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# Socially Responsible Investing

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# Socially Responsible Investing

## **Abstract**

### *Purpose*

This study aims to answer the question, “Are people willing to forgo a portion of financial return for social good?” In other words, this study sought to report whether investors would be willing to accept less return, if the invested money could achieve a desired socially-driven outcome.

### *Methods*

An experiment was conducted at the Wharton Behavioral Lab, asking participants to make a tradeoff decision between lower paying and socially responsible option and higher paying and socially irresponsible option. Participants received payment based on their decisions.

### *Results*

Fifty-two people participated in the experiment over the course of three separate rounds. Findings can be organized into three points: 1.) Higher percentage of return results in the greater number of invested tokens; 2.) Women are more likely to allocate more tokens into the socially responsible option than men; and 3.) People behave differently according to the order of options presented.

### *Conclusions*

Investors interested in socially responsible investing do not necessarily expect to sacrifice a portion of their gains. Thus, to encourage socially responsible investing, its returns should be comparable to returns for conventional investing.

## **Keywords**

socially responsible investing, ethical investing, behavioral economics

## **Disciplines**

Business

# Socially Responsible Investing<sup>1</sup>

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## INTRODUCTION

Everyday, consumers make the choice to be socially responsible or socially irresponsible purchasers, as they have increasing access to an ample selection of pro-social goods. These goods could include naturally-produced eggs, fairly-traded coffee, pollutant-reducing hybrid cars, and more. Analogously, investors also face a similar choice — whether to partake in socially responsible investing or not.

To put it simply, socially responsible investment seeks to meet the double bottom line, which means it seeks to maximize financial gains as well as social good.

As defined by the Social Investment Forum (2006), socially responsible investing entails three different methods. First involves social screening, or reviewing of social criteria to either keep away or seek out specific investments.[1] Commonly used screens include: alcohol and tobacco, gambling, environmental consideration, product quality, corporate citizenship, employee satisfaction, labor standards, and more.[2, 3] Second type of socially responsible investing requires the investor to provide capital for underserved communities and tends to be small and local; it is akin to microfinance.[4] Third is related to shareholder advocacy.[1, 5]

Socially responsible investing could take numerous forms, such as pension funds, mutual funds, stocks, and more. In particular, specifically profiled mutual funds can be explained as those which combine non-financial, or social, ethical, or environmental, criteria with the

conventional financial standards in the investment decision-making process.[6, 7] In fact, new performance indicators specifically for ethical investing have been proposed, to include socially responsible components in addition to investments' fiscal potential.[8]

As a result, socially responsible investors may differ in expectations. Based on individual values, some investors may buy shares that represent their personal and social priorities.[9] Others may choose to use their money in directing a desired societal change. To clarify, socially responsible investors are more likely to consider non-monetary factors in addition to financial returns. Then, this raises the question, whether integrating their socially responsible behavior could increase these particular investors' performance in the market. However, previous research that compare socially responsible mutual funds and stocks to conventional investments demonstrate that there are no statistically significant excess or differential returns, and conclude that their performance is similar.[10-12]

Therefore, given this context, I aimed to answer the question, "Are people willing to forgo a portion of financial return for social good?" In other words, this study sought to report whether investors would be willing to accept less return, if the invested money could achieve a desired socially-driven outcome.

## **METHODS**

### *Study Population*

Participants were recruited through the Wharton Behavioral Lab at the University of Pennsylvania (Philadelphia, PA). The Lab enrolls mostly Penn students, but also staff and members of the community.[13] As an incentive, participants are usually given \$10 in cash at the end of each session. In this study, extra monetary compensation based on the tradeoff decision was offered. The Institutional Review Board approved this study.

### *Experiment Design*

The experiment was created using Qualtrics Survey Software ([www.qualtrics.com](http://www.qualtrics.com)). In the beginning, instructions were given to explain about the investing procedure: With an endowment of 100 tokens, each participant was asked to allocate between two investment options. The percentage of returns for each option determined participants' ultimate payoff. Directions read, "If you decide to allocate 50 tokens to the investment option with a 10% return and the other 50 tokens to the option with a 15% return, then your earning amounts to 12.5 tokens ( $= 50 \cdot 10\% + 50 \cdot 15\%$ ). ...Each token is equivalent to 20 cents...If you earned 12.5 tokens during one round, you will be awarded \$2.50 ( $= 12.5 \cdot .2$ ) for that round."

After the instructions, five scenarios were presented, each with a tradeoff option (9% vs.



