that while the risk-unadjusted annualized return of SRI from 1990 to 2009 has been higher than that of S&P 500, the relative 5 and 10-year returns are more favorable in S&P 500. In addition, we find that while SRI based on Domini Social Equity Mutual Fund (DSEFX) outperformed vice investing through Vice fund (VICEX) over the most recent one year, VICEX has outperformed DSEFX over the long term. Presumably, U.S. investors sacrifice profitability by investing in social responsibility.

SOCIALLY REPONSIBLE INVESTING

SRI is a broad-based approach to investing that encompasses an estimated $2.71 trillion out of $25.1 trillion in the U.S. investment marketplace in 2009. SRI investing considers investor's financial needs as well as the investment's impact on society. SRI investors encourage corporations to improve their practices on environmental, social, and governance issues. The widely known SRI-like approaches to investing are referred as mission investing, responsible investing, conscious investing, double or triple bottom line investing, ethical investing, sustainable investing, or green investing.

The investment strategies SRI companies and funds employ works to enhance the bottom line of the companies in question and, in doing so, deliver more long-term wealth to shareholders. In addition, SRI investors seek to build wealth in underserved communities worldwide. With SRIs, investors can put their money to work to build a more sustainable world while earning competitive returns both today and over time. Socially responsible investors include individuals and also institutions, such as corporations, universities, hospitals, foundations, insurance companies, public and private pension funds, nonprofit organizations, and religious institutions. Institutional investors represent the largest and fastest growing segment of the SRI world.

SRI Portfolio - Risk-Return Hypothesis

Compared to conventional portfolios, SRI portfolios can have better or poorer performance. Two opposing studies provide evidence supporting this - value-enhancing hypothesis and value-discounting hypothesis, respectively. The *Value-discounting hypothesis* states that SRI portfolios cannot outperform conventional portfolios because of reduced diversification using a set of SRI screening criteria which imposes constraint on the choice set of risk-return optimization. Additionally, investors who care about ethical aspects of investing may derive non-financial utility by holding assets consistent with SRI criteria and are willing to forego return to avoid holding unethical assets thus bringing down the rate of return (Hamilton, Jo, ans Statman, 1993; Fu and Shan, 2009).

In contrast, the proponents of the *value-enhancing hypothesis* argue that SRI portfolios can outperform conventional counterparts for some reasons. For instance, socially responsible corporate policies increase firm value by better protecting shareholders. Gompers, Ishii, and Metrick (2003) construct a corporate governance index to measure the degree of shareholder protection, and they find that firms with stronger shareholder rights have higher returns. If socially responsible corporate policies are considered of value to consumers and employees, sales will increase and employee relations will improve, which can translate into a higher firm value. The subsequent sections perform comparative study of DS400 Index with S&P 500 and SRI portfolio returns with respect to conventional index as of March 2009.

Performance Comparison of SRI Index (DS400) with S&P 500

Statman (2006) performed a study on the characteristics that define socially responsible companies by comparing the content of the S&P 500 index to the contents of four SRI indexes - DS400, Calvert Social Index, Citizens index, DJ sustainability index – US. His studies found that SRI indexes vary in composition and social responsibility scores but the mean social scores of each is higher than that of the S&P 500 index and they vary in the emphasis they place on particular characteristics. He also concluded based on his research using Fama and French's 3-factor model that returns of SRI indexes were generally higher than those of the S&P 500 Index. For Example, the monthly Jensen's alpha of DS400 during May 1990 – April 2004 exceeded that of the S&P 500 Index by 0.09%; however the alphas were statistically insignificant. Two earlier studies by Sauer (1997) and Statman (2000) compared DS400 to S&P 500 by employing Jensen's alpha and Sharpe's ratio as performance measures and both found that the returns of the DS400 Index were higher than S&P 500 although differences were not statistically significant.

As evidenced by earlier studies, it is possible to achieve competitive financial returns on Socially Responsible Investments supporting firms with a sustainable mission. SRI funds are designed to be benchmarked to the S&P 500. In the later section of this paper, we provide performance measurements for the longest running SRI fund (DSEFX), which tracks the Domini 400 Social Index (Baue, 2004). The Domini 400, established in 1990, is a float-adjusted, market capitalization-weighted, common stock index of U.S. equities, launched by KLD and it is the first benchmark index constructed using environmental, social, and governance factors (ESG).

