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CHANGING-REGIME VOLATILITY: A FRACTIONALLY INTEGRATED SETAR MODEL

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Changing-regime volatility: A fractionally integrated SETAR model*

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Abstract

This paper presents a 2-regime SETAR model with different long-memory processes in both regimes. We briefly present the memory properties of this model and propose an estimation method. Such a process is applied to the absolute and squared returns of five stock indices. A comparison with simple ARFIMA models is made using some forecastability criteria. Our empirical results suggest that our model offers an interesting alternative competing framework to describe the persistent dynamics in modeling the returns.

Keywords: SETAR - Long-memory - Stock indices - Forecasting.

JEL classification: C32, C51, G12

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