



CSI Technical Journal
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In This Issue

Holiday Schedule
Engineering a Low-Risk Portfolio
Tech Talk
Important Notice - Larger CSI Numbers Coming Soon!

Holiday Schedule

CSI will be closed for voice communication on Monday, May 29th in observance of the Memorial Day holiday. U.S. exchanges will be closed, but data from other exchanges will be available at the normal posting times. The CSI host computer will be accessible throughout the holiday weekend.

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Engineering a Low-Risk Portfolio

There has been a good deal of interest in the Sierra Hotel trading system we introduced to our readers in last month's CSI Technical Journal (CTJ) and also in the risk management techniques we discussed there. I am pleased to announce that in the past few weeks we have implemented several small, but significant changes to the Sierra Hotel program and its network of markets, aimed at better managing risk through diversification and by utilizing correlation data. The Sierra Hotel trading system is now available with these adaptations through CSI's Unfair Advantage platform.

As brief background information, let me explain that Sierra Hotel is an adaptive channel breakout trading system that uses a proprietary algorithm developed by John Ehlers and Mike Barna. It is based upon Maximum Entropy Spectral Analysis or simply, "MESA." The MESA signal processing technology (where technical applications lie in radar development and analysis) adapts parameters for optimal trading signals. The original version offered by CSI provides signals on four currencies.

Before addressing how we added diversification to Sierra Hotel, there's a misunderstanding that must be cleared up about the program's methodology. As many of you may know, I was interviewed by Jayanthi Gopalakrishnan, the editor of Technical Analysis of Stocks & Commodities Magazine, for an article that was published in their "Bonus Issue" at the end of March 2006. In that interview I questioned systems that use today's price as a predictor of future price. I

cautioned that such a posture can result in a principally flawed outcome, as one is trying to gain too much meaning from too little data. I have since been asked if Sierra Hotel is not such a system. The answer is an unequivocal "no." Sierra Hotel's MESA technology does not try to predict futures prices in a price-determines-price formulation because price alone may not necessarily predict price in the future.

A valid exception to my rule against price-determines-price trading tools can be found in the concept of "out of sample" data. A trading system is said to employ "out-of-sample" data when the results are not known to the trading algorithm at the time trading recommendations are generated. Those results can therefore be considered independent and unbiased. With the concurrence of John Ehlers, we employed walk-forward optimization to provide up-to-date parameter settings that were derived only from the past. This assures that no after-the-fact curve-fitting occurs.

I said in the S&C interview and still maintain that intermarket analysis leading to diversification is essential to good trading. I also addressed this subject in the April '06 CSI Technical Journal, emphasizing that it won't do to simply trade multiple markets; you must select markets that are not positively correlated to achieve a balanced portfolio that will minimize coincident risks. You can also trade markets that are negatively correlated, but we'll cover that later. The danger in trading correlated markets is not when the markets move in your desired direction. The danger lies when the markets go against you, serving up double losses.

With the permission of John Ehlers, Steven Davis of CSI tested the Sierra Hotel software on a much larger collection of markets than the four we initially supported. The new candidate markets included grains, indices, metals, petroleum products, financials, other currencies and more. Sierra Hotel is now applied to at least a dozen markets over an extended time period reaching back, in most cases, to the very first day of trading.

We posted the results of the top two dozen performers in this hypothetical* study on our website on the Sierra Hotel "Back Testing" page. This listing details the average trades per year, percentage of profitable trades, profit factor, drawdowns, and more for each market, as shown in Figure 1, below.

