

YMC2004 TALK ABSTRACT

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Title: Using Scale Mixtures of Normals to Model Continuously Compounded Return

Description:

In this paper, a new method for estimating the parameters of scale mixtures of normals is introduced and evaluated. The new method is called UNMIX and is based on minimizing the weighted square distance between exact values of the density of the scale mixture and estimated values using kernel smoothing techniques over a prespecified grid of x-values and a grid of potential sigma values. Applications of the method are made in modeling the continuously compounded return of stock prices. Modeling this ratio with UNMIX proves promising in comparison with other existing techniques that use only one normal component, or those that use more than one component based on the EM algorithm as the method of estimation.