SIERRA MUTUAL FUNDS

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OBSERVATIONS AND PERSPECTIVES: YOUR CLIENT DOESN'T CARE ABOUT STANDARD DEVIATION

All else equal, given the choice between a 10% gain or a 5% gain, most (all) investors prefer the 10%, right? A degree in math or a course in probability and statistics isn't needed to figure that out.

Clearly, investing isn't quite that straightforward though. Earning higher returns means stomaching more risk, we are told. Some will therefore choose the lower return option, 5% in this case, because the road to earn that is considered "less risky."

How to define less risky? This is when the math degree helps. Risk is measured and communicated via statistics including standard deviation, beta, Sharpe ratio, Treynor ratio, value-at-risk, and more. One of the most commonly used is standard deviation, a multi-step calculation best computed in Excel or on a financial calculator. A higher standard deviation means returns are more spread out (bigger gains and bigger losses) than a lower standard deviation. In other words, standard deviation defines how thrilling any investment roller coaster ride will be: heart-in-your throat near-vertical climbs and drops or a pleasant coaster.

The problem is, though, is your client really doesn't care about standard deviation.

Volatility only bites on the downside. When assets are rising, the environment is broadly described as "complacent." On the way down, it's a different story.

Take this past Friday, for example, as the media trumpeted that "calm markets turn choppy." The equal opportunity sell-off was characterized by a global decline in financial asset values across the board. U.S. stocks dropped 2%. European and Asian stocks posted big losses too. Interestingly, so did bonds; typically considered a "safe haven" when fears for stocks surface, the 30 year U.S. Treasury saw a hit of nearly 2 points to price. Commodities, including oil and gold all slid too. In other words, many investors started the day with more money than they had after the day ended.

This is what matters for many investors: measuring what is lost. It is far more important than talking about metrics (like standard deviation) that capture both upside and downside.

Drawdown, for instance, describes the largest single drop from the high water market of a portfolio. For many clients, this is a statistic that actually matters. According to research by J.P. Morgan, in any given year, it is typical to experience a 14+% drop in U.S. stock prices (although that hasn't happened once in the past 5 years). Our strategies don't come anywhere close to that. Even in 2008. Downside deviation and Sortino ratio are additional statistics that only measure losses, in other words the "bad" volatility. Again, our strategies are designed to seek to minimize losses.

Whether Friday's move is a hiccup or something bigger hinges on many unknowns: what the Fed does (or doesn't) do, the health of the U.S. economy, the Presidential election, international dramas. A focus on downside risk, then, is the key to producing solid investment returns and preserving capital.

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TERMS & DEFINITIONS

Beta is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole.

Standard Deviation is a statistical concept used in investment management to measure risk for the variability of return of a fund's performance. A high standard deviation represents greater risk.

Sharpe Ratio uses standard deviation to measure a fund's risk-adjusted returns. The higher a fund's Sharpe Ratio, the better a fund's returns have been relative to the risk it has taken on.

Treynor Ratio is similar to the Sharpe Ratio, but it uses beta as the volatility measure rather than standard deviation. The return is defined as the incremental average return of a fund over the risk-free rate. The risk is defined as a fund's beta relative to a benchmark.

Value-at-risk is a statistical technique used to measure and quantify the level of financial risk within a firm or investment portfolio over a specific time frame.

Max Drawdown is an indicator of the risk of a portfolio chosen based on a certain strategy. It measures the largest drop from peak to bottom in the value of a portfolio (before a new peak is achieved) using month-end data.

Downside deviation is similar to the loss Standard Deviation except the downside deviation considers only returns that fall below a defined minimum acceptable return rather than the arithmetic mean.

Sortino Ratio is a modification of the Sharpe Ratio that differentiates harmful volatility from general volatility by taking into account the Standard Deviation of negative asset returns, called Downside Deviation.