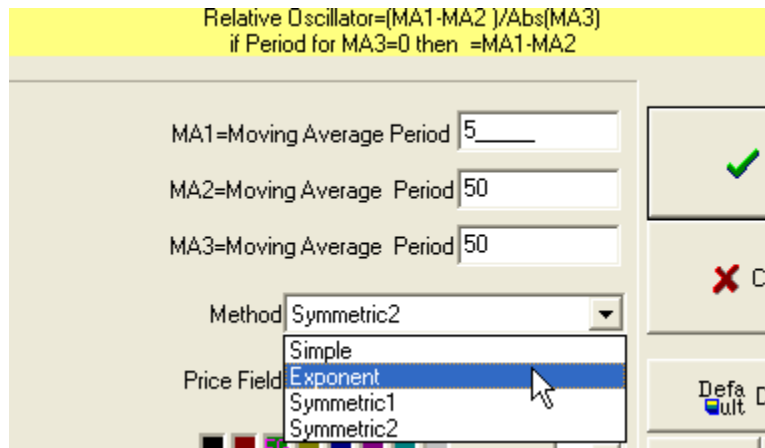


Future leaks indicators in Timing Solution

When we provide the Back Testing procedure in Timing Solution, you should keep in mind that some indicators contain the future leaks by default. This is important for VERY SHORT term forecast only and especially for the next day forecast.

The effect of future leaks means that these indicators “see” the nearest future – because we use future price information to calculate them.

Let’s consider all available “Relative Price Oscillators”:



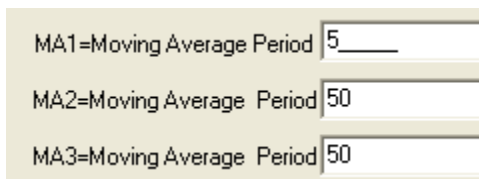
There are 4 variants here. The “Simple” and “Exponent” types do not contain the future leaks at all – to calculate today’s value, we use the price information for today, yesterday, two days ago and so on ...

The other two, “Symmetric1” and “Symmetric2”, use the future price information as per definition, and we definitely should not use them in Back Testing procedure to provide the next day forecast.

To estimate how far this indicator “sees” into the future, use this formula:

(MA1 period) divide on 2.

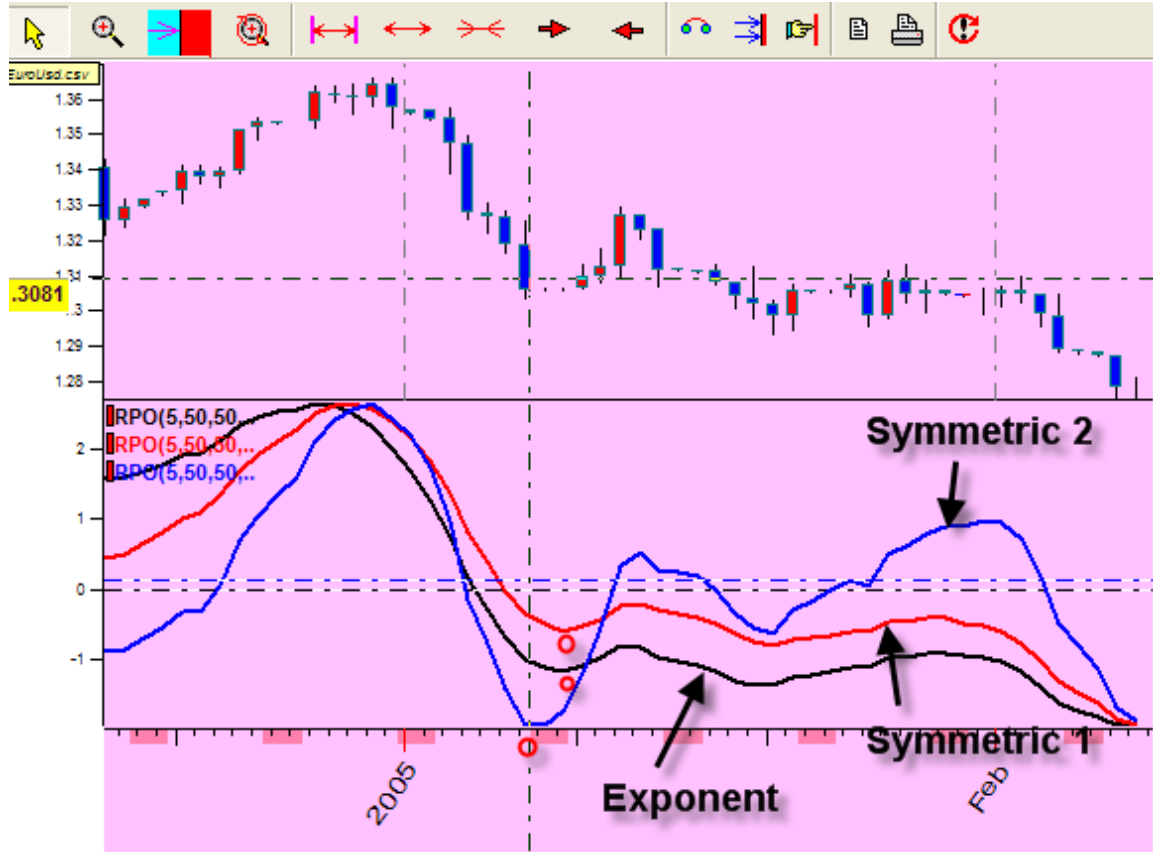
See this example:



The future leaks period is 2.5 price bars ahead. This effect is especially significant for “Symmetric2” oscillator.

In other words, this kind of oscillator should not be applied for making a forecast 1-2 price bars ahead.

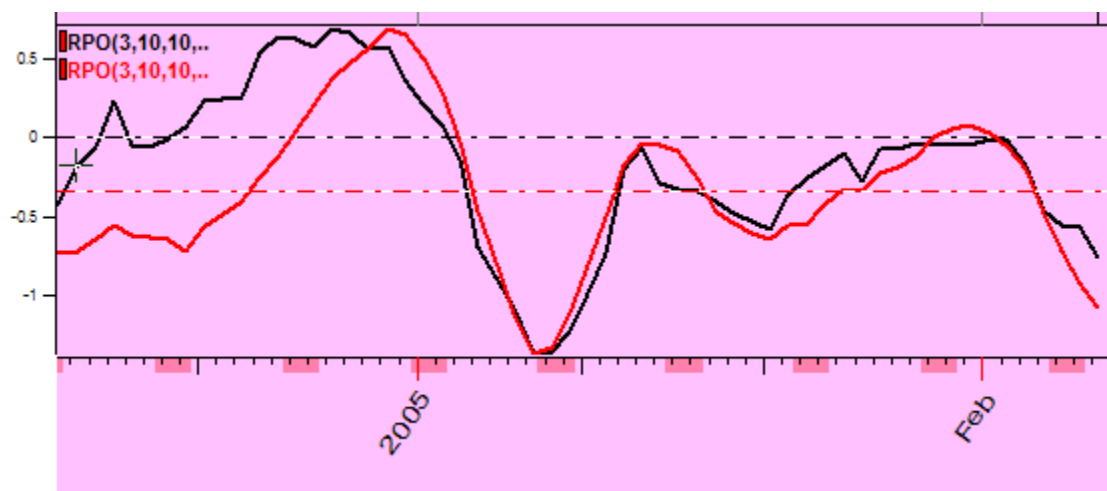
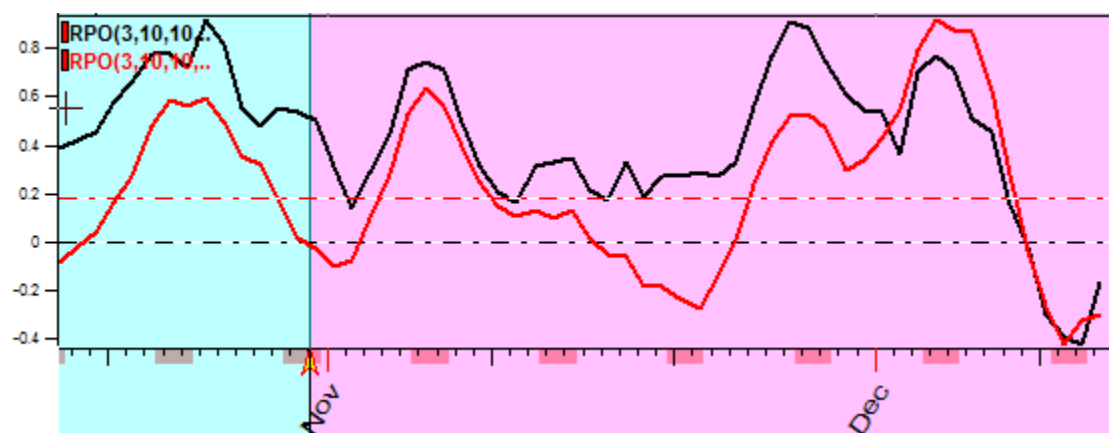
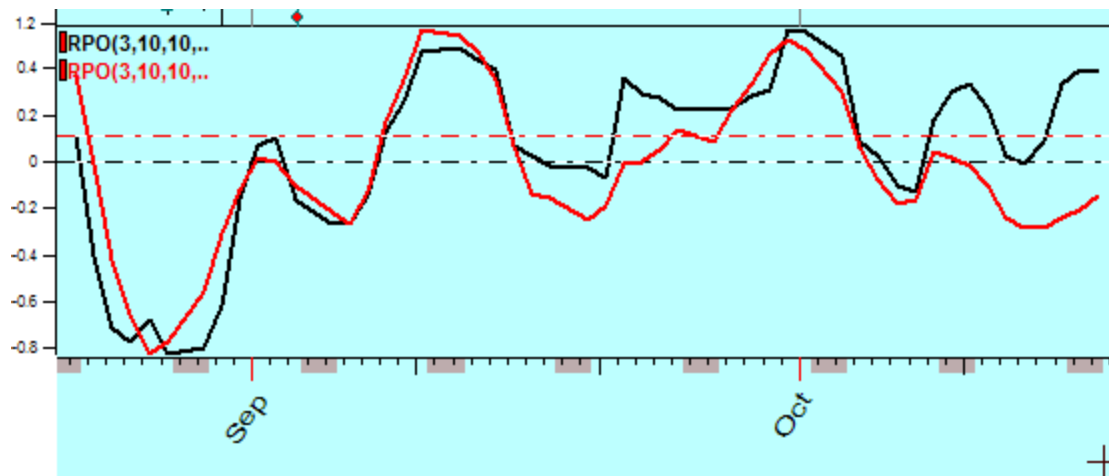
Look how it works in practice:

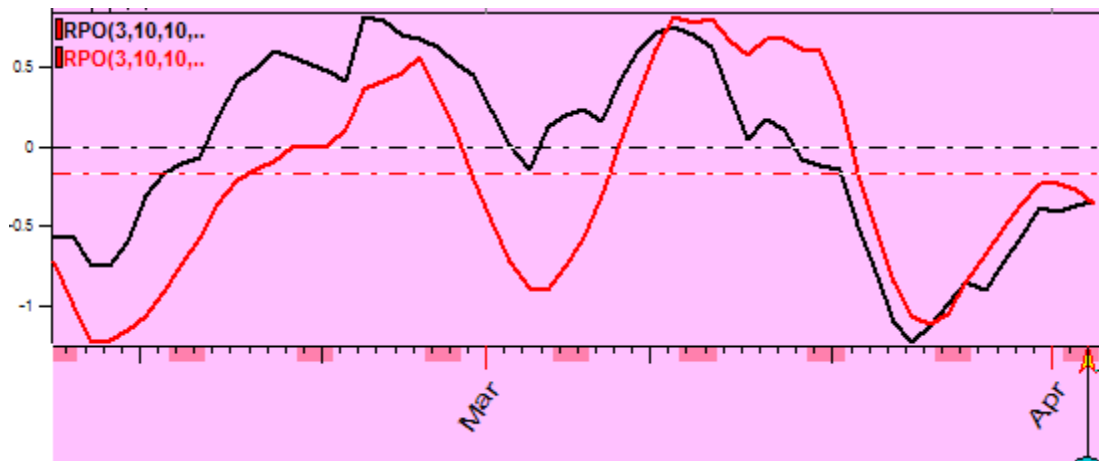


There are three relative price oscillators corresponding to different kinds of moving averages. The local bottom on January 7, 2005 is reflected by blue (Symmetric2) line exactly, while other curves corresponding to other types of moving averages reflect this turning point only two days later.