1%, 8% vs. 2%, 7% vs. 3%, 6% vs. 4%, 5% vs. 5%), with higher return related to socially irresponsible venture. FIGURE I describes the characteristics of two different companies, which are starkly different in terms of socially responsible practices concerning the environment, employee satisfaction, labor laws, and community development.

The same experiment with varied order of option was ran three times, total. At the Lab, we screened out subjects who participated in the first round of experiment from participating in later rounds. The first round presented return tradeoffs in a randomized manner, second from highest to lowest, and third from lowest to highest.

## RESULTS

Over the course of three rounds of experiment, fifty-two people participated. Experiment participant characteristics are displayed in TABLE I. More than half of the participants were female (63.5%, 33/52), white/Caucasian (71.2%, 37/52), and in their early twenties. The mean age was 22, with range of 18 and 36.

Findings can be organized into three points: 1.) Higher percentage of return results in the greater number of invested tokens; 2.) Women are more likely to allocate more tokens into the socially responsible option than men; and 3.) People behave differently according to the order of options presented.

### *Finding 1*

TABLE II exhibits the average number of tokens for varied options. I found that as the percentage of return increases, the number of tokens invested also increases. The R-squared value, which indicates the percentage of the variations explained by the model, when calculated excluding the option with 5%, is 0.9513; the relationship between the two variables is almost perfectly linear. FIGURE II also demonstrates this relationship.

Elasticity, in this case defined as the difference in the number of tokens invested as the return for socially responsible option increases by 1%, also increases linearly in a mostly consistent manner. This value is greatest when the percentages of return are equal

between the two options, indicating that people most willing to invest in the socially responsible option when their returns are same or close. The same notion can be observed in the trend of values for elasticity; it appears to generally increase, which means increasingly more tokens are invested into the socially responsible but lower paying option, as the differences in the returns between the two options are diminished.

### *Finding 2*

For all five scenarios, regardless of varying returns, we found that women tend to invest more in the lower paying but socially responsible option (TABLE III). In fact, the difference between women and men in the number of tokens invested in the socially responsible option is greatest when the difference in the percentages of return is greatest. However, we did not find a significant difference when participants were split based on ethnicity.

### *Finding 3*

TABLE IV delineates descriptions of decisions made by participants. Slightly more than 20% (11/52) allocated more tokens into the lower paying and socially responsible option. On the other hand, 17% (9/52) chose to allocate all of their tokens to the higher paying option, and then all of it into the equally paying, socially responsible option. Similarly, 15% (8/52) chose the higher paying option except when the returns for both options were 5%, 9% (5/52) chose the higher paying option except when it was 6% v 4%, and 4% (2/52) for higher paying option except when 7% versus 3%, with the number of investors in the

higher paying option steadily decreasing. However, this number soars up to 15% (8/52) when 8% vs. 2% tradeoff is introduced.

This irregularity in trend is explained when three rounds of experiments are scrutinized separately (TABLE V). In the first round, the display of tradeoffs was randomized, presenting the scenario of 8% vs. 2% in the beginning. Following each tradeoff scenario, we can observe that as the percentage of returns decreases, invested tokens also decreases, until the 9% vs. 1% scenario, in which investment for the 9% option has a sudden and sharp rise.

In the second round, tradeoff scenarios were presented starting with the highest paying option (9% vs. 1%) and in the order of from highest to lowest. The results are highly different from the first round; in FIGURE III the plotted line is nearly horizontal, demonstrating no associative linear relationship.

In the third round, the lowest paying option (5% vs. 5%) is presented first and in the order from lowest to highest. FIGURE IV displays the resulting plot, and it is more akin to the overall result, exhibiting a slightly more linear relationship. This finding demonstrates that people's behavior is affected by the order of questions. In other words, the first question, or two options that they see first, frames their thinking.

## **DISCUSSION**

Limited research has examined whether investors would be willing to sacrifice a portion of their return in pursuit of achieving social responsibility. In this experimental investigation, we found that people, women in particular, seem to be more affected by financial return than social responsibility.

According to the cohort of people who participated in the experiment, investors are more likely to put their money in the higher paying option, regardless of implications from company's socially responsible practices. This finding is in line with previous literature; in a study by Jonas Nilsson, people who discern socially responsible mutual funds to be better-performing than traditional mutual funds are more likely to invest in the latter type.[14] Several other studies confirm this finding, as socially responsible investors, in general, appear to be interested in maximizing their potential return, which implies that for most, investing responsibly is not an act of charity.[15-17]

Still, some socially responsible investors did seem to have greater tolerance for return differentials between accustomed and screened ventures, at times preferring the lower paying and socially responsible option.[16, 18] This discovery suggests that these investors attain utility from financial as well as non-financial gains from investment. A number of studies illustrate that many socially responsible investors consider investing as a part of their beliefs or identity, stemming from the desire to apply their lifestyle and values to their investing strategy.[16-18] Overall, these findings intimate that both

financial insight and pro-social stance are related to one's predilection for socially responsible investment.

