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Conditionally fitted Sharpe performance with an application to hedge fund rating

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ABSTRACT

We define a battery of Sharpe performance measures, which differ by the information taken into account in their computation, but also by the potential use of the fund by the investor. Four advantages of Sharpe performance based rating are especially important for the investor. First, the performance measures correspond to the standard measures used for mutual funds and known by retail investors. Second, we can compare the numerical results, even if they are obtained with different assumptions. Third, the rankings are based on regression analysis and easy to compute. Fourth, we can easily use these performance measures in the design of an optimal basket of hedge funds. Finally, we can use the performance measures to partition the set of funds into homogenous segments.

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1. Introduction

The hedge fund industry has grown quickly during the last 10 years and represents now about $1600 billions of assets and more than 9000 funds. However, this market is still in its infancy, which explains the relative lack of information on the definition of strategies, portfolio allocations, risk and performance measures. As in the mutual fund industry,[1] the current trend is to diffuse information on hedge funds by means of ratings regularly elaborated by specialized agencies and published in general or specialized newspapers. Two kinds of ratings have been historically proposed. The first ones, introduced by Standard and Poor's in the mid-1970's, are qualitative and based on advanced funds due diligence and manager interviews. Due to the cost of such analysis, the results were not free of charge, and only a few funds were analysed. This explains the success of quantitative ratings based on historical return data, first proposed by Morningstar in the mid-1980's, then followed by Standard and Poor's, Lipper, Aptimum and more recently by Edhec-Europerformance (see, e.g. Amenc and Le Sourd (2005) for a detailed study of these ratings). These ratings can easily be proposed free of charge; they already cover all mutual funds and can be successfully adapted to hedge funds, at least in a preliminary analysis. Indeed, most hedge funds use highly dynamic investment strategies, can have short sell and, in this respect, are different from mutual funds. But, even if we have full transparency on the holdings at some specific dates, we do not get the whole information on the dynamic strategy followed by the fund manager. Historical return data[2] are generally the only source of information for performance estimation and risk analysis. Indeed, retail investors do not have access to managed accounts facilities (i.e. full transparency on the fund holdings) and then must only use historical returns in their funds selection process. This explains why standard quantitative ratings are also used for hedge funds, at least in a first step. These quantitative ratings are most of the time poorly explained, and often misunderstood not only by retail investors, but also by more specialized ones including pension funds, corporates and institutional investors. The aim of this paper is to review in detail the ratings based on the Sharpe performance measures and to standardize their use. We insist on the fact that all performance measures must be investor driven, and not model driven.

In Section 2, we recall the derivation of a conditional Sharpe performance measure in the mean–variance management framework. This derivation shows that different Sharpe performances can be constructed for a given fund. They depend on the information of the investor, but also on the type of other investments, that

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[1] The gap between mutual funds and hedge funds is diminishing rapidly with the so-called "hedged mutual funds", that are mutual funds mimicking hedge fund strategies, but still regulated by the Securities and Exchange Commission (SEC) (see Agarwal et al. (2009)).

[2] And the design of the allocation between investor's account, provision account and management account (see Darolles and Gourieroux (2009)).

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