

**Title:** **A SHARPER RATIO: A GENERAL MEASURE FOR RANKING INVESTMENT RISKS**

**Speaker:** **Kent Smetters**  
**The Wharton School and NBER**

**Importance:** Why this matters:

While Sharpe Ratios may be appropriate to rank strategies with normal return distributions, they may provide incorrect rankings for strategies where the higher moments (skew, kurtosis, etc.) matter. This paper develops a ranking measure SZ, that captures all of the moments of the return distribution, and is much more computationally efficient than integrating the expected utility of the distribution.

**Investigation:** "Speaker analyzed XXX data to address the questions yyy, zzz, etc."

First demonstrated why Sharpe Ratios and other popular metrics should not be used to rank many investment strategies. Went on to present the mathematics required to develop a consistent ranking metric, its necessary characteristics, and the limitations of previous attempts. Developed SZ, a metric that addresses the issues, and is computationally efficient. Demonstrated both Sharpe Ratio and SZ provide similar rankings for indices, SZ ranks were superior when evaluating hedge funds.

**Innovation:** Are there new techniques of interest in the data or approach to the problem?

Developed a ranking measure, SZ that can be used to compare the expected utilities of investment strategies regardless of the underlying distribution of returns. Metric has a parameter  $\rho$  that describes the investor's risk aversion. Calculation of metric is 100-500 times faster than maximizing the expected utility through integration.

**Insights:** 1-2-3, what are the three most important things the speaker offered?

1. Sharpe Ratios should not be used to compare investment strategies that include holdings with non-linear payoffs and/or trading strategies that create non-normal payoffs.
2. Other popular metrics such as Maximum Drawdown and Sortino Ratio are similarly flawed. Using multiple metrics is unsatisfactory because the approach can't be used produce a ranking of multiple strategies.
3. SZ is a computationally efficient metric that can be used to rank strategies based on their expected utility of strategies regardless of the distribution of returns.

**Audience rating: 4.48**