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Rod A Freed* (rfreed@uci.edu), 25832 Empresa, Mission Viejo, CA 92691. *Estimating the Risk Versus Return Trade Off.*

When estimating the investor's risk versus return trade off, the investigator faces (at least) two major problems. First he/she doesn't know the form of the function which relates the return on an asset (or assets) to the factors which determine the asset's return. Second, he/she doesn't know the form of the probability distribution which describes the behavior of the system's variables (although we often assume normality). To solve these problems, we define the conditional empirical distribution function. We show that this distribution is the best estimator of the investor's risk versus return function. We also prove that this distribution converges almost surely to the true risk versus return trade off function. (Received June 25, 2007)