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System Building

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The "well-chosen example" of the perfect trade as shown on a chart is too often the basis for system building. When that system inevitably breaks down, the trader returns to the charts desperately searching for a picture that tells a compelling story. Instead of repeating this damaging cycle, traders must realize that system building is a methodical process with clear steps, most of which occur without the distortion created by charts.

ANALYSIS

- Understand why chart-based systems fail.
- Learn the steps essential to system building.

ACTION

- Use charts as an aid, not the foundation, of system building.
- Create a wide array of systems and observe their performance.
- Use multiplied historical tests to find hidden enhancements for existing systems.

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, System Building, is intended for traders with all levels of forex trading experience and technical analysis understanding.

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FX ENGINES

ANALYSIS

Chart shopping is an affliction that leads many inexperienced traders into dangerous trading situations and ultimately, account liquidation. New tools like FX Engines make the development of advanced systems possible, even for novices. Using quantitative methods and hard data from actual and historical trades, the trader is able to create systems – engines – that avoid the dangers of hidden price action.

THE FAILURE OF CHART-DERIVED SYSTEMS
Most traders look at a chart like the one below, and believe they have found a license to print money. It's just a simple 4 HR MACD cross, but it appears to yield compelling results:

It looks too good to be true, yes, but as soon as the spreadsheet showing the profits from this fantastic system is completed, the die is cast. The trader will trade this system through multiple failures, increasing trade sizes or widening stops until account liquidation is near, then the chart shopping ensues. But why do chart-derived systems fail?

The simple reason is that charts hide price action. Of course candlestick charts like the one above show all the highs and lows, but that's not the whole story. The technical indicator which formed this system – MACD in this case – is derived from price. The price action that translated through this indicator is extremely minimal. As a result, the indicator severely lags price action, shows false signals, or shows signals at the end of price moves, just before a reversal.

Since technical indicators are quantitative in nature, why do traders rely so heavily on charts? As the cliché goes, a picture is worth a thousand words, but more than that it is a vacuum of tools in the trading markets which prevents traders from working with systems in their optimal milieu - numbers.

To work with a system in a numerical environment, a toolkit must be available which allows the trader to analyze trade data and act on it. Until recently, this type of environment was unavailable to traders, but advanced system building platforms like FX Engines have emerged to fill this void and allow the trader to construct systems quantitatively. Using actual trade feedback and statistics from live and historical testing, the trader – with no particular math or programming aptitude – can build expert systems that avoid the pitfalls introduced by chart-derived systems.

ESSENTIAL ELEMENTS OF SYSTEM BUILDING

System building is a 5-step process: Construction, Evaluation, Refinement, Multiplication, and Observation.

> *Step 1: Construction*
> Before any system can be constructed, the trader must make two critical choices: what currency pair(s) to trade, and whether the system is a trending system or not. Each currency pair has a different feel, and though the four majors in particular appear to be highly synched, great differences in actual trading exist. Likewise, some systems appear to be just as effective in a bear market as a bull market, while some depend heavily on being trend-synched.
>
> Market Entry
> At the heart of every system are the signals for trade entry. These signals can take many forms, but most are essentially seeking market tops and bottoms. Once the entry triggers are determined,

the entry type and schedule must be selected. Most traders are surprised to see the impact of selecting limit, stop-limit, or market as the entry type, or by allowing entry to occur only during specified time windows versus 24/6.

Market Exit
There is an old golfing adage relevant to trading: Drive for show, putt for dough. You can make the best entry possible, but if you don't know how to exit trades – to book profit – your entry prowess is meaningless.

Exits can be reactive, like fixed and trailing stops, or proactive, like limit exits and exit signals. Each exit type has pros and cons, and each will have a radically different impact on system performance. Trailing stops can be effective for capturing moderate moves, while limit exits are good for high percentage "pip grabs". Exit signals provide the most contextual form of exit, with technical indicators interpreting the underlying price action and inserting exit triggers into each trade.

Step 2: Evaluation
Once a system is constructed, the trader must determine its value. Each system has a bottom line value, a potential value, and a leveraged value. Historical testing is the best way to quickly determine a system's worth. Once a test is run, the trader will be able to closely analyze the results – even each trade – and determine if the system is worthy of further exploration.

Step 3: Refinement
Most first attempts are flawed in some manner.   Historical testing reveals these flaws, and then the trader must make refinements to the system to improve it. Are losing trades entering during a particular time more often than other times? Perhaps a more restrictive entry schedule is needed. Is the stop being hit too frequently? A stop-limit entry might help. Are winning trades yielding fewer pips, on average, than losing trades? Maybe an exit signal can solve the problem.

Step 4: Multiplication
Of course iterating through so many settings in an engine can be a laborious, tedious task.   The FX Engines historical testing system includes two tools to help speed the process. The first, engine

cloning, allows the trader to construct one basic engine and then clone it into several others. Each of these cloned engines can have a single parameter changed, clearing the path for the second tool: the Back Test Multiplier.

Test multiplication is a method of breaking a number of systems down into their component parts, then recombining the parts into a multiplied number of systems. Just four to six different engines can result in 50 or more multiplied systems, each with a different setup. The multiplier system then tests each of these systems. The benefits to the trader are obvious – time is saved and non-intuitive engine improvements are made.

Step 5: Observation
Once an engine is completed the final step is to observe the engine in live test trades. Some engines may require manual manipulation, while others can trade with complete automation. Additionally, observation of an engine testing against a live price feed tells the trader how the engine will react in a variety of trading situations. Combined with historical testing, live tests validate the engine and arm the trader with the confidence required to move the engine into a real trading account.

IF IT WAS EASY…
System building is extremely difficult work, and the first try is not always a step in the right direction. Successful traders have a large amount of persistence and endurance to help them through the early phases, which can be trying.

Once a certain amount of system building is completed using these methods, clear patterns emerge. System building becomes easier, and profitable engines are more accessible with less effort. Best of all, the trader has the assurance that the systems built with these more analytical methods take into account far more than a simple chart can show.

ACTION

Don't throw away your charts, but don't take them at face value either. Charts are a critical tool for trading, but actual system building requires a look at all of the data in an analytical process. The process is arduous, but you can take solace in knowing that analytically-derived systems are much more battle-tested and consistent than chart-derived alternatives. And you can take that to the bank!

1 - BUILD

Yes, use charts to make first contact with potentially good systems. When you sit down to actually build a system, do it analytically, using the 5 step approach described in this report.

2 - EXPERIMENT

People develop habits, and traders are people. Don't get stuck in a rut building the same old systems. Try different entry and exit techniques. Even if they don't work in the engine you create, they will still provide fodder for the back test multiplier, where they may be combined into a great engine.

3 - MULTIPLY

FX Engines' Back Test Multiplier is a one of a kind tool, and it's extremely valuable once you know how to really tap into its power. Create many engines with different setups, then multiply them to see what they can become. You never know!

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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."