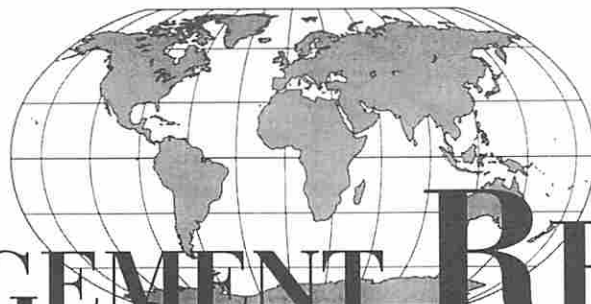


TAM ASSET MANAGEMENT REVIEW

Modern Investment Principles
For Serious Investors

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Every client of TAM Asset Management receives a copy of Charles D. Ellis' book *Investment Policy*. This book is one of the most useful, objective, and contemporary sources on prudent investment strategy. It is also less than 100 pages long and very easy to read.

Mr. Ellis is managing partner of Greenwich Associates, the leading consulting firm specializing in financial services worldwide. The author of six books and dozens of articles, he has taught courses at both Yale and Harvard. Ellis earned his B.A. at Yale, an M.B.A. (with distinction) at Harvard and the Ph.D. at New York University.

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Performance Measurement

Investment Policy: How to Win the Loser's Game

By Charles D. Ellis (Part 13 of 14)

Performance measurement is least useful when needed most—and is needed least when it could be most effective.¹ This chapter explains why.

As the investment manager is given more and more discretion to deviate from a market fund and to take more and more risks of different kinds—market risk, group risk, and individual stock risk—the difficulty of determining how much of any specific period's portfolio return is due to skill or chance increases rapidly.







Performance data that are sufficiently timely to have relevance for practical decisions on how well a manager is really doing, and whether a manager should be changed, may be based on too small a sample or too short a time period to provide information with enough accuracy for decisions. And results for longer time periods—which offer greater accuracy—will not be sufficiently timely to be relevant for current decisions on how well managers are doing, unless the results are overwhelmingly good or bad.

Measurements of a portfolio investment performance do not, at least in the short run, "mean what they say." Performance measurement services do not report "results." They report statistics. These statistics describe samples drawn period by period from a most unusual and

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¹Professor Barr Rosenberg estimates it would require 70 years of observations to show conclusively that even 200 basis points of incremental annual return resulted from superior investment management *skill* rather than chance.

Asset Class Returns* Through November 30, 1994

	United States	YTD 1994
	1-Yr. Bonds	+2.2%
	5-Yr. Bonds	-3.4%
	Large Stocks	-0.3%
	Large Value Stocks	-5.6%
	Small Stocks	+3.1%
	Small Value Stocks	+0.2%
	International	
	Large Stocks	+7.4%
	Japan	
	Small Stocks	+25.6%
	Continental Europe	
	Small Stocks	+10.7%
	United Kingdom	
	Small Stocks	+5.6%
	Pacific Rim	
	Small Stocks	-10.3%

Ouch! Every asset class declined in November—unusual, but not unprecedented. For the year, all of the international markets except Pacific Rim have provided positive returns, offsetting the declines in U.S. large stocks.

So far (let's cross our fingers on December), 1994 has not been a great year for the financial markets in general. This bodes well for 1995, however.

*See "Performance Notes" on back page for explanations.

TAM Portfolio Returns Net of Fees*

Through November 30, 1994

Risk (% stocks)	Year-to-Date		Since Inception
	1994	1993	12/92-11/94
Aggressive (95%)	+5.1%	+21.1%	+27.3%
Growth (85%)	+1.8%	+16.6%	+18.5%
Moderate (65%)	+1.7%	+14.0%	+15.9%
Benchmarks Comparisons			
Balanced Fund Index	-3.0%	+11.7%	+8.3%
Capital Apprec. Index	-3.4%	+14.8%	+11.0%
S&P 500 Stock Index	-0.2%	+10.1%	+9.9%
Salomon Broad Bond Index	-3.6%	+9.9%	+6.0%

*See "Performance Notes" on back page for explanations.

