

**MEDIAN ABSOLUTE PERCENTAGE ERRORS (MdAPE)
ON ERRORS FROM SIMPLE MOVING AVERAGE METHODS
FOR INDEPENDENT NORMAL TIME SERIES**

*Louie Ren, University of Houston, Victoria, Texas, 281-757-9965, renl@uhv.edu,
Yong Glasure, University of Houston, Victoria, Texas, 361-570-4848, glasurey@uhv.edu*

ABSTRACT

This study shows the commonly used Mean Absolute Percentage Error (MAPE) will mislead researchers when attempting to distinguish forecasting accuracies from different Moving Average Methods for popular independent time series from Normal, T, Uniform, and Chi-Squared distributions with moderate coefficients of variation (c.v.), say between 0.4 and 4. The complexity from the ratios of absolute errors will be released only when the c.v. is very small, or when the c.v. is very large. In this study, simulation findings show the Median Absolute Percentage Error (MdAPE) will improve accuracy of forecasting by taking care of outliers from MAPE. MdAPE can only provide consistent forecasting accuracies as the Mean Absolute Deviation (MAD) for independent normal time series with moderate c.v.'s for medium or long term forecasts. In general, the MAD is recommended for use when valuating forecasting methods on random time series.