

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

**Siti Roslindar Yaziz<sup>1</sup>, Noor Azlinna Azizan<sup>2</sup>, Maizah Hura Ahmad<sup>3</sup>, Roslinazairimah Zakaria<sup>4</sup>,  
Manju Agrawal<sup>5</sup> and John Boland<sup>5</sup>**

<sup>1</sup>Faculty of Industrial Sciences & Technology, Universiti Malaysia Pahang, Malaysia

<sup>2</sup>Faculty of Technology, Universiti Malaysia Pahang, Malaysia

<sup>3</sup>Department of Mathematics, Faculty of Science, Universiti Teknologi Malaysia, Malaysia

<sup>4</sup>Faculty of Industrial Sciences & Technology, Universiti Malaysia Pahang, Malaysia

<sup>5</sup>School of Information Technology & Mathematical Sciences, University of South Australia, Australia

### **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 2<sup>nd</sup> 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.

**KEYWORDS:** Gold

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