Sierra Hotel Hypothetical Backtest Results

Updated 20060414

Market Symbol ¹	First Year of Testing ²	Number of Trading Years ³	Total # of Trades ⁴	Avg Trades/Year ⁵	% Winning Trades ⁶	Profit Factor ⁷	Max Drawdown within a Trade ⁸	APR on Average Loss ⁹	APR on Max Closed Drawdown ¹⁰	APR from Max Intraday Drawdown ¹¹	Sharpe Ratio (vs 3.5%) ¹²	Sharpe Ratio Annualized ¹³
AD2	1991	15.2	163	10.6	41.1 %	1.16	2070	100.8 %	5.9 %	4.8 %	0.01	0.0
BO	1974	32.2	122	3.7	43.4 %	1.64	3652	136.4 %	9.2 %	8.3 %	0.04	0.1
BP2	1976	30.2	291	9.6	42.9 %	1.72	4962.5	394.1 %	24.3 %	20.2 %	0.13	0.4
C	1953	53.2	207	3.9	43.4 %	1.90	1737.5	198.3 %	23.0 %	11.0 %	0.07	0.2
CC	1970	36.2	223	6.1	38.5 %	1.05	3296.7	18.8 %	0.5 %	0.5 %	-0.07	-0.2
CD2	1975	31.2	220	7.0	38.2 %	1.11	2560	50.9 %	2.3 %	2.1 %	-0.01	0.0
CFC	1998	8.2	54	6.5	42.6 %	1.89	1740	336.2 %	47.4 %	29.1 %	0.14	0.5
CL	1990	16.2	101	6.2	45.5 %	1.29	5090	97.5 %	8.5 %	6.2 %	0.03	0.1
CT	1970	36.2	193	5.3	38.8 %	1.43	6100	140.5 %	13.3 %	9.1 %	0.05	0.1
CJ2	1975	31.2	310	9.9	43.2 %	1.70	5026.13	397.2 %	31.7 %	28.4 %	0.14	0.5
DX	1989	17.2	116	6.7	50.0 %	2.18	2830	396.8 %	54.7 %	36.6 %	0.16	0.6
ED2	1989	17.2	63	3.6	44.4 %	2.41	1350	287.2 %	38.1 %	29.6 %	0.16	0.5

Figure 1. These are hypothetical results of Sierra Hotel trading on an array of markets. The color coding indicates market correlation. Past performance is no guarantee of future results.

Of particular interest in the Backtest results for candidate markets is the computed "Sharpe Ratio," a mathematical figure of merit derived from the hypothetical historical profitability of the Sierra Hotel platform as applied to each market. The greater the Sharpe Ratio, the greater the return and the less the risk for each market taken as an independent portfolio entity. At present, 12 have what we consider to be a good Sharpe Ratio of perhaps 0.5 or higher. To view a current table on the CSI website (www.csidata.com), go to the Sierra Hotel page and then click "Back Testing: Sierra Hotel."

The Backtest page is shaded to show correlation commonality of the color-coded classes. If you read last month's CSI Technical Journal, you'll remember the techniques for considering correlation data in portfolio selection. There I referred to the CSI Correlation Studies and recommended against trading correlated markets. To repeat: Correlation is your enemy! This web page will help users of Sierra Hotel and other products develop broader trading portfolios that avoid positive correlation. The elimination of all correlated markets from a portfolio provides an ultra-safe basket of markets that is highly unlikely to expose you to devastating coincident losses. Avoid correlated products when picking markets to trade by holding no more than one market in each color category.

The Sierra Hotel "Current Orders" page (Figure 2, below) shows the same color coding as the Backtest page, but on the smaller subset of recommended markets. This page displays current trading signals and profit calculations to Sierra Hotel users. It shows current positions and provides a quick look at the trading markets and their relationships to each other. This exhibit is not intended to supply, nor should it be used to derive market orders.








Sierra Hotel for 20060414							
Symbol	Market Name	Param	Position	Entry Date	Entry Price	Profit/ Loss	Order (next day)
STF 	Rubber TSR- 20- SICOM	1.25	Long	12/09/2005	169.50	4900.00	sell 2 at 185.75 stop
MW 	Wheat- Spring- MGE	0.80	Long	04/11/2006	445^0	-512.50	sell 2 at 394^4 stop
JY 	FX- Japanese Yen- CME	0.39	Short	03/10/2006	0.8535	162.50	buy 2 at 0.8630 stop
SF 	FX- Swiss Franc- CME	0.74	Long	04/05/2006	0.7844	1200.00	sell 2 at 0.7633 stop
NE 	FX- New Zealand Dollar- CME	0.42	Long	04/06/2006	0.6130	290.00	sell 2 at 0.5975 stop
DX 	Index- U.S. Dollar- FINEX	0.93	Short	03/16/2006	88.84	-630.00	buy 2 at 90.79 stop
CU 	FX- Euro- CME	1.28	Short	02/03/2006	1.2115	-575.00	buy 2 at 1.2406

Figure 2. The CSI website's "Current Orders" screen for the Extended Sierra Hotel system. ([Current Orders Page](#))

For more hands-on correlation analysis, you can view a matrix of correlation coefficients (Figure 3, below). This is a premium CSI product that will help you keep your portfolio balanced. The correlation matrix shows the 14 markets that CSI suggests for Sierra Hotel, and which we found to exhibit viable trading opportunities. We propose to offer these in the extended Sierra Hotel package, but the list of markets might change over time.

