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Vindya Kumari Pathirana* (vindya.pathirana@uconn.edu), Department of Mathematics, University of Connecticut, 99 E. Main Street, Waterbury, CT 06702. *Mahalanobis Based k-Nearest Neighbor with Change Point Detection for Foreign Exchange Data*. Preliminary report.

Discovering the time points where changes occur, called change point detection is highly important in Foreign Exchange (FX) trading. Researchers have adopted various change point detection methods for identifying the abrupt changes in time series data. We incorporate the change point detection technique with Mahalanobis distance based k-nearest neighbor forecasting procedure for daily exchange rate data. Our methods are based on the directional change in daily currency rates. We perform a comparative study on FX rate forecasting and decision making with change point detection for various currency data sets. (Received September 26, 2017)