This study also found that women are more likely to put their money into lower paying but socially responsible investments. This finding is in agreement with existing literature. Studies that examined demographic characteristics of socially responsible investors reveal that ethical investors tend to be female rather than male, are more likely to be younger and better educated.[14, 19] Around 60% of pro-social investors are estimated to be women.[9] Therefore, this study affirms past findings and extends knowledge by showing the number of significantly more tokens that women put into the socially responsible option especially when the difference between investing returns was perceived to be greatest.

Another significant finding from this study is that subjects behave differently according to the order of options presented. The initially shown option framed the participant's decision making; this tendency resulted in a puzzling outcome, confounding the linear trend found between the number of tokens and percentage of return. Also known as an "order effect," this phenomenon indicates that results from a series of tasks are contingent on the order in which the tasks are introduced.[20] Consequently, order effects can disarrange treatment effects and produce differing results if the treatment and control states are addressed in different orders, and furthermore, it can be difficult to anticipate order effects. While this finding is not directly related to the topic of socially responsible

investing, further research could further explore and delve into the notion of order effect and its influence on people.

Our study had several limitations. First, our entire sample of participants was recruited through the Wharton Behavioral Lab, which draws from a heterogeneous catchment region. Our study involved mostly young, female, and white people, and it is possible that our results may be biased since their responses and attitudes towards socially responsible investing may be considerably different from older people with more variant socioeconomic characteristics. Therefore, larger studies may be required to establish the generalizability of our findings. Third, our sample size, determined by using theoretical saturation, precluded meaningful statistical analysis; still, we were able to observe several trends.

In conclusion, this study illustrates that in general, higher returns yield greater investment regardless of implications on social responsibility and that women are more likely to be socially responsible investors. Investors interested in socially responsible investing do not necessarily expect to sacrifice a portion of their gains. Thus, to encourage socially responsible investing, returns should be comparable to returns for conventional investing.

**TABLE I. Demographic Characteristics of the Study Population (N=52)**

	N	%
Gender		
Male	19	36.5
Female	33	63.5
Age		
Mean (range)	22.44	(18-36)
Ethnicity		
White/Caucasian	37	71.2
Black/African-American	5	9.6
Asian	8	15.4
Other	2	3.8



**TABLE II. Average No. of Tokens For Varied Options and Elasticity**

Higher % Return (Not SR*)	Number of Tokens	Lower % Return (SR*)	Number of Tokens	Elasticity
9%	69.62	1%	30.38	
8%	62.79	2%	37.21	+6.83
7%	65.13	3%	34.87	-2.34
6%	53.69	4%	46.31	+11.44
5%	16.35	5%	83.65	+37.34

SR\*=Socially Responsible

**TABLE III. No. of Tokens Allocated for Socially Responsible Investment, Male vs. Female**

% of Return	Male	Female	Difference	Significance
1%	20.45	36.59	16.14	**
2%	29.15	42.25	13.1	**
3%	30.55	37.56	7.01	*
4%	40.55	49.91	9.36	****
5%	80.70	85.50	4.80	***

\*=<0.05, \*\*=<0.01, \*\*\*=<0.005, \*\*\*\*=<0.001

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**TABLE IV. Classified Descriptions of All Participants**

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100% for higher paying option and 100% for socially responsible 5/5	9
Always higher paying and socially IRRESPONSIBLE option	7
Always higher paying option except for 5/5	8
Always higher paying option except for 5/5, 6/4	5
Always higher paying option except for 5/5, 6/4, 7/3	2
Always higher paying options except for 5/5, 6/4, 8/2	8
Always higher paying option except for 5/5, 6/4, 7/3, 9/1	1
Always higher paying option except for 5/5, 9/1	1
Choose lower paying but socially responsible option	11


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**TABLE V. No. of Tokens For Each Investment Option Presented in Various Orders (in the order as presented in the experiment)**

