

## TS Module 16 ARIMA Forecasting

(The attached PDF file has better formatting.)

- ARIMA forecasting: moving average processes
- Random walk with drift
- ARMA(1,1) process

Read from the MA(1) heading on page 197 through page 198, stopping at the “Random walk with drift” heading. Know equation 9.3.21 at the middle of page 197 and equation 9.3.22 at the top of page 198. The forecasts are simple for the MA(1) model.

Read from “Random walk with drift” on page 198 through ARMA(p,q) on page 199.

Know equation 9.3.26 in the middle of page 198 and equation 9.3.27 on page 199. As the authors say: “In contrast to the stationary case, here  $\text{Var}(\epsilon_i(l))$  grows without limit as the forecast lead time  $l$  increases.”

Read from ARMA(p,q) on page 199 until “To argue the validity ...” at the bottom of page 200. Know the formulas for the ARMA(1,1) process: Equation 9.3.30 on page 199 and equation 9.3.32 at the top of page 200.

Read “Non-stationary models” from page 201 through end of page 202. You don’t have to memorize the equations in this sub-section.