# The Symmetric Downside-Risk Sharpe Ratio

*And the evaluation of great investors and speculators.*

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The Sharpe ratio is a very useful measure of investment performance. Because it is based on mean-variance theory, and thus is basically valid only for quadratic preferences or normal distributions, skewed investment returns can lead to misleading conclusions. This is especially true for superior investors with many high returns. Superior investors may use capital growth wagering ideas to implement their strategies, which produces higher growth rates but also higher variability of wealth.

My simple modification of the Sharpe ratio to assume that the upside deviation is identical to the downside risk provides a useful modification and gives more realistic results.

Exhibit 1 plots wealth levels using monthly data from December 1985 through March 2000 for the Windsor Fund of George Neff, the Ford Foundation, the Tiger Fund of Julian Robertson, the Quantum Fund of George Soros, and Berkshire Hathaway, the fund run by Warren Buffett, as well as the S&P 500 total return index, U.S. Treasuries, and T-bills. Yearly data are shown in Exhibit 2.

The means, standard deviations, and Sharpe [1966, 1994] ratios of these six funds, based on monthly, quarterly, and yearly net arithmetic and geometric total return data, are shown in Exhibit 3. Shown as well are data on the Harvard endowment (quarterly) plus U.S. Treasuries, T-bills, and U.S. inflation, and number of negative months and quarters.

The first panel in Exhibit 3 shows the data behind