TABLE 1: KLD Investment Categories

Environment	**Social**	**Governance**
Alternative Energy	Community Relations	Accounting
Climate Change	Workforce Diversity	Executive Compensation
Liabilities	Employee Relations	Political Accountability
Management Systems	Human Rights	Transparency
Regulatory Problems	Product Quality & Innovation	Ownership

Source: KLD Fact Sheet: http://www.kld.com/indexes/ds400index.

DS 400 Index Construction Criteria and Performance Statistics

KLD maintains the composition of the DS400 Index with approximately 250 S&P 500 companies, 100 additional large and mid cap companies for sector diversification, and 50 smaller companies with outstanding social and environmental records. Companies involved in industries such as Tobacco, Alcohol, Gambling, Firearms, Military Weapons and Nuclear Power are not eligible for the Index. The ESG evaluation criteria KLD executes to select companies, is based on overall company performance using the following indicators within three broad categories – environmental, social, and governance. Table 1 is a detailed view of each of these three investment categories.

KLD maintains the number of companies in the DS400 index to always total 400, adding new and removing existing company simultaneously and it targets a turnover rate consistent with S&P. Several factors might cause a company to be removed from the DS400 such as corporate actions, violation of exclusionary screens, or poor social or environmental performance. The top 10 holdings of the Index currently include Johnson & Johnson, Microsoft Corp, Procter & Gamble Co., IBM Corp., JPMorgan Chase & Co., Apple, Amgen, Verizon Communications Inc., Oracle and AT&T.

TABLE 2: Performance Metrics of DS 400 vs. S&P 500

Panel A: Index Characteristics

Index Characteristics	DS 400	S&P 500
Price/Earnings	15.36	14.23
Price/Book	3.20	3.05
Dividend Yield	2.93	3.44
Beta	1.03	1.00
R-Square	0.97	1.00
Sharpe Ratio	0.24	0.20
Standard Deviation	15.67	14.94
Tracking Error	2.87	0.00

Panel B: DS 400 and S&P 500 Performance Statistics Over Time

Index Performance (%) (*Annualized Returns)								
	March 2009	1st Quarter	YTD	One Year	Three Year*	Five Year*	Ten Year*	Since 5/1/90 Inception*
DS 400	9.59	-9.55	-9.55	-35.04	-12.60	-5.11	-3.25	7.74
S&P 500	8.76	-11.01	-11.01	-38.09	-13.06	-4.76	-3.00	7.01

Source: http://www.kld.com/indexes/ds400index, performance as of March 31, 2009.

From Panel A of Table 2, it can be observed that DS 400 is more volatile than the S&P 500 as measured by the standard deviation of returns (15.67 vs. 14.94). This additional risk assumed by the investors is compensated by the lifetime outperformance, as indicated by the Sharpe ratio (0.24 vs. 0.20), which measures the return above risk-free interest rate.

Panel B of Table 2 suggests that although the annualized return of DS400 Index since its inception has been higher than that of S&P 500, the relative 5 and 10-year returns are more favorable in case of S&P 500. In the following sections, we describe what sin funds are and compare the performance of DSEFX fund which tracks DS 400 with VICE fund (VICEX).

VICE INVESTING

Sin funds comprise of stocks from companies that are associated with (or are directly involved in) activities that are widely considered to be unethical or immoral. Merton (1987) examines the characteristics of neglected stocks and he claims that the higher litigation risk of these firms is the reason for the increase in the expected returns of the stocks. Concerning tobacco companies, Merton illustrates why neglected stocks are underpriced and perform better than similar companies. Recently, Hong and Kacperczyk (2009) examine the effects of social norms on markets by examining an equally weighted portfolio of American sin stocks, i.e. companies involved in the alcohol, tobacco and gambling industry. They find evidence that investors pay a price for avoiding these firms by proving significant outperformance of sinful portfolio. Unethical stocks seem to behave like value stocks as they provide higher expected returns consisting of a neglect effect.

