Data

The data sample are presented according both the conversion type and by the sliders. The data are sorted by the date (descending) and can be both one or many series (to select more than one series hold the <Ctrl> button and left click the mouse). Use the sliders to change the sample period and the radio buttons (right to the series names) to change the conversion type. The conversion type options are:

- default: Reads the conversion type from the excel file (Tab: meta) for each selected series.
- non: Do not convert the original series.
- ratio: Calculates the rate of return, $\frac{s_t}{s_{t-1}} - 1$ where, s_t is the observation at period t.
- diff: Calculates the difference between two consecutive observations, $s_t - s_{t-1}$.
- log: Takes the ln of the series. for zero values it adds 0.0001. negative values transform to NA.
- div100: Divide the original values by 100.
- BoxCox: This conversion is designed to reduce non normality of the errors in linear models (Box and Cox, 1964). If s is the original series then

$$s(\lambda) = \{ \begin{matrix} \frac{y^\lambda - 1}{\lambda} & if \quad \lambda \neq 0 \\ log(s) & if \quad \lambda = 0 \end{matrix} \}$$

where, λ is estimated using log likelihood.

- scale ratio: Standardize the rate of return by subtracting the mean and dividing by the standard deviation. The converted series have a mean and a standard deviation of 0 and 1 (or 100 percent), respectively.
- scale diff: Standardize the difference between two consecutive observations by subtracting the mean and dividing by the standard deviation. The converted series have a mean and a standard deviation of 0 and 1 (or 100 percent), respectively.

The data sample are automatically saved each time the user selects either new sample period (using the sliders) or new conversion type (using the radio buttons). The output data sample is saved in $\sim /MODS\_inout/RawData.csv$.