Visual Finance: The Pervasive Effects of Red on Investor Behavior*

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Abstract

The visual communication of financial information is commonplace and involves numerous facets, including the use of color. At the same time, perception of color influences behavior. Through eight experiments, we show that using red color to represent financial data impacts individuals' risk preferences, expectations of future stock returns, and trading decisions. The effects are not present in colorblind individuals and are muted in China, where red represents prosperity. Other colors, including yellow and blue, do not generate the same effects. Overall, we demonstrate that simple perceptual processes influence complex investor behavior, which is important given society's increasing reliance on visual communication.

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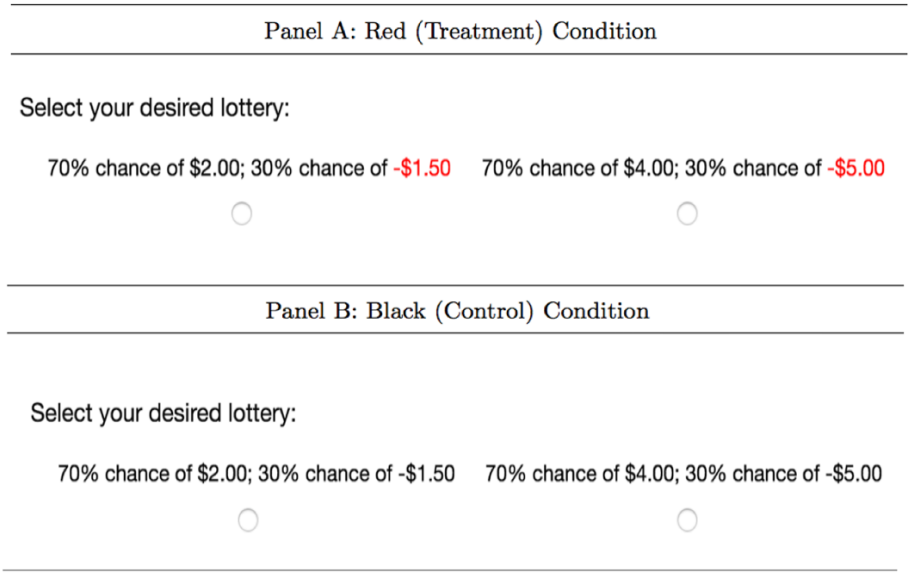
To address these questions, we conduct eight experiments with a total of 1,451 individuals to examine the effects of red color on financial behavior (i.e., risk preferences, expectations, and incentivized stock trading decisions). First, we examine to what extent color influences individuals' financial risk preferences using a standard lottery choice task (e.g., Holt and Laury 2002). We find that when investors view potential financial losses in red, compared to black, the propensity of taking risk is reduced significantly. Specifically, individuals take approximately 20% less risk when shown potential financial losses in red color.

Second, we examine whether color affects investors' beliefs about future expected stock returns. Our results show that when individuals view negative historical stock price data in red, compared to black, their expectations about future returns are reduced significantly. That is, investors are more pessimistic, expecting continuing price declines in the future, while individuals who view the same information, but in black, expect the price trend to reverse, i.e., they predict that prices will rise in the future. We also find that red color reduces investors' reported willingness to purchase stocks, by almost 15%, all else equal.

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Figure A1: Color and Financial Risk Preferences

Each experiment participant was randomly assigned to one of two color conditions: (i) Red, i.e., the treatment condition, for which all potential financial losses were displayed in red color, but all the other information in black color, and (ii) Black, i.e., the control condition, for which all the information was displayed in black. The figure contains an example of the way a risky financial choice pair was displayed to the individuals who were in the treatment group (Panel A) and the control group (Panel B). That is, the only difference was with respect to the color used to visualize potential financial losses.



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Figure A3: Color and Stock Return Beliefs

Each individual was randomly assigned to one of two color conditions: (i) Red condition, i.e., the treatment condition, for which stock price paths were displayed in red color, and all the other information in black color, and (ii) Black condition, i.e., the control condition, for which all the information was displayed in black. The figure contains an example of the way a stock price path was displayed to the individuals who were in the treatment group (Panel A) and the control group (Panel B). That is, the only difference was with respect to the color used to visualize the stock price paths.

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