Trading System Validation

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Synopsis

Systems developers often focus a high percentage of their time and effort studying indicators, optimizing values of arguments, and developing methods for entering trades. While those are valuable tasks, issues related to trading system validation are often overlooked. This session will focus on several topics related to validation.

- **Objective function**. Selection of metrics used to determine the "goodness" of a trading system. The characteristics of several "typical" trading systems will be used as examples, and a variety of metrics applied to them. The choice of the objective function is always important. But it becomes critically important if the trading system will be developed using an automated walk-forward process.

- **Data selection**. Points of discussion will include the amount of data to use for testing, characteristics of markets represented in the data, cleanliness of data, division of data into in- and out-of-sample, and validation data sets.

- **Survivor bias.** Selection of issues to test when developing trading systems. Discussion of components of indexes, advisors, publications.

- **Optimization**. Discussion of why it is necessary to optimize, how to guide the optimization process, optimization's relationship to the division of data.

- **System reliability.** Expectations for real-time performance. Statistical tests. Determining whether a system is broken, and what to do about it. Equity curve analysis.

- **Monte Carlo Analysis.** Sensitivity of trading systems to noise in the data. Effects of rearranging trades.