Higher % Return (Not SR*)	Number of Tokens	Lower % Return (SR*)	Number of Tokens
<b>Randomized</b>			
8%	66.89	2%	33.11
6%	56.68	4%	43.32
5%	13.50	5%	86.50
9%	80.57	1%	19.43
7%	74.71	3%	25.29
<b>Highest to Lowest</b>			
9%	46.85	1%	53.15
8%	54.31	2%	45.69
7%	52.69	3%	47.31
6%	52.23	4%	47.77
5%	13.46	5%	86.54
<b>Lowest to Highest</b>			
5%	27.00	5%	73.00
6%	47.82	4%	52.18
7%	55.45	3%	44.55
8%	62.36	2%	37.64
9%	68.64	1%	31.36

SR\*=Socially Responsible

FIGURE I. A Sample Page from the Experiment

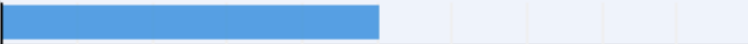
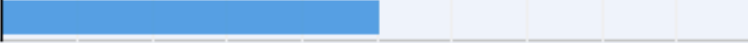



The following describes characteristics of two different companies.

OPTION A	OPTION B
8% return	2% return
falls below average in promoting environmentally-friendly measures, i.e. regularly dumps pollutants	promotes environmentally-friendly initiatives and has established green business practices
employees often express complaints about the company environment	employees are satisfied with working conditions
operates sweatshops overseas for cheap labor	established and follows a code of conduct for foreign workers
infrequent involvement with the local community	encourages employees to regularly participate in community service projects

*Given your endowment of 100 tokens to allocate between two investment options, how would you divide your tokens between the two choices?*

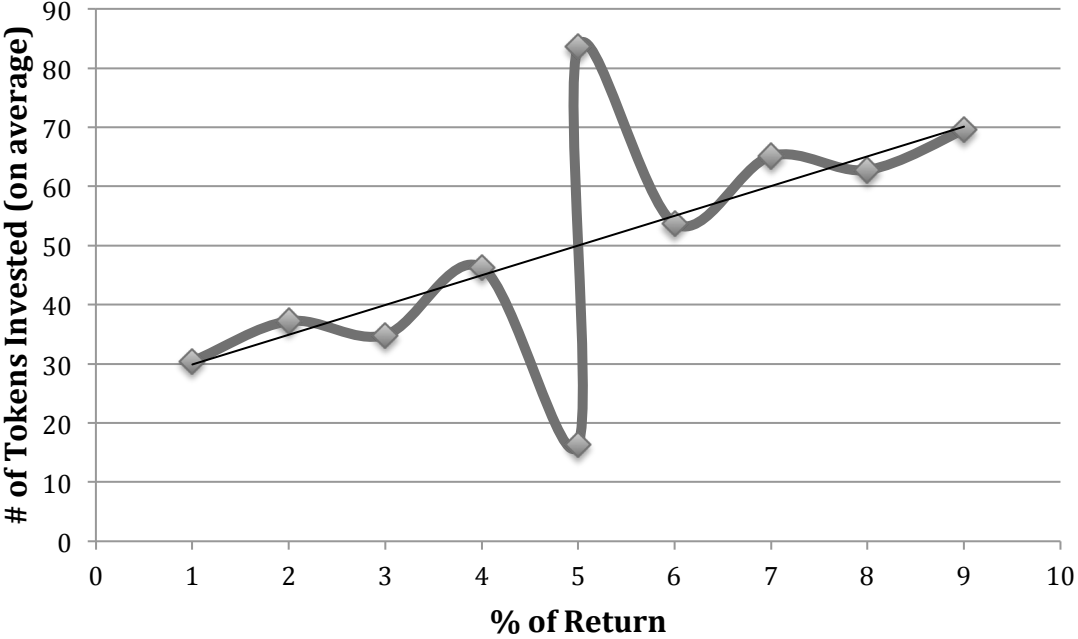
note: sum of the two must equal 100

	0	10	20	30	40	50	60	70	80	90	100	
Option A												50
Option B												50
<b>Total:</b>												<b>100</b>

