Markov regime switching GARCH model for financial series

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In this paper we analyze the use of Markov regime switching models for the conditional variance. These models can estimate easily and intelligently variance conditional observed on the previous variance and the regime. Use the Bovespa series index between January 2003 and April 2012 and adjusted the GARCH (1,1) model with regime switching following a chain of first order Markov considering two regimes.

**Keywords**: GARCH models; Markov regime switching; Volatility.