



ASSETTE 

Do your active returns pass the age test?

Why timing is just as important as magnitude when analyzing
the distribution of active returns

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The five- and 10-year active return series relative to an appropriate benchmark is an investment industry standard. Asset owners and consultants rely on these numbers to evaluate managers' past performance, as well as to quantify the probability of future outcomes. For asset managers, these numbers can make or break reputations, and their prominence—or lack thereof—in marketing materials is usually a telltale sign of how “good” their record is.

But what lies beneath the numbers can be more telling than the numbers themselves. And there is one dimension that is frequently overlooked: how specific time periods within the series contribute to, or unfairly skew, the end results. For example, great 10-year numbers can lose their luster when it's discovered they are being propped up by one or two uncharacteristically stellar periods early in the time series. After all, if most of the top returns occurred long ago, it's only natural to question whether the manager can repeat that performance in the future.

So, what's a manager do?

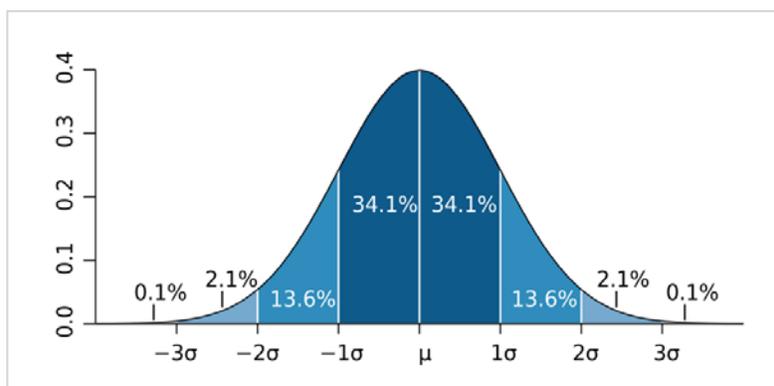
Before we address that question, a quick review of the statistical concepts of normal distribution and standard deviation is useful.

Stats 101 redux

“Normal distribution” is a pattern of data distribution that occurs in many natural phenomena when measured over long time periods. Basically, it's your 5th grade teacher's “bell curve.” Normal distribution is the most common type of distribution and is frequently used in portfolio analysis.

Figure 1 illustrates a normal distribution. The mean average return is represented by “ μ ” on x-axis of the graph. When a curve is normally distributed, we can expect that half of the returns will fall to the left of the mean and the other half will fall to the right. Given enough observations within a sample size, it is reasonable to assume that returns follow a normally distributed pattern, although this doesn't always happen.

FIGURE 1. NORMAL DISTRIBUTION AND STANDARD DEVIATION OF RETURNS



In this graph, the area in dark blue is less than one standard deviation from the mean. For the normal distribution, this accounts for 68.27% of the set; while two standard deviations from the mean (medium and dark blue) account for 95.45%; and three standard deviations (light, medium, and dark blue) account for 99.73%. Source: en.wikipedia.org.

So, back to the problem at hand: What's a manager to do when the predictive value of their five- or 10-year numbers is questioned?

First off, it helps to accept the basic premise that an impressive long-term active return number is not a de facto indication of skill. A five- or 10-year return series can be skewed by one or more short bursts of outperformance that mask an otherwise mediocre performance history. And if those anomalous periods

were also at the beginning of the time series, so much the worse. Saying: “The short-term performance has been a bit off, but look at the 10-year numbers—that’s what really matters,” doesn’t cut it unless those disappointing short-term numbers can be proven to be an anomaly.

Asset managers need to be very aware of the timing of their return distribution, not just the magnitude. If a manager has generated excess returns in more recent periods, that’s something to shout about! But if their distribution pattern doesn’t pass the “age” test, they should be prepared to discuss how and why performance has been lackluster, and demonstrate what, if any, investment process changes have been made to address it during the intervening years.

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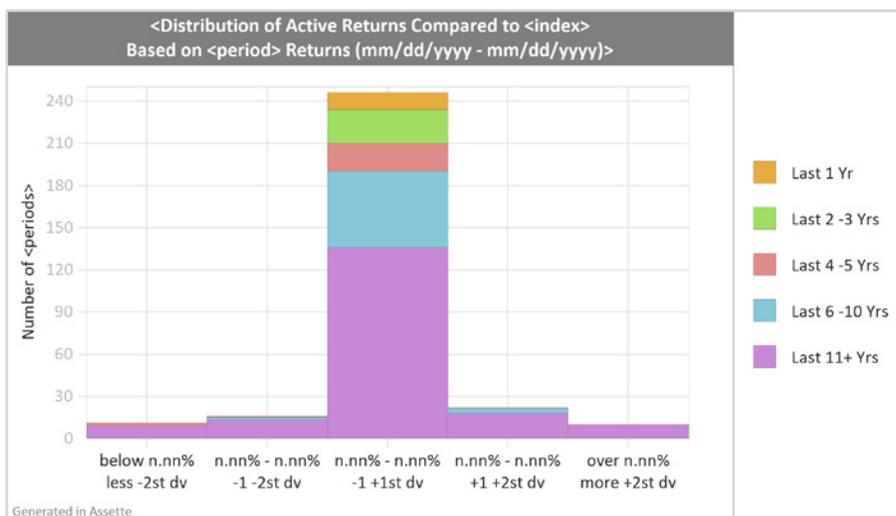
Spikes of outperformance aren’t always a bad thing

There are situations where it’s perfectly acceptable for a manager’s 10-year numbers to be tied to one or two light’s-out years. For example, a small cap value manager might have to wait out a long large-cap growth-stock cycle before their approach is back in favor with the market. This could show up in their return distribution series as a stellar year 1 (the last year small-cap value was in favor), followed by disappointing years 2–10, but that’s OK: It is exactly what you would expect to see if the manager is staying true to their mandate.

Revealing what lies beneath

No matter what lies beneath long-term active return distribution numbers, the smart manager will thoroughly deconstruct the age of those returns and use that information to frame meaningful conversations with asset owners and consultants. One way to do that is by using a graph like the one in Figure 2.

FIGURE 2.



Source: Assette

This analysis looks at the distribution of active returns versus the benchmark by breaking them into various time periods. The first thing we can see in Figure 2 is that this manager’s returns are normally distributed. Using data that includes more than 11 years of observation, their curve is a nearly perfect bell shape, just what one would expect.

But what's really interesting is that in nearly all periods, from 1 year to 11-plus years, the manager's returns were within one standard deviation +/- of their long-term mean performance. That indicates a portfolio strategy with relatively low volatility compared to the benchmark, and that low volatility has generally held regardless of the time period being measured. And, though there have been periods of more significant over- or under-performance—the "tails" to the left and right of the center of the graph—they have been limited to fewer than 20 time periods over the last six or more years with one exception. The very narrow band of yellow to the left of center indicates a period in the past year of negative one-to-two standard deviations, indicating more-than-average underperformance. This recent period of disappointing returns is rich fodder for discussion with clients and their consultants, but should not be a cause for too much concern, given the manager's very long-term return pattern.