

Use with SafeMoneyMetrics™ CTA Indexes published at <http://www.safemoneymetrics.com/indexes.htm>



SafeMoneyMetrics™ always monitors ratios in relationship to each other because nothing in the Universe lives in isolation, For example: Analyzing the trend of a Net relative to Funding Level Ratio gives insight into profitability relative to risk associated with leverage being used. ([Graphic demonstrations are below](#)).

SafeMoneyMetrics™ Indexes can be applied to any data-base and are available as a subscription service. SafeMoneyMetrics (SMM) CTA Rankings and Indexes are one month behind traditional rate of return indexes because of data required to calculate the ratios. The profit and loss value is calculated using the previous month's assets under management. WHY? When advisors report rate of return and assets under management to traditional data bases, the profit and loss (P&L) is already included in the assets under management data. SMM™ needs the dollar P&L Value to calculate a Net and Funding Level Ratio. If the current rate of return was applied to current assets, the P&L value would be inflated or deflated by the current rate of return, because the values would have been twice calculated. Date reflects the most recent Net and Funding Level Ratios available.

## 1. Capital at Risk (CAR):

A formula that represents actual capital used to produce a return; NOT the account size an advisor asks for, or minimum funding level. CAR is the foundation for all ratios. The CAR formula is adapted for different situations. Two examples are actual margin requirements for each trade, or when evaluating monthly data the maximum margin.

Because monthly data is used to create all indexes, the maximum margin requirement for advisors in the index becomes the foundation for determining Capital at Risk. The exception would be foreign exchange traders, and the foreign exchange index.

The formula used to produce the advisor rankings is also used in the indexes. Beginning assets are used as the foundation for creating the net and funding level ratios. Beginning assets already includes the previous month's rate of return. Beginning assets and the monthly rate of return are used to create the net and funding level ratio, therefore the rate of return should be backed out of beginning assets before using beginning assets to calculate the ratios, or use the previous months beginning assets value. When using SafeMoneyMetrics™ indexes as a benchmark ask how the sponsor calculates ratios and compensate for the inherent inaccuracy.

Since accurate evaluation of capital at risk relative to return can only be determined by tracking all trades in the sequence that they are taken, please remember the inherent limitations of using a maximum margin or any monthly formula.

## Capital at Risk Applications:

CAR is also used to evaluate capital waste built into the investment. For example; assume we're evaluating two advisors each having a \$1M required account size. The advisor using the least amount of capital at risk

to produce the highest realized return relative to the lowest volatility would probably be a better choice. (Highest RVR and Lowest CV- see#6 and 7 below).

## 2. Net Ratio (NR):

Is the composite value of realized and open trade equity on capital at risk. (Realized Ratio + or - Volatility Ratio/ Capital at Risk Formula).

## 3. Funding Level Ratios (FLR):

Is the composite value of realized and unrealized open trade equity based on the minimum funding account size.

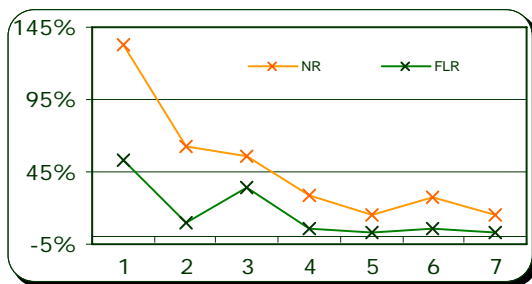
### Net to Funding Level Ratio Applications:

Investment stability is indicated when the FLR is consistently below the NR, especially when the difference is wide. The two ratios evaluate a net return earned on capital at risk relative to net return earned on minimum capital required to fund the account. If and when the net ratio moves into and below the funding level, leverage is too high at the minimum funding level under current market conditions.

The numbers are easy to understand: The table below expresses an average Net (NR) and Funding Level Ratio (FLR). We can say that the maximum risk for 2004 was -23.6% of capital at risk and - 8% of the accounts minimum funding level. The maximum return was 26.8% on capital at risk and 8.9% of the funding level.

