Trading with CSI's Statistical Correlation Engine
Can Reap Low-Risk-High Yield Rewards
(Interpreting Study Results)

Years of research, modeling, analysis, massive computer power, and a pristine data base of more than 100,000 world stock and futures markets reaching back in time up to 50 years made CSI the natural choice in the support of a market tool which can identify spread trading opportunities between correlated pairs of stocks vs. stocks, futures vs. futures, and stocks vs. futures. CSI is the premier error free choice among Google, Yahoo! and MicroSoft Network so you may already know about our reputation as the most error-free data vendor in the business.

We urge site visitors to try us out. Your subscription is likely to pay for itself on the very first day of use. On random Mondays, visitors can try us out FREE before 5:00 PM Eastern time. Let me tell you how this wonderful tool, unavailable elsewhere really works:

CSI's Correlation analysis pairs over five billion market pairs each day, and computes the level of correlation between all pairs over periods of daily information that range from two years to 30 years into the past. This massive daily computing effort is completed within minutes each day after world markets close. Customers of CSI correlation services can search for trading opportunities between any proposed pair of markets, any one market against all other world markets, or all markets against all other markets, and uncover the merits of trading any one or more of the resulting billions of pairs for all of the time periods chosen.

To gain access to CSI's correlation trading tools, click on your Internet Explorer icon, and enter www.csidata.com which takes you directly to CSI's Internet site. Existing customers can explore CSI's correlation tools directly through CSI Unfair Advantage software and data-banking tools. New customers can sign up anytime, but trial users must pay a modest monthly fee or wait until the next unannounced random Monday for a day of FREE service.

Once on-line via Internet Explorer, you will be greeted by CSI's main menu screen. Click the right arrow that lies to the left of the Market Correlation Studies banner. If you happen to be a first time visitor, click "Login" to get set up for your first period of usage.

Familiarize yourself with CSI's various menu and comprehensive search options such as Pricing / FAQ / Stock Picks / One vs. One / One vs. All / Portfolio / All vs. All / and Preferences. A quick familiarization effort will save you time in the exciting pursuit of dynamic trading opportunities. One thing we often fail to mention is that each new day the group of yesterday opportunites may be dropped from the extensive "All" studies list, and new opportunities and profitable challenges seen overnight are uncovered in new emerging market situations. This is one of the dynamic properties of the correlation effort involving billions of market pairs. If you failed to act on an opportunity today, more situations are likely to materialize tomorrow, so missing a day occasionally shouldn't hurt your prospects for profit.

CSI adopts a proprietary and comprehensive statistical process which measures the opportunity for profitable gains by selling short an overpriced correlated market against the simultaneous purchase of the correlated counterpart market each and every new trading day based upon the relative positioning of each member of the market pair on the day the study is conducted. It is up to the using customer to identify the future moment in time when it is appropriate to capture profits, or to cut losses when the correlation strength is insufficient to push the market pair to respond as expected. There are a couple of fully disclosed factors, however, that will assist the trader on the appropriate moment to act. One is the level of correlation in effect on the very day when a decision to launch a trade is appropriate, and the other is the statistical disparity (the profit opportunity) between the proposed members of the pair.

Upon signing onto the CSI system, a search of the correlation opportunities for today's opportunities can be easily launched. For example a starting point might be to simply run a comprehensive study to explore the markets most heavily correlated such that those particular markets are sufficiently separated on a temporary basis to be considered as a profit opportunity. The inputs for such a global search would be whether you want to explore stocks, futures, or both, the range of correlation probability levels you would be willing to consider, and the final day's statistical separation level in standard deviation (or Z-score) units. Your request will result in perhaps hundreds of opportunities for you to consider as a trading opportunity for today. If you choose your inputs carefully, you will likely see numerous outstanding opportunities for profit. Once your output appears, you are allowed to sort perhaps hundreds of trading opportunities by the correlation rank, the Z-score separation in standard deviation units, and other considerations before you make your decision on the market pair you might be comfortable to employ for engaging a well researched trading experience.

Once one or more trading pairs have been identified, the same set of market pairs may be examined daily with a "One vs. One" study on each pair chosen wherein you can watch the market's unfold, observe the on-going Z-score reports, and the movement of the market pair daily over time. Of course, you can and should monitor the progress of each spread trade that you activated by running the "One vs. One" study daily for each market pair that you considered. In my view, I would principally watch the Z-score retreat from the starting point of the trade to some level near zero (0.00), or simply wait until the market pair moves together statistically. Take your profits when satisfied, or your loss when the markets move against your intentions. Not every trade will develop into a loss, however, but every trader should always be very diligent to protect trading capital at all times.

When searching for extraordinary opportunities for profit, please be advised that very high correlation levels very close to 1.0 from an "All vs. All" search may not necessarily result in profitable trading outcomes. A very high correlation level offers little opportunity for tradable differences to occur because highly correlated market pairs very close to +1.0 or -1.0 consistently leave little opportunity for profit. Most personal searches should begin at an absolute correlation level of around 0.98 or less because this would provide a reasonable chance for a market dispersion to be identified. On the other hand, try to avoid allowing the correlation coefficient to get too low because randomness will enter into the choice. Treat the correlation coefficient as a probability of a sought-after event, and be as realistic as possible.

