

Technicals - Special Feature

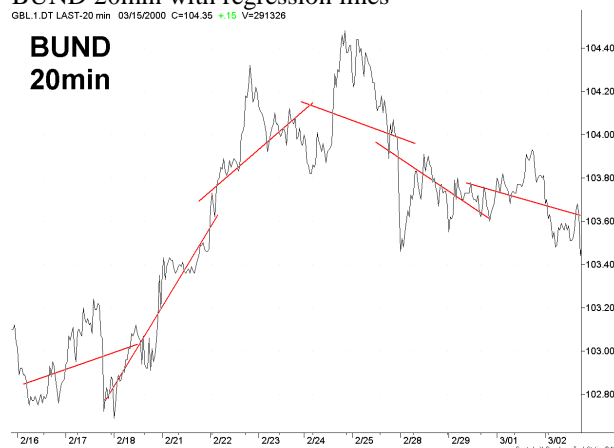
Stefan Mandl

Time-series forecast – regression as an instrument of chart analysis.

The “time-series forecast” indicator, or TSF for short, is similar in design to a moving average, although the trend of the underlying security is determined by means of a linear regression using the least-squares method.

This method basically involves plotting a straight line in a chart prepared for a security so that the distance between individual prices and the line of regression is minimised over a certain time period.

BUND 20min with regression lines



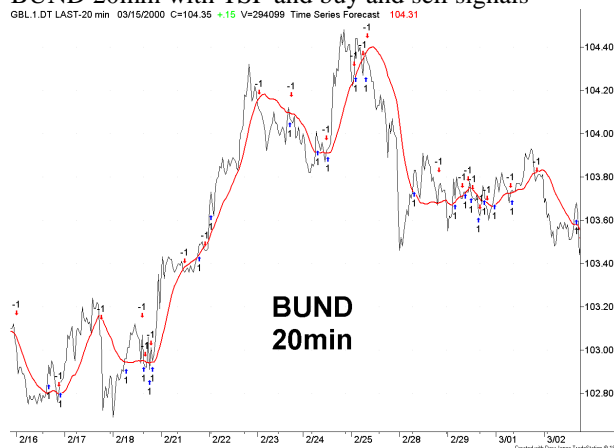
The regression line is calculated continuously for the chosen period of observation. With TSF, however, it is not the line itself that is determined but only the last point of the regression line. The sequence of these last regression points then yields the TSF line.

Regression extrapolates a historical trend into the future. While a moving average represents the prevailing trend with a certain time lag, TSF tries to anticipate future prices, which also explains the name of this indicator.

Regarding signal generation, the potential applications are the same as with moving averages. Buy and sell signals are defined as the points of intersection of various TSF curves with specified periods or points of intersection between the TSF and the price of the underlying security.

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BUND 20min with TSF and buy and sell signals



As the TSF is always a reaction to the current price of the underlying security, this indicator tends to overshoot the target. Such excessive behaviour may be dampened to some extent by the use of filters, which may be defined as a percentage depending on the underlying security or may assume absolute values. Another very interesting approach is the generation of a volatility-based filter. More on this in the next Weekly.

In the next Weekly Essentials, we will take a look at trading systems, as an objective assessment of technicals-based trading systems requires more than computerised optimisation and back-testing procedures, the primary requirements being system stability, sensitivity to trends and the capability of minimising losses in trendless phases.