



The University of Chicago
Department of Statistics

MASTER'S THESIS PRESENTATION

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**Forecasting of Nonstationary Nonlinear Time Series of
Gold Price By Autoregressive Integrated Moving
Average and Feed Forward Neural Networks**

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110 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

This work is motivated by data on daily Gold Prices from the London PM Fix (Noon fixing time). In order to limit the scope of the data, the data were collected from 01/02/2001 to 12/29/2011. The univariate time series of gold price (in US dollar against one ounce of gold) is nonlinear and non-stationary. The aim of the analysis is to develop forecast models for predicting gold price. In this paper, I review two approaches of finding better forecasting model from many candidate models. One is a statistical method such as Autoregressive Integrated Moving Average and the other is Artificial intelligence method such as Feed Forward Neural Networks. Then, their performance was compared using root mean square error, and mean absolute percentage error.

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