In conformity with Merton, Hong and Kacperczyk (2009) attribute the lower valuation to the limited risk sharing of the sinful industries. They find that unethical stocks outperform the market because they exhibit less institutional ownership and less analyst coverage compared to non-sinful stocks with similar characteristics. Pension funds, banks and insurance companies particularly seem to avoid these companies due to social norm pressures. Despite the ongoing increase of SRI funds, conventional mutual and hedge funds do not share this behavior as they are natural arbitrageurs in the market and also buy unethical stocks if they are underpriced.

The findings of Hong and Kacperczyk imply that sinful companies seem to be disregarded because of social norms rather than the danger of litigation risk, which is inconsistent with portfolio theory. They conclude that the aversion to these stocks is based on a preference for following these norms rather than for economic reasons. Olsson (2005), reports that investors who fund companies that promote human vice get rewarded for their sinful behavior. He points out that American sin stocks behave like value stocks and were able to outperform the market in the period 1985 to 2004 by 6.84 percent per annum. Using the single-factor model, he calculates the reward for a sinful investment to 87 basis points per month. Further, he finds evidence that time variations in social norms have an impact on stock returns, using the tobacco industry, which has been considered sinful since the 1960's. The analysis reveals that this sector did not outperform the market until smoking became a human vice.

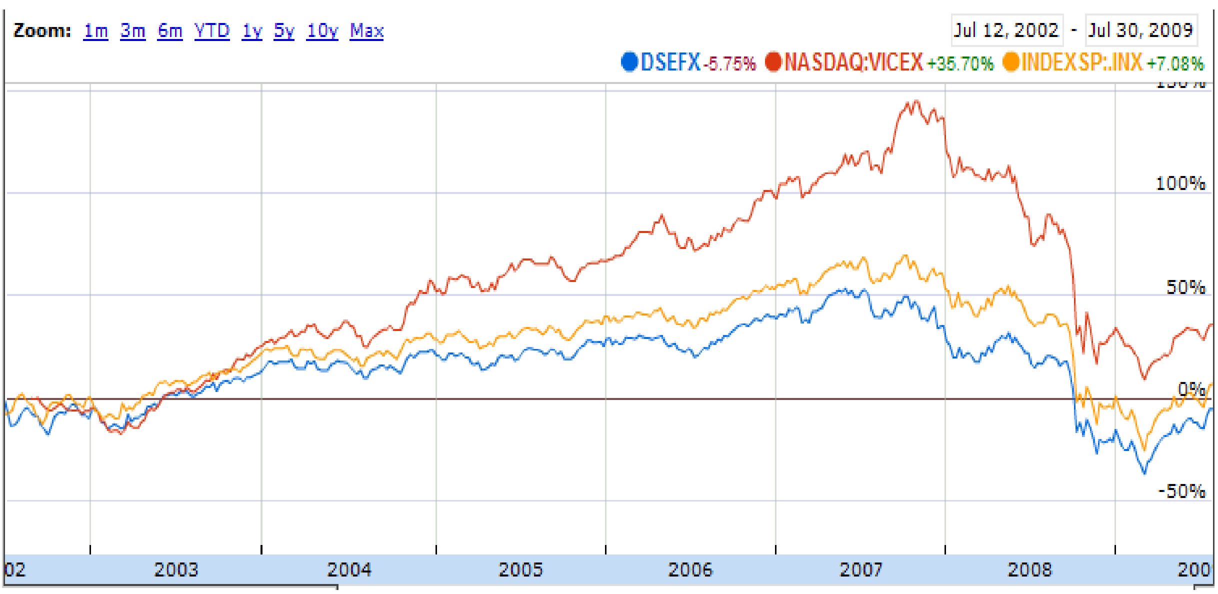
After this change in opinion, tobacco stocks started to behave like value stocks and performed better than the market. Kim and Venkatachalam (2006) offer further evidence on potential disadvantages of avoiding unethically companies and explore other explanations to the disregard of sin stocks. Consistent to prior findings, the authors exhibit that unethical stocks tend to be larger, have lower book-to-market ratios and higher annual earnings per share. They also find that sin stocks exhibit more persistent earnings and have accruals that are better predictors for future cash flows. They conclude that, despite superior returns and financial reporting quality, investors are willing to accept lower returns in order to comply with societal norms.

