## Help on IQR (Inter Quartile Range) method

IQR is defined by this method as: IQR = percentile(75) - percentile(25). For example, if percentile(75) = 5 it means that 75 percent of the observations are smaller or equal to 5. Once K is determined by the user, selecting from the radio buttons list (1.5, 2, 2.5, 3), the upper threshold is calculated as:  $Q3 + K \cdot IQR$  and the lower one as:  $Q1 - K \cdot IQR$  where, Q3 and Q1 are the percentiles 75 and 25, respectively.

In the figure, both lower and upper thresholds (dashed gray lines in the below figure) are drawn accordingly, 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).

The lower panel presents basic statistics on: (1) Normal observations (2), All outliers (3), Positive outliers, and (4) Negative outliers. 'mean', 'median', and 'sd' are arithmetic mean, arithmetic median, and standard deviation, respectively; max and min are the maximum and minimum, respectively; 'Obs.' is the number of observations; 'NAs' and 'pos' are the number of Not Available (NA) and positive 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.





