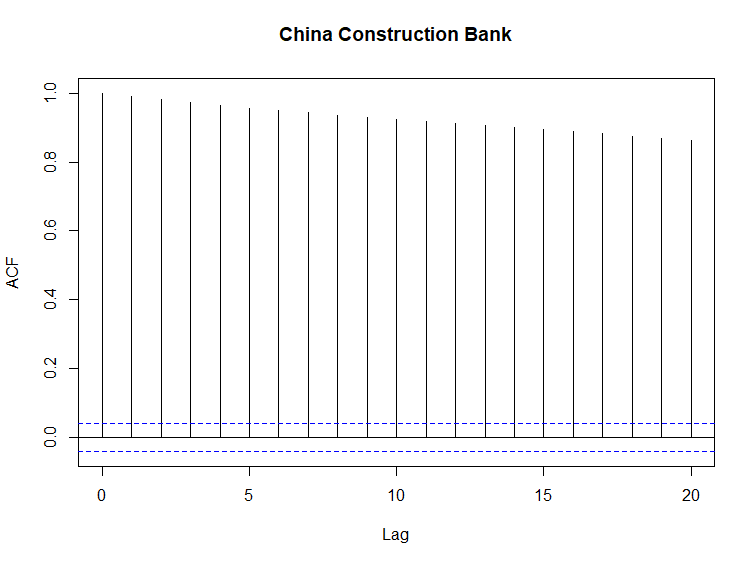
# Straightforward price difference

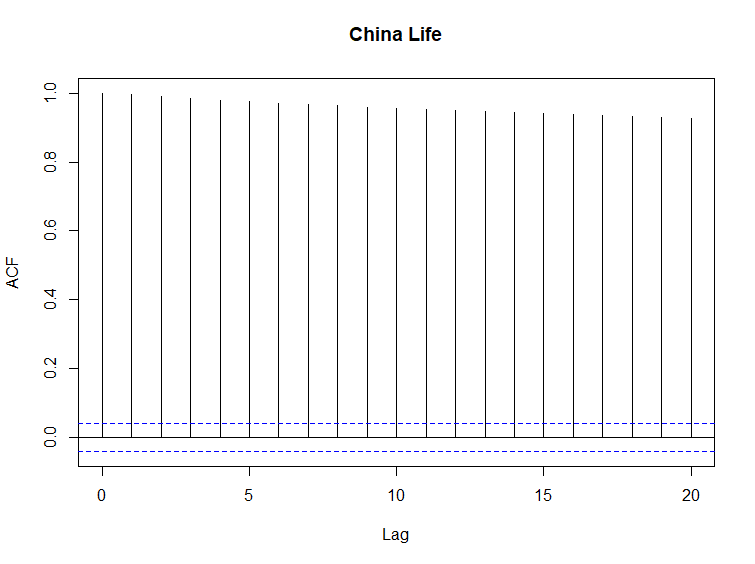
When studying price differences, one intuitive subject is the straightforward difference between the prices or the log value of the prices. Following this idea, we first investigate the difference from the raw prices or their log values. Denote and to be the (foreign exchange adjusted) A- and H- price of the i-th stock at time t. And define

as the absolute price difference, log price and log price difference, respectively.

Difference of raw price

After looking into the ACFs of of all the stocks, we find a very strong serial correlation. For instance, the ACF plots of China Construction Bank (A: 601939.SH, H: 00939.HK, Sector: Banking) and China Life (H: 02628.HK, A: 601628.SH, Sector: Insurance) are as follows with lag 20 (monthly lag).





Then we turn to ACF