11 ARMA Notes

Monday, February 8, 2021 6:40 PM

most econ variables are non-stationary

stationary linear models are building blocks in more complicated non-linear and/or non-stationary models

The Wold Decomposition

Any stationary process $\{z_t\}$ can be expressed as a sum of two components

1) Stochastic: linear combination of a white noise process
2) Deterministic: uncorrelated with stochastic

Importance of Wold

Any stationary process can be written as a linear combination of a lagged value of a white noise process

MA(q) Processes

MA(1) stationarity and Ergodicity

Ergodicity: A point visits all available places

Invertibility: z_t if it admits an autoregressive representation