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Value Functions for Prospect Theory Investors: An Empirical Evaluation for U.S. Style Portfolios

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	Value Functions for Prospect Theory Investors: An Empirical Evaluation for U.S. Style Portfolios
Year:	2018
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Abstract:	<p>The main aim of this article is to provide a general behavioral analysis that proposes a series of different value functions for prospect theory (PT) investors incorporated into behavioral reward-risk models that are finally solved so as to provide some specific optimal solutions. To do this, general behavioral reward-risk models, which contain all the basic elements of the PT, are first set up. Two reward and risk measures, the upper partial moment and the lower partial moment, are subsequently used to create the various value functions. The technical difficulties arising during the behavioral maximization process are overpassed by adapting the Rubinstein [1982] algorithm. The results show that agents differentiate their behavior according to their type of preferences (S shaped, reverse S-shaped, kinked convex, and kinked concave value function) but they seem to always prefer small capitalization and high positively skewed value stock portfolios. Probability distortion also affects the optimal solutions of the problem, independently of the employing weighting functional form; when subjective probabilities are employed the optimal weights of the most risky positively skewed assets seem to increase. Probability distortion has an additional important effect on optimal perspective values of the problem driving to a significant increase.</p> <p>KEYWORDS Prospect theory; Probability distortion; S-shaped value function; Loss aversion; Behavioral portfolio optimization; Upper partial moment; Lower partial moment</p>