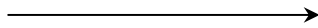


ADDING VALUE

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SUMMARY:



We live in an age of measurement. We want to measure everything: how much, how many, how high? Nowhere is this impulse more powerful than in the world of investments. We don't dispute that there should be performance measurement; our chief gripe is how people interpret the numbers and the performance.

ADDING VALUE is mailed quarterly to our clients and friends. The intent of this publication is to share some of our more interesting views and research with our clients.

Fourth Quarter Investment Review and Outlook

Performance: The Basic Idea

Providing clients with fair and meaningful reporting of investment performance is one of the primary objectives of investment management services. The concept of investment return is easy to understand. In its simplest form, it is defined as the change in portfolio value, including both capital appreciation and income, divided by the beginning market value. What complexities arise from this simple calculation?

Unfortunately, investment calculations in practice are rarely as straightforward as the above formula. One complication that is readily apparent is what happens to the calculation with irregular time periods, additional cash contributions, withdrawals, and distributions? What happens with multiple year calculations? What do the numbers really mean?

Time-Weighted Returns are the Standard

Acknowledging the need for consistency in reporting investment returns, separate from investors' actions in contributing or withdrawing money from the portfolio, the investment community uses a standard performance measure—the time-weighted return (“TWR”). This measure is essential for comparing investment manager performance, because it reflects the effectiveness of manager decision-making, independent of factors that are outside the manager's control, i.e. cash flow magnitude and timing. In the quarterly reports issued by Wright Associates, the Performance Report and the Performance Report by Sector are calculated using TWR.

Performance Calculations over Multiple Years

Now consider the calculation of total return over multiple time periods. Is it appropriate to use the cumulative return from inception, a compound annual rate, or a simple average rate of return? To decide, consider a very simple two-period example for a \$1000 investment:

<u>End of Period</u>	<u>Return</u>	<u>Portfolio Balance</u>
0		\$1,000
1	100%	\$2,000
2	-50%	\$1,000

Compound Annual Return = 0%, i.e. start with \$1,000 and end with \$1,000.

Average Annual Return = 25%, i.e. $(100\% - 50\%/2)$

The cumulative return is zero, the compound annual return is zero, but the average return is +25%. Quite a difference!! For extended time periods, investors should rely on the compound annual return, also known as the geometric rate of return, as the best measurement of performance, unless by coincidence your portfolio measurement started on January 1st of any year.

One further note on cumulative return: while the miracle of compounding indeed takes place as the holding period of your investment lengthens, it is simply impossible for most investors to easily compare cumulative total returns in a sensible way. First, there is the problem with consistent starting and ending points. Second, there is a problem with interpretation. Did a fund with a ten-year cumulative return of +100% earn a compound annual return of +10%? (No! The annual return, reflecting the compounding effect, was +7.2%). Did a fund with a five-year cumulative return of 93% do better or worse than one with a ten-year cumulative return of +271%? (The compound annual rates of return are identical). Has a fund with a staggering gain of +1602% over 30 years been successful? (The annual rate of return was 10%, and over the same period the stock market's return was 11%). To be sure, the use of annual rate of return tends to reduce sharply the apparent gaps among performers. For instance, the ten-year difference in the rate of compounding at 4.02% versus 5.13%, is only 111 basis

points, but the actual dollar amount difference is almost 12% greater. Winning in the arena of investments is a game of inches. Over time, a few inches (or basis points in this case) can make a significant difference in how much money you have made. Wright Associates reports both the cumulative total return and the compound annual return on the Performance Report.

Mean Regression

In addition to understanding the meaning of the performance number, mean regression is one of the most important concepts of performance measurement. A simple way to explain mean regression is a coin-tossing contest. Given a *fair* coin, we could predict with great confidence that most coin-tossers in the long run would average close to 50% heads and 50% tails. You could also predict in the short run that some coin-tossers would be better than average at tossing heads. Now, would you want to use the short-term results of the dominant heads tosser to predict long-term results? The answer is clearly no. Sooner or later, each heads tosser would become more and more average. That's mean regression. Yet, how many of us use short-term investment performance as an indicator of long-term investment performance?