VICE Fund

While Hong and Kacperczyk (2009) focus on sin stocks. In this paper, we focus on sin mutual funds. Only one mutual fund specializes in all the sin categories employed in sin-based investing. Vice fund (VICEX), established in September of 2002 invests in alcohol, gaming, tobacco and defense. Norton is the active fund manager since 2005. For the purpose of relative performance comparison with SRI, we use DS 400 based fund DSEFX. Military-related companies are included in the sin investment classification because they tend to perform well in general in periods of high economic downturn. These sectors tend to do well regardless of economic cycles and tend to outperform during volatile times. This leads investors to view vice sector investments as good strategy during periods of recession (Anderson, 2008). As mentioned in the US News and World Report (2008), "Consumers don't give up necessities like toothpaste and laundry detergent in tough economic times. And they don't kick their habits, either" (Marquardt, 2008).

The fund's top holdings include Raytheon, Lockheed Martin, Philip Morris, Altria, Diageo, and British American Tobacco. VICEX investment strategy is to achieve long-term growth of capital. The fund invests mainly in the stocks of small, medium, and large capitalization domestic and foreign companies. VICEX even invests in those stocks traded in foreign jurisdictions as well as American Depositary Receipts (VICE). VICEX $177 million fund doesn't have a load fee, but does charge a hefty annual fee of 1.75% while DSEFX has annual fees of 1.15%, with no load as well.

FIGURE 1: VICEX, DSEFX, & S&P Index Returns



Source: Google Finance (http://www.google.com/finance?q=DSEFX)

DSEFX vs. VICEX

According to Figure 1, DSEFX has historically under-performed the S&P. VICEX has continued to out-perform the S&P since its inception in 2002 as shown in Figure 1. During the same seven year period, VICEX has shown historically better performance. Panel A of Table 3 suggests that a negative Sharpe ratio signifies that a risk-free asset such as cash or Treasury bills would perform better than the funds in question. However, in an economic downturn it is not abnormal that this would occur. Both the SRI and VICE funds currently have negative Sharpe ratios. However, the slightly lower negative Sharpe ratio for VICEX implies less risk for the given return. The two funds have almost equal standard deviations in the five year period. Therefore, VICEX has better risk-adjusted return. Furthermore since VICEX has a positive alpha of 3.08, we see greater excess returns coming from this sin fund in the same period. Therefore, over the last five years, VICEX has had better returns than then both the DSEFX and the overall S&P.

TABLE 3: Performance Metrics of DSEFX vs. VICEX

Panel A: DSEFX vs. VICEX Over Five-year

Fund Characteristics (5 years)	DSEFX	VICEX
Beta	1.08	0.94
Alpha	(1.04)	3.08
R-Square	96.58	77.05
Sharpe Ratio	(0.32)	(0.05)
Treynor Ratio	(6.41)	(2.48)
Standard Deviation	16.92	16.97

Panel B: Performance metrics: DSEFX vs. VICEX Over One-year

Fund Characteristics (1 year)	DSEFX	VICEX
Beta	1.10	0.84
Alpha	5.66	(4.19)
Sharpe Ratio	(0.43)	(0.71)
Standard Deviation	33.26	27.52

Panel C – Trailing Annualized Returns

Trailing Returns	DSEFX	VICEX
YTD	16.35%	5.48%
One Year	(18.31%)	(22.6%)
Three Years*	(6.19%)	(5.88%)
Five Years*	(1.57%)	2.65%

Source of Panel A: Yahoo Finance (http://finance.yahoo.com/q/rk?s=DSEFX)
Source of Panel B: Google Finance (http://www.google.com/finance?q=dsef)
Source of Panel C: Google Finance (http://www.google.com/finance?q=DSEFX)

Panel B of Table 3 indicates that over the last year, DSEFX has the slightly lower negative Sharpe with a larger standard deviation. Therefore in the short term, VICEX has less risk given the return, but not better return given the risk adjusted rate of return. Panel C of Table 3 shows that looking at the three and five year trailing returns of the two funds, it is evident that better returns came from VICEX. However, the more recent time horizon i.e. one year and YTD trailing returns show that this SRI fund has out-performed the Sin fund.

WHY VICEX OUTPERFORMED S&P and DSEFX?

