

Projective system approach to the martingale characterization of the absence of arbitrage

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Abstract

The equivalence between the absence of arbitrage and the existence of an equivalent martingale measure fails when an infinite number of trading dates is considered. By enlarging the set of states of nature and the probability measure through a projective system of perfect measure spaces, we characterize the absence of arbitrage when the time set is countable.

Key words: Absence of Arbitrage, Martingale Measure, Asset Pricing, Perfect Measures, Projective Systems

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