The Z-score parameter range provided to an "All vs. All" study measures the significance of the dispersion between each viable market pair uncovered. This second parameter input of the Z-score range is allowed to be up to 10 standard deviations which, of course, is far beyond what a typical normally distributed frequency distribution could possibly reveal. We bring up this matter because some distributional forms are absolutely not of the normal probability density classification. However, because this matter may be important to statisticians, we had to make this point. The distributional requirements for markets do not necessarily follow traditional statistical concepts. Therefore a wide level statistical dispersion may result in situations when market movement and behavior is not normally distributed. A normal distribution of events brings into play the proverbial bell-shaped curve. This is the typical case, but when Z-scores get much beyond 4.0 the bell shaped curve can give rise to highly peaked distributional forms or very flat or shallow distributional forms. Because of this unavoidable concept, the Z-score can sometimes reach unusual levels approaching + or – 10 in place of the usual + or – 3 situations that often develop in most market pairs.

Following an “All vs. All” study, the user may want to witness the historical statistical movement of a given market pair by consulting the multi-year chart of the proposed market pair. By clicking on the name of one of the markets suggested from among the rather long list of opportunities. You will be provided with a chart of the market pair that extends for the many years requested in the “All vs. All study. Typically, there will be a chart prepared in blue, another in red, and the Z-score line is presented usually in green. The spread will typically show the market to be sold in red, and the market to be bought in blue, and the Z-score chart will be supplied through the green line. This red vs. blue concept helps the user to avoid mixing the direction of emerging pairs. Red means sell short. Blue typically means buy long.

As you become familiar with the process, you may notice that there are occasional opportunities or situation where in certain unusual correlated market situations one might be advised to sell both markets, or to buy both markets. We bring this up at this time to avoid questions later. This phenomenon sometimes surfaces when there is a phase change in the studied pair. I personally recommend users act on such unusual situations with great caution.

When a user conducts the correlation studies described herein, he will undoubtedly see situations wherein a commodity is traded off against a stock, or a high priced stock is traded against a low priced stock. The explanatory tables shown below any given proposed market pair carefully advise the user of the respective quantities of each member of the pair such that one can make the tradeoff based upon price, and again based upon volatility of the respective pair members. I prefer using simply the market price approach, but that is only my opinion. The main point I am making here is to keep dollars at risk constant between pair members whether or not you have chosen price or volatility as your trade-off or equality goal.

Also present in the details below in the One vs. One chart is a table showing, among many other things, the net changes in dollar value for the prior ten days. What this does for the user is helpful in assessing the day-to-day dollar risk one would have to sustain should the market pair move against you. This assessment is based upon the two items: stock or contract value price or stock or contract dollar volatility. There are many other helpful details to consider in the tables. Knowing the level of risk one may be exposed to is very important when maintaining a balance in your portfolio.

Another major consideration all traders must take into account is the idea of a balanced portfolio. When launching a given portfolio of markets, one pair at a time, be absolutely certain that your resulting total mix of markets does not have a mix of markets where several markets are jointly correlated. An entry in the One vs. One, One vs. All, and All vs. All selection area is the Portfolio entry. This entry will bring together all contemplated markets chosen for your overall portfolio of trading situations. What the trader should be very cautious about is compiling a portfolio mix whereby coincident losses of several markets can gang up to lose money simultaneously. Portfolios must be balanced because nothing will push you from the market more quickly, and more readily than multiple losses in many markets simultaneously. It is easy to get into this trap. You may believe you have conquered the world, but if you are allowing coincident losses among unsuspecting market elements then your trading experience will be very short lived.

The CSI depth and scope of market coverage includes world commodities, stocks, mutual funds, exchange traded funds, indices, bonds, and just about everything else that trades in a daily frequency.

I didn’t have the time to speak about the red arrow system, but the correlation text page speaks to that simple way to discover through any “All” study. The best place to observe this tool is from the vantage point of an All vs. All study. Look for the red arrow in the right margin of the All vs, All report. I especially treasure the down red arrow with a horizontal hat on the arrow. This is an exceptional opportunity for profit because it monitors a change in the up direction of the green line, and is posted when the Z-score threshold has been reached. The details are disclosed within the site verbiage. Please consider that tool because it will save a great deal of time in identifying stellar trading opportunities.

And, Oh yes, don’t forget to click on the “face” profile option to learn about nearly every one of the over 100,000 stocks in the CSI database. The time to do this is after you find a promising pair, and before you launch a trade. It is generally mandatory to understand why a pair of markets is positively or negatively correlated. That profile icon will inform you of the salient details of most stocks in the CSI database. Never trade on coincidences!

Some other interesting concepts worthy of mention will hopefully wrap up this introductory piece. I didn’t refer to negatively correlated markets where when one market goes up the other follows suit by moving down. Such situations, although somewhat rare, offer great opportunities for trading. I will offer some examples: Copper is a great metal in that it is favored by air-conditioning manufacturers. Trading a company against a key commodity product is often an excellent way to trade. Copper futures traded against a company which manufactures A/C equipment like STD, the manufacturer of the Trane air conditioning system is an interesting choice. Another example might be an airline stock vs. oil futures. How about Starbucks vs. Coffee futures? If you think about it, there may be many situations you can personally discover.

I wish our readers great prosperity in their trading pursuits. This article may be expanded as situations develop. Thank you for spending the time to read some of the more exciting characteristics of correlation analysis. I would like to hear from readers who might wish to offer extended views, criticisms, or suggestions for improvement. We can be very responsive and helpful.

Sincerely,
Bob Pelletier

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