

Percentile method

This non parametric method gets two inputs from the user: High threshold - a percentile from the list: (0.9, 0.95, 0.975, 0.99) and Low threshold - a percentile from the list: (0.1, 0.05, 0.025, 0.01). Accordingly, lower and upper bounds (dashed gray lines in the below figure) are drawn and all observations between them are considered 'normal' (green points) while red points are considered outliers. The lower panel presents basic statistics of: Normal observation (excluding outliers), all outliers, positive outliers (above the upper threshold - dashed gray line), and negative outliers (below the lower threshold - dashed gray line). 'mean' and 'sd' are arithmetic mean and standard deviation, respectively; 'Obs.' is the number of observations (can be changed using the sliders); 'NAs' and 'pos' are the number of Not Available (NA) and positive values observations, respectively; 'sum' is the simple sum of observations ($sum = mean \cdot Obs.$), 'skew' is a measure of asymmetry (skewness; 0 in normal distribution) while 'kurt' is a measure of fat tails (kurtosis; 0 in normal distribution); 'Q25' and 'Q75' are the percentile 25 and 75 of the distribution, respectively; 'AC1' is the auto correlation coefficient of one lag, and 'JB' is the Jarque-Bera test for normal distribution.

