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Historical Testing

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Risk assessment is a critical element of money management. To gauge risk in advance of live trading, sophisticated investors employ a historical testing system. However, not all historical systems are capable of delivering complete risk assessments, and choosing the wrong tool could lead to poor live trading results.

ANALYSIS

- Use historical testing as a risk assessment tool.
- Learn how historical testing works and can be optimized.
- Understand the potential pitfalls of historical testing.

ACTION

- Test your systems to get baseline metrics for risk performance.
- Optimize your systems to minimize drawdowns and consecutive losses.
- Trade your systems live with a few caveats about historical testing.

RELATED MATERIAL

Test-drive FX Engines for free online at www.fxengines.com to see the power of system building, system testing, and system automation.

ABOUT THIS REPORT

The Forex Report is a periodic publication that investigates advanced strategies for superior trading performance in the foreign exchange markets. These reports utilize advanced statistical and econometric modeling techniques to create new insight into the trading strategy of the average trader. This Core Concept Brief, Historical Testing, is intended for traders with all levels of forex trading experience and technical analysis understanding.

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FX ENGINES

ANALYSIS

Historical testing is one of the most powerful tools in the trader's arsenal. Using a large amount of historical data allows the trader to build systems that are fundamentally sound and expand upon them. Along with the benefits of historical tests come a few warnings about the dangers of using historical results irresponsibly.

ASSESSING RISK

Each time a trader places an order, a number of factors combine to form a risk profile for that particular trade. Chief among these factors are position size, volatility, drawdown potential, and recent events. For a trader with a long history of live trading experience with a particular system, these dynamics are well known. But the trader who deploys a new system usually does so without the advantage of this live trading perspective. For these traders, historical and live tests are the best substitutes for actual trades.

HISTORICAL TESTS

Historical tests, in particular, provide a rich analytic framework for ascertaining a system's ability to cope with the factors that influence risk. A historical test is a tic-by-tic re-enactment of a trading system's performance over time. The best systems, like the one offered by FX Engines, use multiple years of tic data, employ that data in a *real* re-enactment with *real* trading constraints, and work in a way that the trader can replicate in a real-time, real-money account.

A good historical test provides a wealth of data which must be scrutinized by the trader to identify patterns that can be used advantageously in further optimized tests. The most telling metrics are net pips, maximum drawdown, consecutive losses, and success rate. These metrics give the trader enough information to make a rapid determination of the system's worth. If the system is obviously bad, another direction can be chosen. If the system is good or looks to have potential, further scrutiny is needed.

The statistics of a back test are convenient, quick ways to gauge a system's value, but there is no richer data to mine than the trades themselves. By looking at each trade the trader can get an idea of what happened, even with only a handful of data points. Using this data and the metrics from

the test, a course for system optimization can be devised.

In some cases the methods for optimizing a system are obvious – adjust a stop, change an exit signal, change the entry schedule, etc. In other cases the methods are not so clear, and that's when an automated optimizing system is of tremendous value. FX Engines, in particular, has such a tool, the Back Test Multiplier. This tool takes a number of different engines, breaks them down into their component parts, then recombines them into many more engines. This method creates systems that the trader might not have had the time or creativity to discover otherwise.

Once a system has been created and optimized through historical tests, a period of live testing is required. Only after verifying the conditions predicted by the historical test should a system be traded in a real account. Even then, real trades can deviate from the historical trades in many ways.

CAVEAT EMPTOR
Despite all the power of historical testing, it is still only one tool in the trader's arsenal. In some cases a historical test can be a highly accurate predictor of a system's performance ability. More often, the trader must weigh the results against the common pitfalls of historical testing:

Cause	Effect
Curve Fitting Over testing a system in a given date range or trading environment which overly favors system parameters.	Curve fitting makes for great test results but poor trading systems. If a system is over-optimized in one condition it will fail in others.
Ignoring Trend Trading against the trend.	Some systems perform equally well with or against the trend. For those that don't, trading against the trend will reduce your results.
Spread Differences Testing with a 3 pip spread when the live trading spread exceeds 3 pips.	Spread has a significant impact on any system. Test spreads and live spreads must be synchronized.
Data Source Using a data supply with too few data points or without the optimal frequency (tic) to result in accurate	Valid tests are made against complete, gap-free tic data from a quality source. FX Engines' dealer-derived data is over 15GB in size – are you

| back tests. | testing a file as large? |

| **Over-Mechanizing**
Forcing a system to be overly-mechanical when it could be more discretionary. | Don't ignore the signs. Some engines should be totally automated but other should be just partially automated. Choosing the wrong combination will adversely affect results. |
| **Platform Incompatibility**
Historically testing with one platform, live trading with another. | The test platform must perform identically to the live platform, as FX Engines' does. Any difference can have dangerous implications. |

Although these factors can reduce the value of some historical tests, there remains no better way to assess risk in advance of live trading.

RELATED MATERIAL

Sign up to try FX Engines' state of the art historical testing platform at www.fxengines.com/register.

ACTION

Don't jump into trades without any context. Use historical tests to provide a reasonable expectation of what will occur in live trading, and over time allow your live trading experience to take the place of the historical tests that provided your early basis for risk assessment.

1 - TEST

Create as many different systems as possible, then test them, keeping in mind the potential pitfalls of historical tests.

2 - OPTIMIZE

Once you have a sense of the basic value of your engines, optimize them. Some tweaks will be obvious, but others can be found using FX Engines' Back Test Multiplier.

3 - TRADE

Once you feel comfortable with your historical tests, test them live, then trade them in a real account. With FX Engines, you can be sure that your live trades will be executed on the same system as your historical and live tests.

RELATED MATERIAL

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THE FOREX REPORT

Analyzing statistical, econometric, and behavioral trends in the foreign exchange markets for insight into the optimal use of the FX Engines automated trading platform.

The information contained in this report is represented without warranty or any statement of its veracity. The contents of this report are intended to stimulate thinking on issues related to trading forex. This report does not suggest any particular action that could be utilized in live trading for profit or loss.

I can put it no better than Hoffer, who deferred to Montaigne:

"All I say is by way of discourse, and nothing by way of advice. I should not speak so boldly if it were my due to be believed."