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Performance Measurement (cont.)

continuous process—the process of managing complex, changing portfolios of securities in the context of a large, dynamic, always changing, and often turbulent free and competitive capital market. The stocks and bonds in the portfolios are frequently changed; companies and their businesses are always changing in many different ways; and the factors that most affect the prices of securities (fear, greed, inflation, politics, economic news, business profits, investors' expectations, and so forth) never cease to change.

So long as the portfolio is not being cashed in, this multidimensional set of change forces will go on and on revising the value of the portfolio. There are no real "results" until the process stops and the portfolio is finally liquidated.

Since each investment manager's actual performance will—like the market's return—be drawn from a bell-shaped probability distribution around a mean or average annual rate of return, investment objectives and performance measurements should be understood and specified in terms of both the mean or average rate of return and a distribution around that mean.

Recognizing that measurements of performance are statistics leads to an appreciation that, as with any series of statistics, each data point must be read not as an exact number but only as an *approximation* of an exact number.

For users of performance measurement, the big problem is separating three very different factors that are mixed into the overall performance data. One factor is the "sampling error" or the probability that the statistics do not precisely equal the facts. As in any sample, there will be imprecision or uncertainty. In investment performance data, the sampling error is the degree to which the particular portfolio, for the particular time period, is a good or a biased sample of the manager's work.

The second factor is that during the measurement period, the market conditions may have been a favorable or unfavorable environment for the particular manager's way of investing. For example, managers of small-capitalization stocks have had a very favorable market environment during the past decade. As a result, they have all "looked better than they really were." This is why most investment managers want to be measured over at least one full market cycle.

The third factor is the skill—or *lack* of skill—of the investment manager. This is what many clients and managers most want to measure. But here's the rub: In the very short run, sampling errors will have a much larger impact on the measured results than will the manager's skill.

To be specific, it would not be at all unusual for an investment manager's results to be in a range that was plus or minus 2 percent of the return that would be expected most of the time from a broadly diversified portfolio with the same level of market risk. As noted earlier, it would take many years of performance measurement to know whether the *apparently* superior results were due to the manager's skill or just to good luck.

A major problem for the investment managers and for their clients is the considerable dispersion in performance being produced by the same investment managers when managing portfolios with the same investment policies. Results should be the same, but the differences are substantial. For the investment manager, such dispersion is clearly an important problem in quality control.

For clients, a key problem will be in deciding how to interpret the results. Should a disappointed client accept the manager's assurances that below-average results will surely be reversed in the coming period and that the client should stay? Or should the client reject the assurance,

assert that the manager is "out of control," and terminate the relationship?

One thing is certain: Clients should insist on full disclosure of the performance of *all* the manager's portfolios so they can get a good sample of the manager's overall achievement. Clients should not try to infer the manager's overall performance from their own portfolio—a sample of one!

[Ellis is pointing out a significant problem with performance reporting for most actively-managed equity and balanced accounts. "Composite" performance numbers can include balanced accounts with very different stock/bond ratios. Equity accounts or the equity portion of balanced accounts with a difference of only one or two stocks in a 30-40 stock portfolio can vary widely in performance.

TAM balanced accounts fall into four categories: Defensive, Conservative, Moderate, and Growth with equity percentages ranging from 25% to 85% of the portfolio. Performance is calculated and reported for each category. Since the asset allocations within each category are almost identical and the investments are made in highly diversified index funds, performance varies only slightly from one account to the next within a category.]

Information is data with a purpose. Because performance measurement can only be useful when a valid standard has been clearly established, performance measurement depends on a clear and explicit investment policy. And the purpose of regular measurements of portfolio performance must be to determine whether current portfolio *operations* are in faithful accord with long-term *policy*.

Performance measurement cannot and will not be useful in measuring results. Only an approximate answer

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Performance Measurement (cont.)

can be given to a question like "What rate of return was earned in this quarter?" and that approximation will not be useful unless results are extreme. However, quite useful information can be drawn from performance measurement on the investment *process*. If portfolio operations have not been in accord with agreed policy and the investment manager's agreed-upon mission, it is not really important whether current portfolio results happen to be above (lucky client) or below (unlucky client) the results that would be expected had policy been followed faithfully. In either case, the truly important information is that the portfolio and the portfolio manager are out of control. Sooner or later, this lack of control will show up in losses—uncontrolled and unrecoverable losses.

