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FM 431: Econometrics of Financial Markets

Fall 2008

Analyzing a Time Series of American Presidents' Approval Ratings

Outline of our efforts:

1. Load the series, convert it into a time series object, plot it.
2. Investigate the acf and the pacf.
3. Compare different candidate models:

   AR(1), AR(2), MA(1), MA(2), ARIMA(1,0,1), ARIMA(2,0,1), ARIMA(1,0,2)

   w.r.t. AIC and autocorrelation in residuals.
4. Using a suitable ARMA model, produce a forecast for the approval ratings in the next 12 months.
5. What if we use a non-stationary model? Should we do that? Compare candidate models:

   ARIMA(1,1,0), ARIMA(2,1,0), ARIMA(0,1,2), ARIMA(1,1,1),
   ARIMA(2,1,1), ARIMA(1,1,2)

   w.r.t. AIC and autocorrelation in residuals.
6. Using a suitable ARIMA model, produce a forecast for the approval ratings in the next 12 months.
7. Discussion; among others: the need for judgment in forecasting.