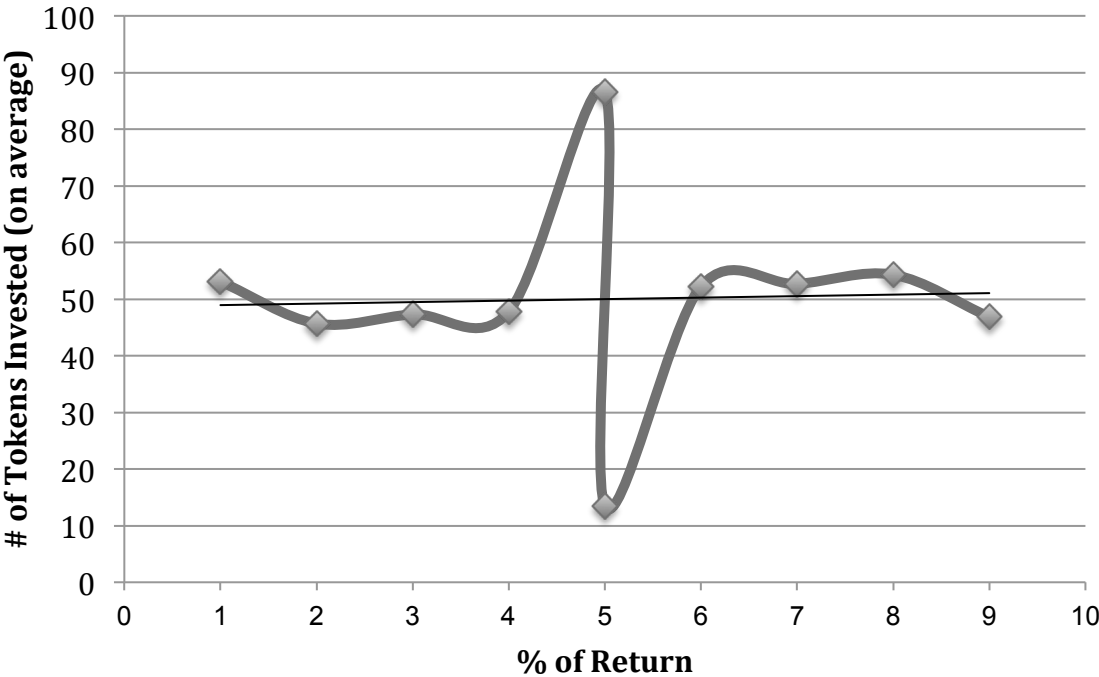


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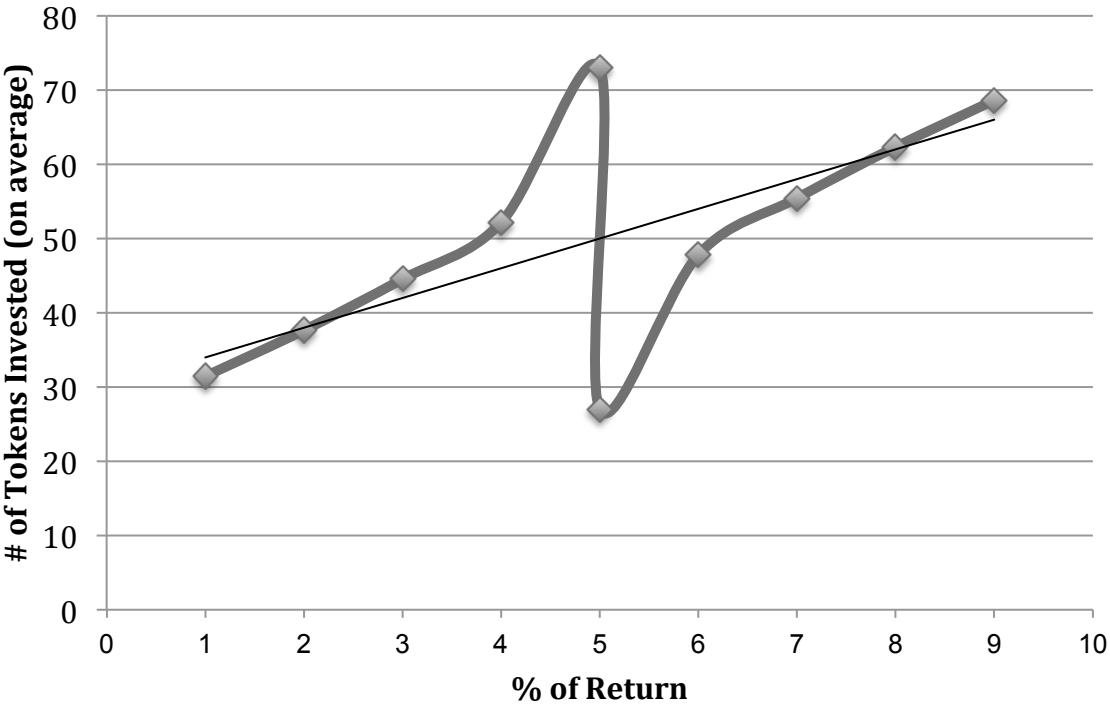
**FIGURE II. Average No. of Tokens for Each Investment Option**



**FIGURE III. No. of Invested Tokens When Higher Paying Options Are Presented First**



**FIGURE IV. No. of Invested Tokens When Lower Paying Options Are Presented First**





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