VICEX fund was launched in the August 2002. In 2003, its first full year, the fund returned 34%. Its average annual three year return was 18.24% vs. 11.2% for its peers and 11.87% for the S&P 500 (Ho, 2006). In 2006, Altria[MO] (formerly Phillip Morris) was VICEX's largest holding. At the time, Phillip Moris had made a deal to sell Marlboro cigarettes in China. The number of smokers in China in 2006 was roughly equal to the population in the U.S. Further, Phillip Morris also acquired cigarette makers in Indonesia and Colombia. In 2006 there was ban on cigarette smoking in the U.S. and parts of Europe. In spite of which, Phillip Morris earned profit by selling cigarettes in other parts of the world.

In addition to Phillip Morris, the biggest gainer both in year to date and past 12 moths for VICEX was Las Vegas Sands. In 2006 the Ventian Resort Hotel Casino opened few other Venetian at Macau, Singapore, Thailand, Japan and China. Two thirds of Las Vegas Sands revenue came from Macau. In 2006 MGM Mirage was one of the top ten holdings of VICEX. At the time MGM was the top player on Las Vegas strip with a casino in Macau. (Lansky, 2009)

According to VICEX portfolio manager Charles Norton, "On the alcoholic beverages side, our largest holding is Diageo (DEO), the leading premium spirits business in the world by volume, by net sales and by operating profit; it also manages 9 of the world's top 20 spirits brands. North America is experiencing the fastest growth in spirits volume in the world, as consumers are choosing spirits (and wine) over beer. The market leader in the fast-growing U.S. spirits market is Diageo, with about a quarter of the market. The company is a key supplier of liquor to Wal-Mart, which is aiming to aggressively boost its liquor sales, and it's buying back stock hand over fist." (Stockpikr, 2009). He further adds that," The ideology is simple: people around the globe have been drinking, smoking, gambling for hundreds, if not thousands, of years. Wars have been around since the earliest, hunter-gatherer societies. Few industry groups have a history that dates back that far. And no matter what is happening in the world economy, people will continue to drink; smoke, gamble and nations will need to defend themselves. As a result, in general, these companies tend to be steady performers in good times and bad – they are mostly insulated from economic slowdowns." (Associated Press, 2009)

However, the recent slow down in VICEX is hugely due to sharp decline in global air traffic. According to the fund managers of VICEX, "Cargo traffic is still pretty bleak: down 17% in May following five months of 20%+ drops. As could be expected in this environment, commercial aircraft orders in Q1 were very weak. Due to declining traffic, vast majority of airlines are cutting capacity, and deferring or canceling orders for new aircraft that are no longer needed" (Lansky, 2009). Also Lockheed, in 2009, announced pension underfunding resulting from the declines in the stock market eating away its profits. Additionally, with the change in administration, there is a decline in spending on the part of the U.S. government in investments in big defense hardware (Associated Press, 2009). FDA legislation recently signed into by President Obama on tobacco industry could also have had an impact on the performance of VICEX (Associated Press, 2009).

According to Marquardt (2008), "A lower performance of the socially responsible portfolio with respect to Sin fund indicates that investors probably sacrifice performance by investing in socially responsible funds. In addition, investors might not only buy a portfolio of high social responsibility, but also sell a portfolio of low social responsibility." He examine if this trading strategy, going long in the portfolio of high social responsibility and short in the portfolio of low social responsibility, yields an abnormal performance. Therefore, funds with low SRI ratings can outperform those with high SRI rankings and these funds should provide better financial returns to investors.

CONCLUSION

In this paper, we find that sin based investments have historically performed better than SRI based investments over the long term, but not over the most recent short term of one year. Although the higher long term returns of vice fund might be either due to Merton (1987)'s neglected stock effect or Hong and Kacperczyk's (2009) social norm effect or both, it seems that socially responsible U.S. investors value social responsibility more than profitability over the long term. In this volatile market environment, however, diversification of SRI investment themes can prove valuable resources. Efficient market hypothesis states that market already places premium based on positive information thus affecting SRI fund valuation accordingly. SRI funds can improve their returns only if their ESG screens consistently reflect information that the market has missed to assimilate in its pricing.

According to Wheelan (2009), in order to account for ethical investing, companies with stronger regulations and social responsibility can be included based on whether a company has had product recalls or if it is not overpaying its CEO or spending more on research and development than competitors and has a fully funded pension scheme. SRI portfolio can target these companies to increase returns on SRI investment; however the feasibility depends largely on the quality of corporate information disclosed to the public.

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