Year	Ratios	Avg.	Max.	Min.
2005	NR	-1.1%	26.8%	-23.6%
	FLR	-0.4%	8.9%	-8.0%

\*\*\*The analysis reveals potential risk of an investment when funded at the minimum funding level over variable market conditions. When applied to indexes, the analysis reveals potential average risk of the sector, or account size group represented by the index being evaluated.



### A Few Limitations of SafeMoneyMetrics Indexes:

Based on benchmark definitions taken from

- William Sharpe/ Gordon Alexander - Investments Fourth Edition Pages 733-734.
- Sharpe and Alexander - Investments 4<sup>th</sup> Edition Page 737 23.2

With one exception, we do not believe that any managed futures index is a useful investment benchmark. Mr. Sharpe is quoted below.

“In order to infer whether the manager's performance is superior or inferior, returns of similar portfolios that are either actively or passively managed are needed for comparison. Such comparison portfolios are often referred to as benchmark portfolios.

Selecting benchmark portfolios should prove relevant and feasible, meaning they should represent alternative portfolios that could have been chosen for investment rather than the portfolio being evaluated”.

A few of our own reasons are as follows:

- The nature of numbers is that averages create a middle ground. The best, worst and those next to the extremes are leveled off. Comparing an investment to an index or average establishes erroneous performance expectations. Any erroneous expectation is cause for ill-fated loss.
- Indexes are compiled with advisor data having different account sizes, investment strategies, margin to equity and minimum funding levels. Past performance calculations also vary. Although parameters for identifying and monitoring risk are easily identified on individual accounts, they would not realistically be comparable to an index, unless the index was specifically built to mirror an investment.
- There is no direct ‘benchmark’ relationship between an investment and an index. The text below was taken from Always SafeMoneyMetrics™ article #46 Managed Futures and Superior Risk Management. Close the Gap Between Belief, Truth and Relevance.

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“Stock and bond market indexes are comprised of closing stock or bond prices at the end of each day. Indexes directly mirror prices of the stocks or bonds in it. If someone developed a grain index and daily prices for all the grain markets were included, then that futures index mirrors the equity indexes and has useful relevance.

If people bought the grain markets reflecting the exact proportions used in the index, then the index serves a useful purpose. If people invested in grain traders based on values of the grain index, they are increasing their risk because there is no relevance between the grain index and the performance of any grain trader!

CTA and hedge fund indexes reflect the returns of trading talent applied to markets, whereas debt and equity indexes reflect the market prices of stocks or bonds in each index. I perceive that the industry wide applications of using CTA and Hedge Fund indexes for benchmark and investment evaluation purposes are ‘erroneous.’ The ‘belief’ underlying the application unknowingly increases risk for many investors.”

Limitations of Information Provided by Data Bases

SafeMoneyMetrics™ when applied to public domain data requires the following information. Monthly ROR, Total Assets, Minimum Account Size, Minimum Funding Level, Maximum Margin to Equity and Round Turn Transactions per million.

Currency traders do not report like futures traders. Many advisors do not report the minimum funding level or RT per million. When possible we ask each advisor. When the minimum funding level is unavailable we use a default number of 75%. The statement says that those advisors accept minimum funding levels at 75% of their minimum account size. This is probably not true however the error is perpetuated throughout all reports and indexes that include these advisors. Slowly over time, with the cooperation of each advisor, the data is adjusted.

To compensate for the weakness, Rankings now include extra columns that indicate if default values are used. This leaves people with the opportunity to contact the advisor for more accurate information.

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In conclusion SafeMoneyMetrics™ Indexes, when used as 'industry wide indicators' are only as useful as the data base they are applied to. Data-base services can track assets reported. Although not factual, I have reason 'to believe' that data-base services have no indication of total industry assets managed relative to assets reported to their specific data base.

