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## Technicals - Special: The new generation of technical indicators!

*By now, technical analysis is more than 200 years old...*

The attentive reader knows that the beginnings of chart analysis date back to the 18th century. At that time, candlestick formations were used in the Japanese rice market to predict future price trends. It was, however, only in the last third of the 20th century that the ideas and concepts of technical analysis were implemented broadly with the advent of the first programmable pocket calculators. This was the time when users realised that technical analysis involved much more than the processing of charts.

The first concepts of indicators were published.

Most of the indicators frequently used today are more than 15 years olds. The well-known "stochastic" was first presented in 1984, the first concepts of moving averages as early as 1948! While in the early days of technical analysis all indicators were still plotted manually, a wide variety of easy-to-use chart programs are available today. Very often, however, users no longer have a precise idea of what, let's say, an MACD really is. In the professional practice of technical analysis, such ignorance may easily prove fatal.

*... but development has not come to a standstill.*

What is truly surprising, however, is the apparent stagnation in the development and publication of new ideas. And this at a time when computer software is becoming increasingly user-friendly and many chart programs offer users the option of writing programs based on their own ideas.

*Today's technical analysts have long since started to co-operate with physicists and software developers.*

New concepts of technical analysis go far beyond mere chart analysis, addressing aspects of behavioural finance as well as ideas and approaches based on the fractal attractors of chaos theory. It is no coincidence that system development departments, which were once populated by technical analysts, are today the domain of physicists, statisticians, and software developers.

However, one need not necessarily develop theories about bifurcation paths into chaos to benefit from the new generation of technical analysis. There has been no standstill in recent years in the development of indicators. New concepts of indicators and oscillators may help to "pep up" the good old chart programs. Some of these new ideas are presented below.

*New trend followers...*

The classic trend followers are all variants of moving averages: simple, weighted or exponential averages or the MACD as the most basic application of two averages. In the nineties, the first studies were published that looked at a combination of moving averages and volatility. The **Variable Index Dynamic Average** (VIDYA), an exponential average that adjusts automatically to market volatility, was first presented in 1992. The more widely known **Commodity Channel Index** (CCI) also belongs to this category.

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Relatively new are methods that, in addition, reflect the efficiency of a trend. Some technical analysts are still largely unfamiliar with concepts incorporating (some) findings from chaos theory.

The **Polarised Fractal Efficiency** indicator (PFE), for example, applies the laws of fractal geometry in analysing the efficiency of a movement. Sideways markets, the natural enemies of trend followers, can thus be largely avoided.

Another relatively unknown indicator is **Kaufmann's Adaptive Moving Average** (KAMA). Here again moving averages are modified to take into account trend efficiency. Perry J. Kaufmann, who first presented KAMA in 1998, uses modified volatility measurements that are similar to the 'True Range' method (with which most technical analysts are familiar).

*...new oscillators...*

Where oscillators are concerned, development has not stopped at momentum and stochastics. New methods, including the **Chaikin Oscillator** and the **Chande Momentum Oscillator** seek to minimise the general weakness of momentum oscillators, i.e. frequent misleading signals due to nervous short-term outliers, by using a variety of smoothing methods. **Double Smoothed Stochastics** (DSS) attempts to combine moving average methods with oscillator principles.

*...and modern  
volatility measures  
create new options.*

Novel concepts have also been presented in the past few years for trend detection and volatility measurement. The ADX, for example, or the plain standard deviation are no longer the only methods for classifying the market as "trending" or "trading". New ideas based on the random walk model, for example, are becoming increasingly popular.

Whatever methods one prefers, successful technicians are always open to new ideas. Interested readers will find a number of recommendable books on offer, which may help them to brush up on some of their half-forgotten knowledge. If you have any questions, suggestions, views or comments, please contact:

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