$$K = \frac{\mu_4}{\left(\mu_2\right)^2} - 3.$$

The Jarque-Bera statistic is asymptotically distributed as a Chi-squared with two degrees of freedom. For values of *n* in the range [7,2000] the operation provides critical values obtained from Monte-Carlo simulations. For further details or if you would like to run your own simulation to obtain critical values for other values of *n*, use the JarqueBeraSimulation example experiment.

StatsJBTest reports the number of finite data points, skewness, kurtosis, Jarque-Bera statistic, asymptotic critical value, and the critical value obtained from Monte-Carlo calculations as appropriate; it ignores NaNs and INFs.

References

Jarque, C., and A. Bera, A test of normality of observations and regression residuals, *International Statistical Review*, *55*, 163-172, 1987.

See Also

Chapter III-12, **Statistics** for a function and operation overview; **StatsKSTest**, **WaveStats**, and **StatsCircularMoments**.

StatsKDE

StatsKDE [*flags*] *srcWave*

StatsKDE can be used to estimate a PDF from original data distribution. Unlike histograms, this method produces a smooth result as it constructs the PDF from a normalized superposition of kernel functions.

The StatsKDE operation was added in Igor Pro 7.00.

Flags

/BWM=*m* Sets the bandwidth selection method.

- *m*=0: User-specified via /H flag
- *m*=1: Silverman
- *m*=2: Scott
- *m*=3: Bowmann and Azzalini

/DEST=*destWave* Specifies the output destination. Creates a real wave reference for the destination wave in a user function. See **Automatic Creation of WAVE References** on page IV-72 for details.

/FREE Makes the destination wave (specified by /DEST) a free wave.

/H=bw Specifies a fixed user-defined bandwidth.

/KT=*kernel* Specifies the kernel type.

- *kernel*=1: Epanechnikov
- *kernel*=2: Bi-weight
- *kernel*=3: Tri-weight
- *kernel*=4: Triangular
- *kernel*=5: Gaussian
- *kernel*=6: Rectangular

/Q No results printed in the history area. In the case of univariate KDE this flags suppresses the printing of the bandwidth value.

/S={*x0*,*dx*,*xn*} Specifies the range of the output starting from x=*x0* to x=*xn* in increments of *dx*.