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Theory and Methodology

## A data envelopment analysis approach to measure the mutual fund

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## Abstract

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## Abstract

In this paper we present a model which can be used to evaluate the performance of mutual funds. This model applies an operational research methodology, called data envelopment analysis (DEA), which allows to measure the relative efficiency of decision making units. This approach allows to define mutual fund performance indexes that can take into account several inputs and thus consider different risk measures and, above all, the investment costs (subscription costs and redemption fees). Moreover, the DEA approach can naturally envisage other output indicators, in addition to the mean return considered by the traditional indexes. Therefore, a generalized version of the DEA mutual fund performance indexes is defined, too, which includes among the outputs a stochastic dominance indicator that reflects both the investors' preference structure and the time occurrence of the returns. In addition, the procedure allows to identify, for each mutual fund, a composite portfolio which can be considered as a particular benchmark. The performance indexes proposed are tested on empirical data.

## Keywords

Finance; Data envelopment analysis; Mutual fund performance indexes

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Corresponding author. Tel.: +39-040-6767061; fax: +39-040-54209

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