Autoregresive Integrated Moving Averange

ARMA= ARIMA (p,0,q)

Autoregressive

AR(1)

Pt = π + ϴ Pt-1 + ϵt

Random walk AR(1) ϴ=1

White noise AR(1) ϴ=0

Stationary= -1<ϴ<1

ϴ (-) mean reversing

ϴ (+) trend following

Autokorelasi

AR(1)

Lag 0 = 1

Lag 1 = ϴ

Lag 2 = ϴ^2

Lag 3 = ϴ^3

AR(2)

Pt = π + ϴ1 Pt-1 + ϴ2 Pt-2 + ϵt

AR(3)

Pt = π + ϴ1 Pt-1 + ϴ2 Pt-2 + ϴ3 Pt-3 + ϵt

Cara nentuin AR brp:

1. Partial Autokorelasi
2. Information criterian

PACF

Pt = π + ϴ1 Pt-1+ ϴ2Pt-2 + ϵt

IC:

1. Akaike Information criteraition (AIC)
2. Bayesian Information criteraitio (BIC)

Moving Average

MA(1)

Pt= π + ϵt - ϴϵt-1

ϴ=0 white noise

ϴ (-) mean reversing

ϴ (+) trend following

Autokorelasi MA(1)

Lag 1 = ϴ / (1+ ϴ^2)

Lag 2 = (ϴ / (1+ ϴ^2))^2

Lag 3 = (ϴ / (1+ ϴ^2))^3

MA(2)

Pt= π + ϵt - ϴ1ϵt-1- ϴ2ϵt-2