

MULTIFRACTAL FORECASTING MODEL CRISIS OF FOREIGN EXCHANGE MARKET

The existing efficient market theory cannot explain the long discussions of the price fluctuations distribution, volatility clustering and crisis causes. In contrast, the multifractal theory of the market suggests the coexistence of agents with different strategies, working in different time intervals with different volumes and price dynamics. So it is similar at different scales. It is precisely the multifractal theory that is characterized by an infinite hierarchy of dimensions. And it gives the total nature description of self-similar objects and helps to distinguish homogeneous from heterogeneous objects. The concept of multifractal formalism provides an effective tool to study and quantify a wide variety of complex systems.

The application procedures of multifractal analysis shows multifractal time series exchange rate. The function of multifractality and the values of the generalized Hurst coefficient indicate the existing distribution of fractal series coefficients. That is the multifractality.

With the help of multifractal model of the crisis of monetary conditions it is proved that the change of fractal properties of time series is an indicator of a currency crisis. On the basis of calculations of the local Hurst coefficient we can see that the decrease in its value is a fractal indicator and a forerunner of a currency crisis.