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Equilibrium relations in a capital asset market: A mean absolute deviation approach

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Abstract

We consider the equilibrium in a capital asset market where the risk is measured by the absolute deviation, instead of the standard deviation of the rate of return of the portfolio. It is shown that the equilibrium relations proved by Mossin for the mean variance (MV) model can also be proved for the mean absolute deviation (MAD) model under similar assumptions on the capital market. In particular, a sufficient condition is derived for the existence of a unique nonnegative equilibrium price vector and derive its explicit formula in terms of exogeneously determined variables. Also, we prove relations between the expected rate of return of individual assets and the market portfolio.



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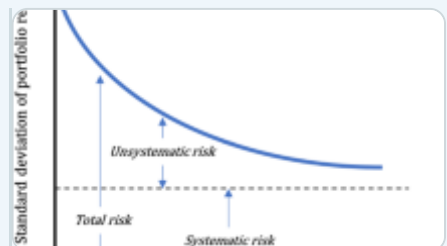
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