Alpha-Beta Trend Formula

Calculation Of Constants

$$T_i = t_i - t_1$$

$$\overline{close} = \frac{1}{n} * \sum_{i=1}^{n} close_i$$

$$\overline{T} = \frac{1}{n} * \sum_{i=1}^{n} T_i$$

$$a = \overline{close}$$

$$b = \frac{\sum_{i=1}^{n} (T_i * close_i) - n * \overline{close} * \overline{T}}{\sum_{i=1}^{n} (T_i^2) - n * \overline{T}^2}$$

Where:

$\overline{close}$ = mean close

$close_i = a + b * (T_i - \overline{T})$ is the Least - Squares Regression line based on the n data points $(T_1, close_1), \ldots, (T_n, close_n)$ and b is the slope of the regression line.

$$\alpha\_m = \frac{2}{m + 1.5}$$

$$\beta\_m = \frac{\alpha\_m}{m + 0.5}$$

$$x_0 = close_1 - b * (T_2 - T_1)$$

$$= a - b * (T_2 + \overline{T})$$

$$v_0 = b * (T_2 - T_1)$$

Where:

x_0 and v_0 are simply initialising values used in the following iterative definition of the data series est_x, x and v.

Calculation of Upper Band and Lower Band