

#### عنوان مقاله:

Efficient estimation of Markov-switching model with application in stock price classification

### محل انتشار:

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#### خلاصه مقاله:

In this paper, we discuss the calibration of the geometric Brownian motion model equipped with Markov-switching factor. Since the motivation for this research comes from a recent stream of literature in stock economics, we propose an efficient estimation method to sample a series of stock prices based on the expectation-maximization algorithm. We also implement an empirical application to evaluate the performance of the suggested model. Numerical results through the classification of the data set show that the proposed Markov-switching model fits the actual stock prices and reflects the main stylized facts of market dynamics. Since the motivation for this research comes from a recent stream of literature in stock economics, we propose an efficient estimation method to sample a series of stock prices based on the expectation-maximization algorithm. Numerical results through the classification of the data set show that the proposed Markov-switching model fits the actual stock prices and reflects the main stylized facts of market dynamics. Since the motivation for this research comes from a recent stream of literature in stock economics, we propose an efficient estimation method to sample a series of stock prices based on the expectation-maximization .algorithm

# كلمات كليدى:

Regime-switching model, Estimation of Parameter, Expectation-maximization algorithm, Classification

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