

# Portfolio Performance Manipulation and Manipulation-proof Performance Measures

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Numerous measures have been proposed to gauge the performance of active management. Unfortunately, these measures can be gamed. Our article shows that gaming can have a substantial impact on popular measures even in the presence of high transactions costs. Our article shows there are conditions under which a manipulation-proof measure exists and fully characterizes it. This measure looks like the average of a power utility function, calculated over the return history. The case for using our alternative ranking metric is particularly compelling for hedge funds whose use of derivatives is unconstrained and whose managers' compensation itself induces a nonlinear payoff. (*JEL* G11, G23, G24)

Money managers often claim that they can provide superior performance in their funds. Investors must rank and then select managers based upon these claims, and any other information at their disposal. Ideally, manager evaluation requires a consideration of the inputs to the investment process as well as the resulting outcomes. Inputs include answers to questions such as: What is a fund's style and investment philosophy? Does the fund practice closet indexing, does it have high expenses or high turnover, does it employ window dressing, or engage in behavior which might result in portfolios with aberrant performance?<sup>1</sup> An assessment of the inputs allows the returns that are earned to be evaluated in light of the risks undertaken and the expenses incurred.

Along with this input information, output information measured by periodic rates of return is readily available for most—but not all—sectors

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This article has benefited from the comments of an anonymous referee and Maureen O'Hara at the *The Review of Financial Studies* and numerous colleagues including the participants at the Five Star Conference hosted by New York University, the Hedge Fund Conference hosted by Borsa Italiana, and the Berkeley Program in Finance. Address correspondence to Jonathan Ingersoll, Yale School of Management, PO Box 208200, New Haven, CT 06520-8200, or e-mail: jonathan.ingersoll@yale.edu.

<sup>1</sup> See, for example, Brown and Goetzmann (1997) on style investing, Cremers and Petajisto (2006) on closet indexing, and Lakonishok et al. (1991) on window dressing. "Aberrant" is used here only in the statistical sense of a sample not representing the population. An example of a practice that can result in aberrant performance is writing covered calls. This was a common portfolio technique in the 1980s and resulted in superior performance provided the underlying portfolio or stocks did not have very large gains. Of course, the realized performance is aberrant only if the actions and its consequences were unanticipated or unusual.