



L-performance with an application to hedge funds [☆]

Serge Darolles ^{a,b}, Christian Gouriou ^{b,c,d}, Joann Jasiak ^{e,*}

^a SGAM AI, France

^b CREST, France

^c CEPREMAP, France

^d University of Toronto, Canada

^e York University, Canada

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ABSTRACT

This paper introduces a new parametric fund performance measure, called the L-performance. The L-performance is an alternative to the Sharpe performance, which is commonly used in practice despite its inability to account for skewness and heavy tails of unconditional return distributions. The L-performance improves upon the Sharpe measure in this respect. Technically, it resembles the Sharpe measure in that it is defined as a ratio of the first- and second-order moments, which are the trimmed L-moments instead of the conventional (power) moments. The trimming parameters allow for focusing the L-performance on specific risk levels of interest, according to financial risk criteria. For illustration, a set of L-performances is computed for a variety of hedge funds. The empirical study shows the use of L-performance for fund ranking and return smoothing (manipulation) control.

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1. Introduction

Sharpe performance is the basic measure of performance used for fund comparison, ranking and segmentation [see e.g. Sharpe (1966), Lo (2002), Darolles and Gouriou (2008)]. By definition, the Sharpe performance is a ratio of the sample mean and standard deviation of excess returns. These two statistics do not always provide adequate characterizations of return distributions, especially in the presence of skewness and/or heavy tails. In particular, the sample mean is not a robust location measure, and the standard error may not even exist in heavy tailed distributions. This is of special importance in the analysis of the (unconditional) distributions of hedge fund returns, whose departures from normality are evidenced and related to some liquidity and management effects [see e.g. Getmansky et al. (2003)].

The aim of this paper is to introduce a new parametric performance measure, called the L-performance, which accommodates skewed and heavy tailed distributions better than the Sharpe ratio. By analogy to the Sharpe performance, the L-performance is defined as a location measure divided by a dispersion measure, which are the first- and the second-order trimmed L-moments. Like conventional moments, the (trimmed) L-moments summarize various characteristics of a distribution, such as the location,

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* Corresponding author.

E-mail addresses: serge.darolles@sgam.com (S. Darolles), gouriero@ensae.fr (C. Gouriou), jasiakj@yorku.ca (J. Jasiak).