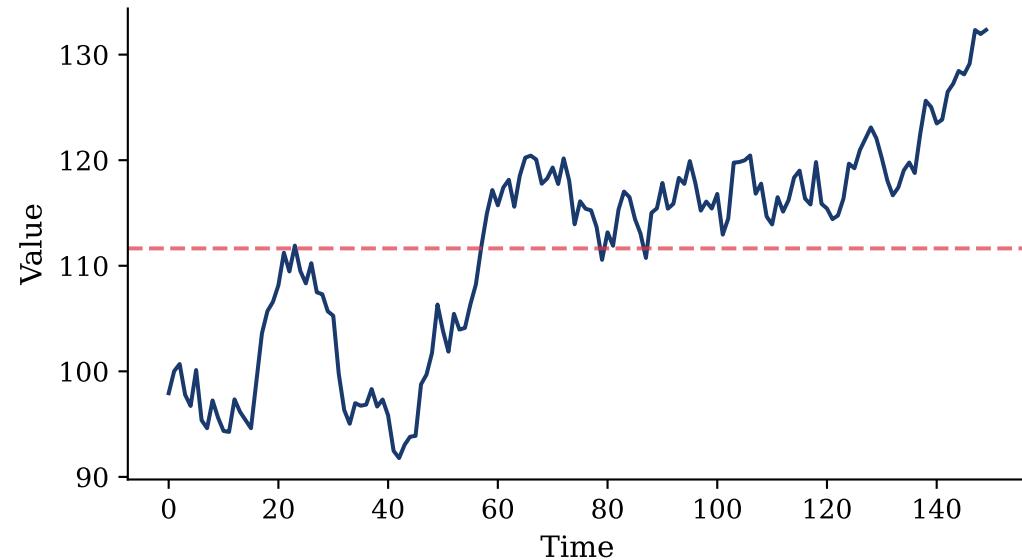
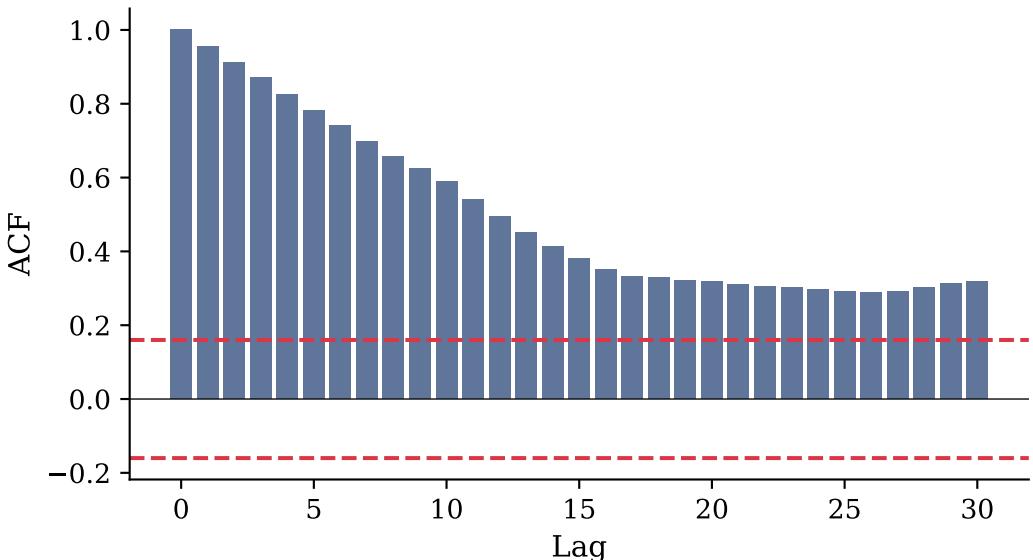


# The Magic of Differencing: Converting Non-Stationary to Stationary

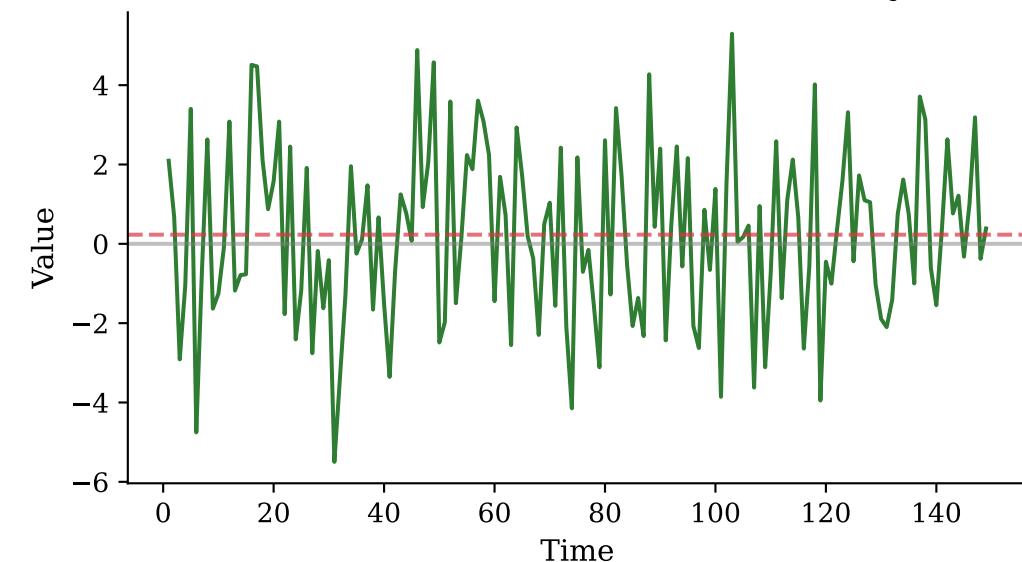
**Original Series:  $Y_t$  (Non-Stationary)**



**ACF of  $Y_t$ : Slow Decay (Unit Root)**



**Differenced:  $\Delta Y_t = Y_t - Y_{t-1}$  (Stationary)**



**ACF of  $\Delta Y_t$ : Quick Decay (Stationary)**

