Preliminary Analysis On Hybrid Box-Jenkins - GARCH Modeling In Forecasting Gold Price

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ABSTRACT

Gold has been regarded as a valuable precious metal and the most popular commodity as a healthy return investment. Hence, the analysis and prediction of gold price become very significant to investors. This study is a preliminary analysis on gold price and its volatility that focuses on the performance of hybrid Box-Jenkins models together with GARCH in analyzing and forecasting gold price. The Box-Cox formula is used as the data transformation method due to its potential best practice in normalizing data, stabilizing variance and reduces heteroscedasticity using 41-year daily gold price data series starting 2nd January 1973. Our study indicates that the proposed hybrid model ARIMA-GARCH with t-innovation can be a new potential approach in forecasting gold price. This finding proves the strength of GARCH in handling volatility in the gold price as well as overcomes the non-linear limitation in the Box-Jenkins modeling.

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