

Bianco Research L.L.C.

An Arbor Research & Trading Company

Independent · Objective · Original

Volume 11, No. 26

1731 North Marcey, Chicago IL 60614

www.biancoresearch.com

Market Facts

Correlation Of Volatility Points To Hedge Funds

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August 3, 2006

Patterns of positive and negative covariance of price returns on unrelated markets scarcely raise an eyebrow; indeed, this is one of the cornerstones of modern portfolio theory. We can reduce the volatility of a portfolio by combining assets – or the volatility of a fund of funds by combining managers – whose returns are correlated negatively with one another. And those who seek to add risk to their portfolios can do so by combining assets or managers whose returns are correlated positively.

Implied volatilities between markets affect overall risk levels, too. Neither historic volatility, the

standard deviation of returns, nor option implied volatilities, the option market's price for hedging future uncertainty, are static. Both measures rise and fall. We have no *a priori* reasons to expect implied volatilities between unrelated markets to exhibit positive correlation (blue font on green background), but this appears to be the case over a seven-year period.

Only a handful of implied volatilities exhibit negative correlations (red font on yellow background) to each other, and these are concentrated in non-financial commodities such as corn and copper.

Correlation Of Selected Volatilities: August 1999 To August 2006

	CD	BP	EC	JY	ED	FV	TY	US	CL	HO	HU	NG	SP	ND	HG	GC	SI	C	S	W
Can \$	1.000																			
Br. Pd.	0.135	1.000																		
Euro	0.219	0.332	1.000																	
Yen	0.198	0.200	0.282	1.000																
E-dlr.	0.027	0.053	0.060	0.040	1.000															
5-Year	0.034	0.027	0.103	0.065	0.234	1.000														
10-Year	0.005	0.026	0.056	0.061	0.174	0.637	1.000													
30-Year	0.027	0.040	0.116	0.123	0.151	0.615	0.605	1.000												
Crude Oil	0.067	0.038	0.016	0.046	0.050	0.087	0.104	0.068	1.000											
Htg. Oil	0.040	0.053	0.048	0.025	0.031	0.040	0.051	0.026	0.332	1.000										
Gasoline	0.025	0.034	-0.004	0.004	0.038	0.073	0.048	0.055	0.294	0.388	1.000									
Nat Gas	-0.016	0.025	0.050	0.042	0.003	0.057	0.051	0.078	0.129	0.152	0.157	1.000								
SP 500	0.045	0.049	0.094	0.060	0.126	0.101	0.100	0.101	0.130	0.017	0.044	0.018	1.000							
ND 100	0.024	0.008	0.042	0.053	0.085	0.048	0.036	0.067	0.052	0.018	0.016	-0.010	0.575	1.000						
Copper	0.039	-0.014	-0.034	0.006	-0.005	0.022	0.046	-0.031	0.088	0.041	0.065	0.021	0.038	0.004	1.000					
Gold	-0.020	0.013	0.013	0.004	0.024	0.044	0.044	0.033	0.154	0.097	0.074	0.027	0.055	0.022	0.087	1.000				
Silver	0.043	0.001	-0.001	-0.020	0.026	0.022	0.053	0.004	0.111	0.104	0.017	-0.012	0.021	0.055	0.032	0.302	1.000			
Corn	0.014	-0.007	0.021	-0.024	-0.014	-0.007	-0.014	0.003	0.028	-0.002	-0.019	0.009	0.015	0.008	-0.016	0.010	0.025	1.000		
Soybeans	0.016	0.008	0.052	0.033	0.026	0.016	-0.001	-0.010	0.002	0.004	0.028	0.005	0.043	0.011	0.024	0.016	0.023	0.415	1.000	
Wheat	0.056	0.010	0.042	0.012	0.038	0.074	0.060	0.107	0.030	0.051	0.037	0.018	0.018	-0.034	-0.014	0.017	0.012	0.288	0.206	1.000

Conclusion

The presence of these positive correlations has profound implications for financial markets. It does more than confirm the axiom that in a market crisis, all correlations move toward 1.00. It demonstrates how implied volatilities across disparate markets already are predisposed to move together. In a "normal" market, traders should expect intermarket levels of risk to rise and fall in a related, not a random, fashion.

If markets were traded only by commercial players within that particular business, this would unlikely be the case. The related volatilities rise and fall from the risk-seeking and averting actions of players involved in multiple markets without necessarily having a commercial presence in any of them. Restated, this is the footprint of hedge funds in action.

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