	BP2	CU2	DX	ED2	FV4	JY2	KC
BP2	1.000	0.960	-0.962	-0.001	0.316	0.626	0.630
CU2	0.960	1.000	-0.987	0.128	0.463	0.529	0.535
DX	-0.962	-0.987	1.000	-0.025	-0.369	-0.619	-0.599
ED2	-0.001	0.128	-0.025	1.000	0.839	-0.504	-0.648
FV4	0.316	0.463	-0.369	0.839	1.000	-0.327	-0.334
JY2	0.626	0.529	-0.619	-0.504	-0.327	1.000	0.662
KC	0.630	0.535	-0.599	-0.648	-0.334	0.662	1.000
LCO	0.006	-0.111	0.022	-0.929	-0.718	0.410	0.636
MW	-0.009	-0.047	-0.005	0.084	0.079	0.040	-0.102
NE	0.950	0.963	-0.965	-0.000	0.354	0.553	0.637
NQ	0.061	-0.069	-0.049	-0.861	-0.820	0.651	0.574
SF2	0.922	0.974	-0.944	0.288	0.593	0.426	0.408
STF	0.214	0.146	-0.266	-0.638	-0.506	0.519	0.523
TY4	0.379	0.516	-0.425	0.739	0.983	-0.273	-0.220

Figure 3. MultiMarket Analyzer's Correlation Table for Sierra Hotel's "Recommended markets."

This table was produced by Unfair Advantage's MultiMarket Analyzer. The 14 recommended Sierra Hotel markets were selected for analysis using long-term Perpetual Contract(R) data. When the Factor Analysis screen displayed during the MMA run, I clicked the [Raw Correlation] button to produce this report. As you can see, it displays correlation coefficients like those discussed in the April CTJ and found on the Correlation Studies page of the CSI website.

As discussed last month, a correlation coefficient of 0.0 for a pair of markets suggests there is absolutely no predictable connection between the two. A positive correlation coefficient of around +1.0 suggests that a pair of markets will move up and down together — always in the same direction, but a negative correlation coefficient of -1.0 implies that the markets in the pair consistently move in opposite directions. These diverging markets pose excellent opportunities to sell one against the purchase of another. Armed with information like this, I sometimes favor trading negatively correlated markets. A strategy of this type requires a rather complex series of analyses. In addition to correlation scores, it requires the Z-score values that are accessed through our website's CSI Correlation Studies. The typical scenario would involve selling the market with the Z-score that is statistically higher relative to the norm and buying the market with the Z-score that is statistically lower relative to the norm. In this way one would hope to capitalize on the tendency for the members of the pair to move in opposite directions from each other. Results may be inconsistent with the trading signals of Sierra Hotel or other trading systems.

All this is too much to discuss in a single article, so we will try to delve further into it next month. In the meantime, please consider the wisdom of avoiding correlation in your trading portfolio. Remember that when exploring heavily positively correlated markets, you should choose the one you wish to trade from among the many. Markets correlated near the zero level are

recommended. The danger of coincident loss is greatly lessened for these because the near-zero correlation coefficient suggests independence of movement.

Although these correlation tips are relevant to Sierra Hotel, they apply equally well to all system approaches, including the many CSI-compatible trading systems. Choose your markets carefully, visit UA's MMA study to capture the correlation matrix, and attempt to keep your risk under control. Your trading success is likely to depend upon consistently following these rules and recommendations.

Bob Pelletier

Note: The results attained through back-testing with Sierra Hotel are "hypothetical," because they are not the results achieved in a funded trading account. The CFTC requires the following disclosure statement in reference to hypothetical results: Hypothetical or simulated performance results have certain inherent limitations. Unlike an actual performance record, simulated results do not represent actual trading. Also, since the trades have not actually been executed, the results may have under- or over-compensated for the impact, if any, of certain market factors, such as lack of liquidity. Simulated trading programs in general are also subject to the fact that they are designed with the benefit of hindsight. No representation is being made that any account will or is likely to achieve profits or losses similar to those shown. Past performance is no guarantee of future success.

