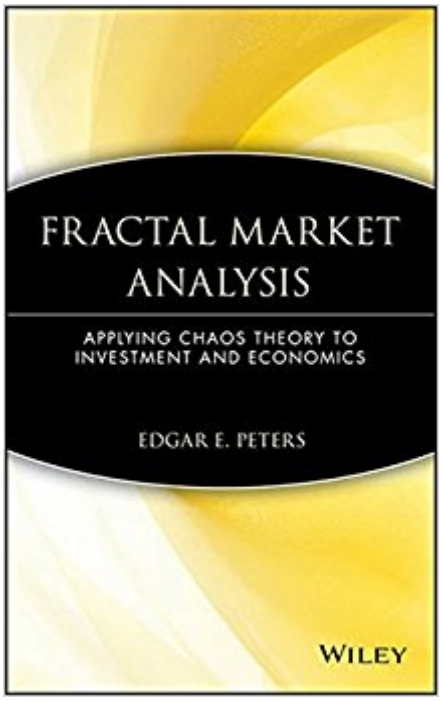
Fractal Market Analysis: Applying Chaos Theory To Investment And Economics



Synopsis

A leading pioneer in the field offers practical applications of this innovative science. Peters describes complex concepts in an easy-to-follow manner for the non-mathematician. He uses fractals, rescaled range analysis and nonlinear dynamical models to explain behavior and understand price movements. These are specific tools employed by chaos scientists to map and measure physical and now, economic phenomena.

Book Information

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Customer Reviews

Reviewed by Michael P. CorningEdgar E. Peters wasn't satisfied with the Efficient Market Hypothesis (EMH). With the publication of his first book, Chaos and Order in Capital Markets, John Wiley & Sons, New York, 1991, he went public with his concerns about its underlying assumptions and with its empirical shortcomings. That book, a manifesto really, was followed last year by Fractal Market Analysis: Applying Chaos Theory to Investment & Economics (FMA). Where his first book broke ground, FMA has laid the foundation of a new conceptual infrastructure of capital markets.Risk From The PastMuch of Peters argument is based on two things: one hundred three years of daily Dow Jones Industrial Average data, and Rescaled Range (R/S) analysis. He begins FMA by demonstrating that capital market returns in the United States are not a truly random walk. Instead, he contends they are a biased random walk and indicate a long memory process; they are persistent. Specifically. he characterizes their short term behavior (less than 1,200 days) as a stochastic nonlinear process and their long term behavior as a nonlinear dynamic, or chaotic, process. As a result, he enlarges the definition of risk to include a phenomenon he discovered about

persistent processes: they are mirrored by antipersistent ones. If persistent processes are less random than random ones, antipersistent processes reverse themselves more often than random ones. An early insight due to this discovery is that risk in not merely the deviation from an expected value, viz., standard deviation, but the velocity of the second difference of price changes.Peters offers the Stable-Levy, or fractal, frequency distribution as a more faithful representation of capital markets.