For 1-2 days forecast, this choice between different moving averages is critical. But, for instance, for 10 days forecast, this effect is miserable. For phenomenological models when we provide the long term forecast this effect is invisible.

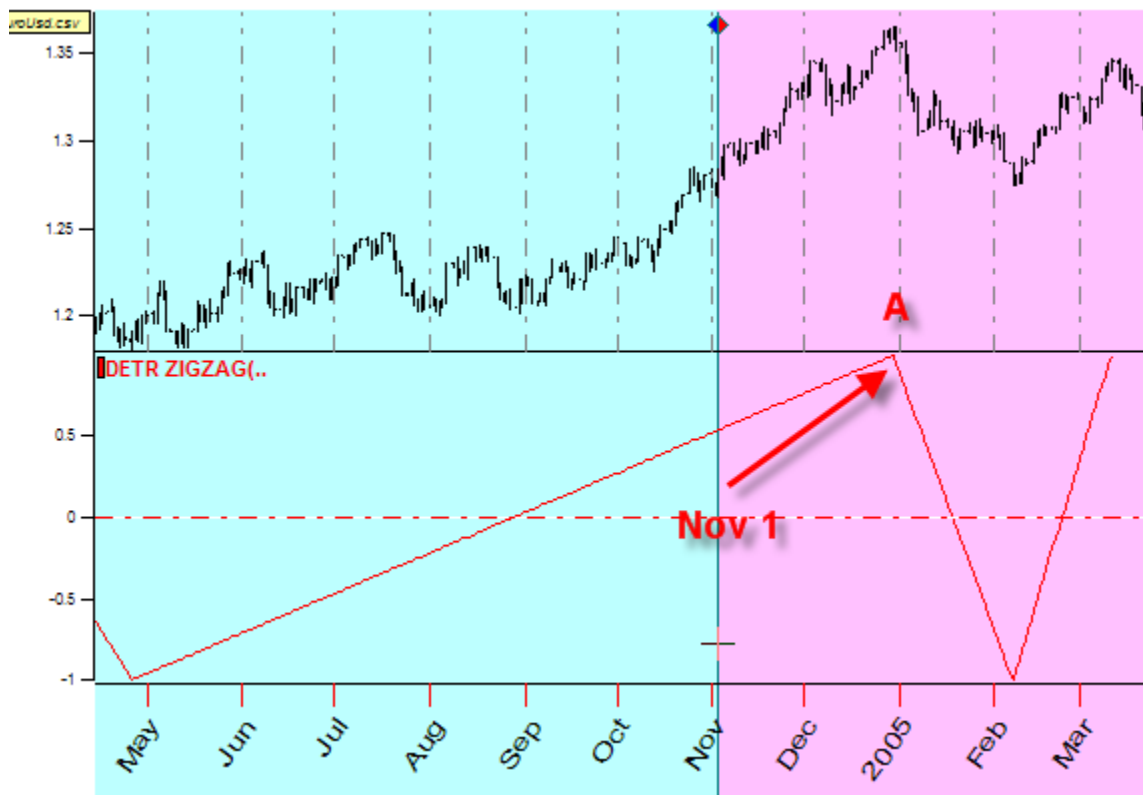
To monitor the difference between Exponent and Symmetric moving averages, I have created RPO (3,10,10) for Exponent (black line) and Symmetric1 (red) moving averages:





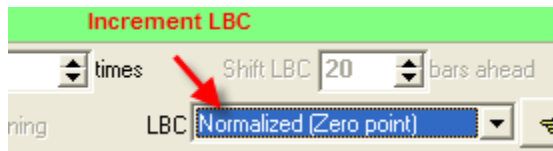
For detrended zigzag indicator, this effect is more significant.

Look at this example:



To calculate the value of this oscillator for Nov, 1, we need to know the information regarding the next top turning point that really has happened at the end of December 2005. In other words, the slope of this line contains the information regarding the future movement.

To minimize (though not to eliminate) this effect, I would recommend for now using “Normalized” LBC in Back Testing module:



I plan to modify the Back Testing module in the future with a possibility to recalculate all “suspected” indicators regarding Learning Border Cursor in Back Testing module. For Detrended Zigzag, we simply have no other possibilities.