

StrategyDB – Back-testing 101

Introduction

StrategyDB’s back-test process is not a recipe that we are willing to release to the public, but we will tell you about the high level steps we take to output tens of thousands of results in real-time through the trading session for hundreds of symbols.

Open source strategy code from a strategy list gets applied to market data on a large universe of multi asset class symbols.

The screenshot shows the StrategyDB Performance Matrix interface. At the top, there is a navigation bar with links for Home, Support, Performance Matrix (highlighted), Strategy Matrix, and Log Out. Below the navigation bar, there is a search bar and a filter section with dropdown menus for Page Size (25), Exchange, Symbol, Interval, Category, Strategy, and End Date. The main content is a table with 16 columns: Exchange, Symbol, BarInterval, Category, StrategyName, NetProfit, ProfitFactor, PercentProfit, AvgWinTrade, AvgLossTrade, GrossProfit, GrossLoss, ChartStartDate, ChartEndDate, and Max. The table contains 16 rows of data for various trading strategies on the CME exchange with a 15-minute bar interval.

Exchange	Symbol	BarInterval	Category	StrategyName	NetProfit	ProfitFactor	PercentProfit	AvgWinTrade	AvgLossTrade	GrossProfit	GrossLoss	ChartStartDate	ChartEndDate	Max
CME	@AD	15 Minute	Signal	PivotExt	10880	1.08	42.78	153	-127	139340	-128460	02/04/2014	09/01/2014	
CME	@AD	15 Minute	Oscillator	Stochastic	8080	1.16	63.55	300	-477	59200	-51120	02/04/2014	09/01/2014	
CME	@AD	15 Minute	Channel	Bollinger Band	3800	1.06	59.54	309	-444	63750	-59960	02/04/2014	09/01/2014	
CME	@AD	15 Minute	Signal	OutsideBar	1680	1.03	44.58	397	-325	58900	-57220	02/04/2014	09/01/2014	
CME	@AD	15 Minute	Signal	PivotPiv	600	1.01	32.40	440	-214	71280	-70680	02/04/2014	09/01/2014	
CME	@AD	15 Minute	Cross	MACD	-100	1.00	32.68	310	-157	102540	-102740	02/04/2014	09/01/2014	
CME	@AD	15 Minute	Signal	NewHighLow	-360	0.00	0.00	0	-180	0	-360	02/04/2014	09/01/2014	
CME	@AD	15 Minute	Signal	Inside Bar	-2880	0.96	46.85	302	-306	74120	-77000	02/04/2014	09/01/2014	
CME	@AD	15 Minute	Oscillator	RSI	-3940	0.88	57.29	506	-815	27880	-31820	02/04/2014	09/01/2014	
CME	@AD	15 Minute	Signal	ConsecUpsDwns	-4300	0.95	37.94	344	-231	77400	-81700	02/04/2014	09/01/2014	
CME	@AD	15 Minute	Cross	MA2 Cross	-5720	0.94	36.68	272	-181	86650	-92380	02/04/2014	09/01/2014	
CME	@AD	15 Minute	Cross	MA3 Cross	-6580	0.92	34.62	355	-215	73650	-80240	02/04/2014	09/01/2014	
CME	@AD	15 Minute	Cross	Parabolic	-7420	0.93	34.15	295	-170	102700	-110120	02/04/2014	09/01/2014	

Performance Matrix is the database where we store performance summaries. Sixteen metrics are tracked and published. Both intra-day and End-of-Day market data / bar intervals are used. The historical data look-back default is set to varying lengths to ensure that reports contain statistically significant data points.

Back-testing is a common and methodologically accepted research approach for evaluating a strategy, theory, or model by applying it to historical data. It can be used to study how a trading strategy would have performed in past stock markets.

One key element that differentiates back-testing from other forms of historical testing is that it calculates how a strategy would have performed if it had actually been applied in the past. To obtain an accurate result, the back-test replicates the prevailing conditions at the time. However, a high or successful correlation between a back-tested strategy and historical results can never prove that a theory will be correct in the future, since past results do not necessarily indicate future ones. In other words, things are always changing, but back-testing is a useful analytical and predictive tool in a world where yesterday bears some resemblance to today.

Links

<http://en.wikipedia.org/wiki/Backtest>

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