Original Sierra Hotel for four currencies: \$995.

Extended Sierra Hotel with additional markets: Add \$500.

For full details, go to the CSI Website and click "[Sierra Hotel](#)" at the top of the page.

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Tech Talk

Each month in this column the CSI Technical Support staff addresses topics of interest to many CSI subscribers. This month they will discuss the volume and open interest values produced by futures exchanges, give advice to correct a problem that sometimes occurs when creating export-format files and help with the automated retrieval.

Don't forget - VantagePoint customers should use the "EzDownloader" every day!

Q. I just learned that volume and open interest from different exchanges are not necessarily handled the same by CSI. Some are current-day and some are estimated or yesterday's values. Please explain.

A. The calculation of open interest requires an analysis of both sides of each volume transaction by the exchanges themselves. Open interest represents the number of contracts for which traders have not evened up their trades. Calculating this quantity requires pairing all of the incidences of volume

with each other. Some may be paired with current day trades, and some may be paired with longer term prior day trades. The pairing process typically takes more time than is available before the statistics are officially released, forcing a one-day delay in the data-release process.

A few exchanges (primarily electronic) are more efficient than the rest at calculating the official volume for the day and/or the total number of outstanding contracts (Open Interest) and can therefore release them on a current day basis. Some exchanges provide current day volume and current day open interest, while others provide current day volume but one day behind open interest. At this time, all U.S. futures exchanges are still one day behind in both volume and Open interest. We post what the exchanges provide.

Q. I had a problem creating files to use with a third-party analysis program. Unfair Advantage seemed to let me create a new portfolio and add files (contracts) in ASCII format, but when I checked the folder C:\ua\files, there was no new folder representing the portfolio I just defined. What should I do?

A. You may have inadvertently attached a post-processing study to the file specifications. In UA v.2.9.1, these studies do not work correctly. If you intend to apply the study, then upgrade to UA v.2.9.2. If you didn't intend to apply a study, highlight the affected export-format file(s) in your UA Portfolio Manager panel and then click the [Edit File] button above the portfolio listing. This will bring up the "Selecting data series" screen. Click the [Ch] button in the lower right corner. The "Code Editor" screen will display as either one or two windows. Delete all text in the top (or only) window and click [OK]. Upon returning to the "Selecting data series" screen, click [OK]. When asked if you want to build the files, click [Yes]. Your folder and files will be created.

Q. I'm running Unfair Advantage with Windows XP, and am having trouble getting unattended updating to work through the Scheduled Tasks applet. I've scheduled the Initiate UA Download.vbs script as described in the help file, but if I am not logged on, or am logged on as a different user than the one the script runs under, UA doesn't launch and the download fails. Any suggestions?

A. This question refers to using Windows' Scheduled Tasks to automate downloads. Unlike the auto-download feature offered through UA, the task scheduler will automatically launch the program. This means you don't have to remember to keep it running. The disadvantage of this choice is that it activates only by time, not by either time or data release as UA's auto-downloader does. Since the release of XP SP2, we sometimes hear that the task scheduler has stopped working with UA. The problem is usually correctable through one of these steps: Make sure that the Windows account into which UA is supposed to launch has a password (not blank); check the settings and assure that "Run only if logged on" is NOT checked; and make sure that "Wake if computer is to run this task" is checked.

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Compatibility Corner

Compatibility Corner is an occasional series that introduces our customers to programs that run on quality CSI data and investment-related services that may be of interest. We at CSI are pleased to be among the preferred data vendors for many third-party investment programs and welcome the opportunity to pass along these notices when space allows.

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*This is not a CSI product. CSI does not endorse or stand behind the products of outside firms.

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IMPORTANT NOTICE

Larger CSI Numbers Coming Soon!

In order to accommodate the ever-expanding universe of market data, it is necessary to increase the size of the CSI numbers used to identify markets within the CSI database. We are working on this change now and will implement it within the next few months.

Such a change will likely require corresponding changes in custom or third-party software that reads CSI data. To maintain compatibility through this transition, all users of custom software and developers of compatible third-party software should visit the CSI website at www.csidata.com for full details on necessary revisions. Unfair Advantage users who do not export to third-party programs will not be affected, as full compatibility will be retained within the Unfair Advantage platform.