

## Exercises – Week 4

For this exercise ignore seasonality as I will get onto SARIMA models next tutorial.

1. For your series of choice produce the acf
2. For the same series take the difference and produce the acf for that differenced series
3. For the same series take the logged values and produce the acf
4. For the logged series take the difference and produce the acf for that differenced series
5. Using the acf (and looking at original series) decide if you need to model the original or logged series or the differenced (i.e. which of the 4 options seems to closest to stationary)
6. From your choice produce the pacf also
7. From whether you differenced or not ( $I=1$ ,  $I=0$ ) the acf and pacf decide  $p$  and  $q$
8. Run this series through `auto.arima` function in R. What does it say is the  $ARIMA(p,d,q)$  model