

Tsallis Algebra Applications to Finance

Abstract: We briefly review how naturally Tsallis algebra, also called q -calculus, may be applied to financial applications, and how actually silently accompanied the lifetime research experience of the speaker. In particular, we would show that the concept of q -sum is linked to a specific class of capacities and fuzzy measures that can be used as a parametrization of the bid-ask spread. The concept of q -product leads instead to the celebrated concept of copula, and in particular the Clayton copula. We will also show that q -calculus emerge as the natural kind of financial calculus in stochastic clock models of financial price dynamics.