The impossibility of using short- or even intermediate-term performance measurement to manage managers by acting on "results" is what makes it so essential that clients and investment managers establish and sustain wise long-term investment policies.

There are other practical problems with performance measurement, particularly when used to measure whether a portfolio is or is not "within policy."

First, estimates of the risk of individual stocks and the risks of groups of stocks are probabilistic estimates of *future* price behavior based on the best available estimates of *past* behavior. While past patterns are usually our best available guide to likely future patterns, the future is sure to differ in significant measure from the past.

Second, the relationship between the "market" and a specific stock or portfolio of stocks is not constant. The relationship drifts. Consequently, the past will not be a perfectly reliable basis upon which to estimate the current or the future behavior of a stock or group of stocks.

Third, the amount of "drift" in the relationship over time will be less for stocks of major companies in established industries and will be more for stocks in small or marginally successful companies, particularly in rapidly changing industries.

Fourth, even the most rigorous statistical descriptions of individual stocks or groups of stocks are themselves estimates and are stated in terms of statistical probabilities, with the implicit understanding that there will be a distribution of actual experience around the expected mean.

Fifth, just one or two decisions—perhaps brilliantly skillful, perhaps lucky, perhaps both—can make a powerful difference to the reported performance of a portfolio. The classic example was the impact of a spectacularly successful, but almost accidentally made, investment in Digital Equipment. With it, American Research and Development (AR&D, a venture capital fund) significantly outperformed the market averages. Without it, AR&D would have underperformed the market during its 20-year life. Professional investment managers will recognize how often one of their portfolios has enjoyed far better results than another portfolio simply because, when implementing a strategic decision to invest heavily in an industry group, the stock used in one portfolio did very well while the stock used in another portfolio did badly.

Sixth and most important is the problem of "end period dominance." Almost always, the most important factor in the reported performance of an investment manager is not his or her skill but the choice of starting date and ending date. Many of the most impressive "gee whiz" charts of investment performance become quite ordinary by simply adding or subtracting one year at the start or the end of the period shown.

More and more clients and investment managers are quite properly dissatisfied with the convention of

comparing the results of their portfolio to the results of a group of other portfolios of similar size which do not necessarily have the same long-term investment policies. A portfolio's operations should only be judged in comparison with its policy commitment and the results that should reasonably be expected given that policy.

At the very least, results for one portfolio should be compared only to funds with a similar prescribed level of market risk. And one of the key criteria on which performance should be measured is this: Did the portfolio manager keep the portfolio's market risk at the level specified in the statement of investment policy?

In addition, it would be more equitable and more informative to compare a portfolio's results with other portfolios with a similar mission: growth stock portfolios versus growth stock portfolios; conservative stock portfolios versus conservative stock portfolios; "small cap" stock portfolios to "small-cap" stock portfolios, and so on.

In the same vein, the performance of an equity portfolio should be based on the total assets available for equity investment, not just the portion that happened to be in stocks—with cash positions excluded. The same applies to bond portfolios: Cash reserves should be counted in, not counted out. (Whether the use of cash reserves helped or hurt performance compared with a fully invested portfolio can and should be examined separately.)

For balanced accounts, the equity portfolio (cash reserves included) should be measured in comparison to similar equity funds, and the bond portfolio (cash reserves included) should be compared to similar bond funds, and the impact of shifts in the stock/bond mix should be reported and examined separately to see if these shifts in asset mix are con-

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Performance Measurement (cont.)

tributing to overall results.

One of the great frustrations thoughtful investment managers have had with typical performance measurement is that bad decisions with favorable outcomes are often well received by innocent clients while good decisions with temporarily unfavorable outcomes can lead to the loss of an account. (This problem has been particularly common in recent years for investment managers specializing in growth stocks.)

More serious—because it is more common—is the pattern of clients choosing managers just after they have had “their kind of market,” and imputing to these managers a special set of skills and genius that will be impossible to sustain after that market environment changes.

