

## ***Reading backtest report***

To view the report of last backtest simply click **Report** button in the automatic analysis window. To view results of ALL past backtest, click drop down arrow on the **Report** button and choose **Report Explorer** option. This will display the Report Explorer window that will show the list of all backtests performed. If you double click on the line - detailed report will be shown.

New report is hugely enhanced compared to old one. It includes separate statistics for all, long and short sides as well as large number of new metrics. You can get short help on given figure by hovering your mouse over given field name. You will see the description in the tooltip. Short explanations are provided also below:

**Exposure %** - 'Market exposure of the trading system calculated on bar by bar basis. Sum of bar exposures divided by number of bars. Single bar exposure is the value of open positions divided by portfolio equity.

**Net Risk Adjusted Return %** - Net profit % divided by Exposure %

**Annual Return %** - Compounded Annual Return % (CAR)

**Risk Adjusted Return %** - Annual return % divided by Exposure %

**Avg. Profit/Loss**, also known as **Expectancy (\$)** - (Profit of winners + Loss of losers)/(number of trades), represents expected dollar gain/loss per trade

**Avg. Profit/Loss %**, also known as **Expectancy (%)** - '(% Profit of winners + % Loss of losers)/(number of trades), represents expected percent gain/loss per trade

**Avg. Bars Held** - sum of bars in trades / number of trades

**Max. trade drawdown** - The largest peak to valley decline experienced in any single trade. The lower the better

**Max. trade % drawdown** - The largest peak to valley percentage decline experienced in any single trade. The lower the better

**Max. system drawdown** - The largest peak to valley decline experienced in portfolio equity. The lower the better

**Max. system % drawdown** - The largest peak to valley percentage decline experienced in portfolio equity. The lower the better

**Recovery Factor** - Net profit divided by Max. system drawdown

**CAR/MaxDD** - Compound Annual % Return divided by Max. system % drawdown. Good if bigger than 2

**RAR/MaxDD** - Risk Adjusted Return divided by Max. system % drawdown. Good if bigger than 2.

**Profit Factor** - Profit of winners divided by loss of losers

**Payoff Ratio** - Ratio average win / average loss

**Standard Error** - Standard error measures chopiness of equity line. The lower the better.

**Risk-Reward Ratio** - Measure of the relation between the risk inherent in a trading the system compared to its potential gain. Higher is better. Calculated as slope of equity line (expected annual return) divided by its standard error.

**Ulcer Index** - Square root of sum of squared drawdowns divided by number of bars

**Ulcer Performance Index** - (Annual profit - Treasury notes profit)/Ulcer Index > Ulcer Performance Index. Currently treasury notes profit is hardcoded at 5.4. In future version there will be user-setting for this.

**Sharpe Ratio of trades** - Measure of risk adjusted return of investment. Above 1.0 is good, more than 2.0 is very good. More information <http://www.stanford.edu/~wfs Sharpe/art/sr/sr.htm> . Calculation: first average percentage return and standard deviation of returns is calculated. Then these two figures are annualized by multiplying them by ratio (NumberOfBarsPerYear)/(AvgNumberOfBarsPerTrade). Then the risk free rate of return is subtracted (currently hard-coded 5) from annualized average return and then divided by annualized standard deviation of

returns.

**K-Ratio** - Detects inconsistency in returns. Should be 1.0 or more. The higher K ratio is the more consistent return you may expect from the system. Linear regression slope of equity line multiplied by square root of sum of squared deviations of bar number divided by standard error of equity line multiplied by square root of number of bars. More information: Stocks & Commodities V14:3 (115-118): Measuring System Performance by Lars N. Kestner

### **Color-coding in the backtest report (new in 5.60)**

Version 5.60 brings enhanced backtest report: color-coding 'good' and 'bad' values in backtest report. Some of the metrics in the backtest report are color-coded. Blue means "neutral", Green means "good", Red means "bad". Metrics that are not colorized are always black. This color coding is of course arbitrary and should be used as guidance only. Treat 'red' as a warning flag and advice to check the value in detail.

As of now the following metrics are colorized:

Net Profit, Net Profit % - bad < 0, good > 0

Annual Profit %, bad < 0, neutral between 0 and 10, good > 10

RAR % bad < 0, good > (10 / Exposure)

Avg. Profit/Loss all trades (Expectancy \$) - bad < 0, good > 0

Avg Profit/Loss % all trades (Expectancy %) - bad < 0, good > 0

Max. system % drawdown - bad: dd worse than -30%, neutral: dd between -30 and -10%, good - -10% to 0%

CAR/MaxDD, RAR/MaxDD - bad < 1, neutral between 1 and 2, good > 2

Recovery factor - bad < 1, neutral between 1 and 2, good > 2

Payoff ratio - bad < 1, neutral between 1 and 2, good > 2

### **See Also:**

[Old backtest report](#)

[Backtesting your trading ideas](#) article.

[Portfolio Backtesting](#) article.

[Backtesting systems for futures contracts](#) article.

[Using AFL editor](#) section of the guide.

[Insider guide to backtester \(newsletter 1/2002\)](#)