

Additive discount functions through Arbitrage Theory

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This paper aims to derive the decomposability of discount functions from the Arbitrage Theory proposed by Kreps and Clark which involves a certain number of well-known financial markets. The framework of this model is a locally convex real linear topological space X in which a convex cone C defines a vector order. Additionally, there exist markets for only some of the contingent claims of X which assigns a price p_i to the marketed claim m_i . Later, the time has been included in this model as a characteristic inherent to contingent claims. In this way, the additivity of discount functions has been derived as a particular case of the general theory and by using some specific trading strategies.