

# Universal behaviour of interoccurrence times in financial markets and elsewhere - A nonextensive thermostatistical approach

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## Abstract

Boltzmann-Gibbs entropy and statistical mechanics are very successfully applicable to systems whose total number of microscopic configurations  $W$  increases exponentially with the number of elements  $N$  of the system. For those -- very many -- complex systems whose  $W$  increases as a power-law of  $N$ , the appropriate entropy is instead the nonadditive Sq one. Many financial phenomena appear to be of this type. Consistently, they exhibit laws of the same type that emerge in earthquakes and DNA structures. We will introduce the basic concepts, and illustrate this universality for the distribution of interoccurrence times and risk functions.