Forecasting Volatility in Copper Prices Using Linear and Non-Linear Models

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***Abstract*—Copper is one of the oldest and highest traded commodities on the Indian commodity market. Its price is based on demand and supply. With the 'Make in India' and 'Smart Cities' project in process there is a large amount of copper requirement in speculation, which in turn shall cause a sudden increase in demand and bring volatility in copper prices. Therefore, there is a need to study the price behaviour of copper spot prices in India. The study uses data from April 2007 to September 2016 of copper spot prices on Multi-Commodity Exchange. We conduct Autoregressive Integrated Moving Average (ARIMA) method and Multi-layer Prediction (MLP) Artificial Neural Network (ANN) method for predicting volatility in copper prices. The study finds MLP neural network provides better forecasting accuracy compared to ARIMA on the basis of Root Mean Square (RMS) errors and forecast errors.**

***Index Terms*: volatility, ARIMA, artificial neural networks, MLP**

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