#### A Few Benefits of SafeMoneyMetrics Indexes:

- The indexes are useful as timing indicators for entering or exiting specific types of managed futures investments.
- They are useful for determining the risk and cost of an investment relative to 'an index or industry average.'
- Investors can watch the indexes over time frames, if an investment is not performing better than the 'middle ground created by averages', research other investments.
- The indexes can determine acceptable downside boundaries. The data provided by an index can be used to determine the worst you can expect for an investment related to that index over specific time frames and market conditions.
- The account size indexes are useful for analyzing "industry trends" relative to actual managed accounts.

#### Useful SafeMoneyMetric™ Ratios:

The definitions below are included because, no matter what, people insist on using indexes to judge the performance of their investments. We thought you should learn about and benefit from a few SafeMoneyMetrics™ strengths. The ratios below can be calculated and applied to any investment under consideration.

4. Cost Ratio (CR): Defined by a relationship between account costs relative to the Net or Funding Level Ratio. Traditionally costs are evaluated as a percent of the notional account value annualized. Cost analysis is improved when evaluated relative to return and capital at risk. For example - one of the industry's greatest traders had a 20% cost factor. People "perpetuate the illusion" that he needed to exceed a 20% return before clients benefited.

This industry wide thinking is 100% inaccurate. The trader earned over 100% annually on the notional account value using 25% margin (Capital at risk). Now we “see” that he earned 400% on capital at risk and his costs were 20% relative to the 400% or Net Ratio.

5. Traditional Rate of Return (TR): SafeMoneyMetrics™ uses the TR relative to the Net and Funding Level Ratios for evaluating account stability at variable degrees of leverage. The TR is also used to evaluate costs relative to account size, capital at risk and return.

6.\*\*\*A Primary Benchmark: Reward to Variability Ratio (RVR): When used with SafeMoneyMetrics™ risk and investment management services the RVR estimates the capability to produce realized profits with respect to managing the risk of open trades. Traditionally the RVR is calculated by dividing the Risk Premium (RP is a return above the risk free ROR) by the Standard Deviation (SD) of returns. Since SD measures volatility and RP risk premium the result is a risk/reward ratio. For this advisor selection analysis we divide the average Net and Funding Level Ratios by their Standard Deviation (NR/StD and FLR/StD). A high RVR indicates a higher return relative to the amount of risk taken. For example Assume the NR= 23%, a SD of the NR for the same time frame is 30%, then 40% and 55%.  $23/30=0.76\%$ ,  $23/40=0.575\%$  and  $23/55=0.418\%$  - As the SD increases or NR decreases the RVR decreases. This ratio is expressed as one number and is applied to every aspect of analysis, including comparison of investments.

7.\*\*\*Secondary Benchmarks: Coefficient of Variation (CV): From statistics the CV measures absolute and relative dispersion. If the absolute dispersion is a standard deviation (S) and the average (A) is the mean, then the relative dispersion is called the coefficient. When a mean or average is close to zero, the CV is not useful  $CV=S/A$  – When applied to composite SafeMoneyMetrics™ analysis the CV is a Benchmark, used to monitor the average of each ratio over time frames relative to the last for that time frame. The CV is also used to compare advisors. Assume two trading advisors, one returns 55% with a StD of 35% and the other returns 35% with a StD of 15%.  $35/55=63.63\%$  and  $15/35=42.85\%$ . The second advisor is more efficient.

Billing Account size (BAS): Also called a fully funded or notional account size accepted by the advisor (Management fees are calculated on this account size).

Minimum Funding Level (FL): Cash used to fund an account expressed as a percentage of the Billing Account Size.

Margin Minimum%: Margin used expressed as a percent of the Billing Account Size.

Margin Funding%: Margin used expressed as a percent of the minimum funding level.

Cost/MA: Annual cost relative to the Billing Account Size (BAS) accepted by the advisor.

Cost/FL: Annual cost relative to the Minimum Funding Level (FL). See # 4 Cost Ratio.

BA and FL Total Return: Based on the hypothetical account size for time frame being analyzed.

Max: The best value of a ratio within the time frame specified.

Min: The worst value of a ratio.

Time Frames: Ratios and benchmarks calculated over a specific time frames, rather than calculating annual return data. We perceive constructive evaluation of time frames to be superior to evaluating annual return data.

The End

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