The final problem with performance measurement is its perverse tendency to stimulate counterproductive thinking and behavior by directing both the portfolio manager's and the client's interest and attention to the short-term operating results and away from long-term policy. The process of measuring will almost certainly influence the phenomenon being measured, as the physicist Heisenberg elucidated years ago with his “Principle of Indeterminacy.” There is a strong human tendency to think about the phenomenon being measured in the time interval used in the measuring and to let the measurement interval dominate the time horizon actually used. Short-term thinking is the enemy of long-term investment success.

Since what is measured—and rewarded or penalized—and how often and by what standard will

surely influence and may even become a dominant determinant in what investment managers will seek to achieve, clients must be sure they and their managers are measuring the right things the right way over the most relevant time period.

A form of Gresham's law can easily develop with both investment managers and corporate executives allowing concern with short-term operating results to drive out thoughtful concern with the longer-term policy concerns. (Quarterly performance, as we've just discussed, really can't be “measured.” The sample is too small to give useful information.) This can easily lead to short-term operating results dominating long-term policy, with portfolio risk levels being reduced after adverse results and risk levels being increased after recent favorable operating results. Both are clearly counterproductive.

If the risk level is to be changed, it would make more sense to change it in the opposite direction, reducing risk after recently favorable results and increasing risk after recently adverse results. Taking this counterintuitive action is, of course, very difficult to do—for both managers and for clients.

The main reason for measuring performance is to improve client manager communication. The purpose of performance measurement is not to provide answers, but rather to identify questions that clients and managers should explore together to be sure they have a good mutual understanding of what is contributing to and what is detracting from investment performance.

Central to good client-manager communication is information that shows whether the portfolio is being managed in accordance with agreed-upon policy, particularly policy on market risk and on the type of security in which the manager is expected to specialize. The impact of these two policy parameters should be measured and reported on a regular basis.

The final area of “performance measurement” is clearly qualitative. Does the manager's explanation of his or her decisions make good sense? Is the manager doing as promised—making the kinds of decisions that were “advertised”? Are the manager's actions consistent with his or her words at the previous meeting? When the manager changes the portfolio's structure, do the explanations make good common sense? As a thoughtful, interested client, do you find your confidence in the manager's abilities, knowledge, and judgment rising as you have more and more discussions—or is it falling?

Clients should give real weight to these “soft” qualitative factors because over and over again, this is where the best signals of real trouble first surface—long before the problem is evident in the “hard” qualitative data.

Even more important, wise clients have been able to stay with managers that made good qualitative sense even when the quantitative measures of performance were disappointing because the manager happened to be temporarily out of tune with the market. In many cases, subsequent performance has been very rewarding to both manager and client.

Performance Notes:

Asset Class Returns—United States: 1-Yr. Bonds = DFA One-Year Fixed Income Portfolio; 5-Yr. Bonds = DFA Five-Year Government Portfolio; Large Stocks = Vanguard 500 Index Fund; Small Stocks = DFA 9-10 Small Company Portfolio; Small Value Stocks = DFA Small Cap Value Portfolio. International: Large Stocks = 57% Vanguard Pacific Index Fund, 43% Vanguard Europe Index Fund (approximates the return of the Morgan Stanley EAFE Index). Japan: Small Stocks = DFA Japanese Small Company Portfolio. Continental Europe: Small Stocks = DFA Continental Small Company Portfolio. United Kingdom: Small Stocks = DFA United Kingdom Small Company Portfolio. Pacific Rim: Small Stocks = DFA Pacific Rim Small Company Portfolio.

TAM Portfolio Returns Net of Fees—These are the actual returns of TAM portfolios in each risk category net of actual TAM management fees, custodial fees, and fund expenses. The “Growth” returns were calculated using a model portfolio from 12/31/92 to 4/30/93. The “Aggressive” returns were calculated using a model portfolio from 12/31/92 to 3/31/93. In both cases, the maximum TAM fee was deducted, representative custodial costs were deducted, and all mutual fund returns are net of expenses. Past performance is no guarantee of future returns. This is especially the case with model portfolios which are not subject to specific economic or market factors. **Benchmarks**—Balanced Fund & Capital Appreciation Fund Indexes: Lipper Analytical's indexes representing the 30 largest balanced mutual funds and 30 largest capital appreciation mutual funds in the country.