

Taking Risks

Extrapolating into the Future

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Astute readers may have recognized that, while I tend to avoid prognostication, I do extrapolate price dumbbell surfaces into the future. The price dumbbell surfaces that I create are not zero contour level isosurfaces of a money potential. They are the locus of most probable values of the dumbbell coordinates evaluated for each time measurement taken.

Let ϕ designate the phase angle of the price dumbbell and σ designate the geometric price spread. Then the equation for the most probable time surface is given by

$$t = a\phi^2 + b\phi + c\sigma^2 + d\sigma + e \tag{1}$$

This surface extrapolates linearly with time. There is no empirical basis with which to choose any other extrapolation. The value of using price dumbbell surfaces with which to extrapolate, instead of using raw price coordinates of assets, results from the principle of regression to the mean. One should recall that our markets are, for the most part, open systems, so that the mean is always changing. With an ever changing mean, one cannot properly speak of a regression to the mean, since no point in time has greater significance than any other. But, we now from empirical observation, that price dumbbells tend to oscillate within relatively well defined limits. While it does not fix the center of price for a price dumbbell, it provides sufficient guidance with which to judge the fluctuations in geometric price spreads of the dumbbell. Although extrapolation of any data set entails risk, utilizing price dumbbells to extrapolate informs the risk taker of all combinations of most probable future prices for a pair of assets. If, in principle, one could place bets upon the continuum of values, then one would be certain of gain.