We will provide two examples to illustrate this concept. The table below shows the compound annual return of three classes of mutual funds:

<u>1982-2002 Compound Annual Return</u>	
Large Company Stock Funds	11.5%
Foreign Stock Funds	10.0%
Small Company Stock Funds	10.2%

Returns, expressed in percentages, are not much different for the equity funds over the 20-year period. However, as we just dis-

cussed, the dollar value of the portfolio would be significantly different. Further, if one examined returns over a shorter time period of 1 year, 2 years, or 3 years, one would see significant volatility of results. The objective, therefore, is to capture the out performance of those managers over the shorter time frame, rebalance as appropriate by selling high and buying low, and apply the miracle of compounding to the results. By George, I think we've got it! Understanding mean regression and eliminating any behavioral biases in the decision-making is what separates successful investment advisors and managers from the average.

To further illustrate the point, Sequoia Fund is a mutual fund we have followed for many years. Unfortunately, we have never owned the fund since it closed to new investors in 1982. It has one of the best long-term records of any mutual fund, returning over 16% annually for the past 35 years and beating the S&P 500 by almost five percentage points on an annualized basis over that time period. Incredible performance to say the least. However, in 15 of the 35 calendar year time periods, the fund underperformed the S&P 500. That's 43% of the time! In the mid- to- late 1980's, the fund underperformed in five out of six years. In the early 1970's, it underperformed for four straight years. What investor would have the patience to stay with this fund during those tough periods? What fund manager has the discipline to stay with his or her investment process when it isn't working over that long period?

The Sequoia Fund was established in 1971 at the request of Warren Buffett who at the time was liquidating his investment partnership. Warren asked his friend Bill Ruane to set up a fund to handle the partner's assets. The first four years were very tough. To quote Buffett, "I am happy to say that my partners, to an amazing degree, not only stayed with him but

added money, with a happy result." What about the big institutional investors who oversee pension plans, endowment funds, and other multi-billion dollar pools? After all, the big money players should have access to the best minds on Wall Street to help them make decisions. Not so, says Robert Kirby, who at the time was a director of Capital Guardian Trust, which managed over \$32 billion for large institutional clients. To quote Kirby, "There's always some guy out there who knocks the cover off the ball for the last five years. He waltzes into a presentation, and the corporate staff says 'Holy mackerel, he's beat the market by 6% annually!' and the guy gets hired to manage their money. Then you have what's statistically called regression to the mean. As soon as the manager regresses to the mean, the client fires that guy and gets the new guy who has done 6% over the market. It is so naive, it's incredible."

Interpretation of Results

Performance numbers look very precise and scientific. But they almost always fail statistical tests of significance and can hardly ever be projected forward. While development of investment standards (time-weighted returns reported on a compound annual basis) improved the underlying data substantially by making it honest, nothing has improved *how* the data is used. In terms of selecting investment managers on the basis of short-term performance indicators, despite all the marketing money thrown at trumpeting past successes, short-term performance is no indication of future achievements. Indeed, it may be better to pick a solid long-term performer that has underperformed in the last couple of years on the assumption of mean regression.

In Conclusion

If the road to fund selection by using past performance numbers is full of potholes, how

does one select good mutual funds? How does one break the vicious circle of chasing performance however it is calculated? We think you have to go behind and beyond the numbers. Were the numbers generated when the fund's investment style was favored in the market? Are the key people still at the fund or have they been replaced? Most important, is understanding the fund's investment philosophy. Does it make sense, and is it likely to have competitive advantage over others? Do the individual securities held in the fund embody the investment philosophy? Can the fund effectively handle the assets under its management? What is the investment management focus? Does it focus on asset gathering or investing? These are a sample of the questions we ask in evaluating funds. In fact, our starting point is not quantitative (looking at the numbers), but qualitative (looking at the firm, its people, its process, its philosophy) and so on. One investment manager once said that if he had the responsibility of fund selection that he would assign qualitative factors at 2x the importance of quantitative factors in the initial selection. He also said that once the fund manager is hired and on board, he would weigh qualitative factors at 3 to 1. Robert Kirby sums it up in the fol-

lowing quote, "If I had the responsibility for hiring a money manager, I would go through the procedure that a company uses in selecting a law firm, a medical clinic or accountant. Find an organization of quality people with integrity, experience and dedication that is respected by its clients. When you have identified all the money management organizations that meet those specifications, hire the one that has had the worst investment performance over the past two to three years." A practice unfollowed by most.

Sincerely,

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