When Day Traders Do Well, It’s Probably Just Luck

Research suggests market gains for day traders in recent months owe more to chance than skill.

Day trading is a stab in the dark, according to the tried-and-true tests for measuring the relative roles of luck and skill in the investment arena.

PHOTO: JON KRAUSE

By Mark Hulbert
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There’s little doubt that day trading has mushroomed in popularity in recent months, or that some day traders have produced extraordinary profits.

According to statisticians, however, there’s also little doubt that most of these day traders’ good performance is due to luck. They essentially would have just as good a chance of success going to the casino.

I’m not holding my breath that statistics will persuade any day trader that his or her profits weren’t attributable to skill. But maybe going through the numbers will dissuade others from risking their livelihoods on bets that have little more odds of success than a coin flip.
Statisticians over the years have devised a number of sophisticated tests for measuring the relative roles of luck and skill in the investment arena. Despite their different approaches, they come up with remarkably similar conclusions.

**Dispersion of returns**

Bradford Cornell, an emeritus finance professor at UCLA, measures the role of luck by comparing the greater dispersion of short-term versus long-term returns. His rationale is that, when focusing on a given group of managers, the bigger range of their short-term returns is due entirely to luck.

I applied Prof. Cornell’s test to several hundred investment newsletters, many of which pursue strategies that are popular among day traders. The difference between the best and worst newsletter returns over the past 12 months is a huge 81 percentage points. The comparable range at the 15-year horizon is just 11 annualized percentage points. Since we’re focusing on the same group of advisers in both instances, skill can’t explain the much larger dispersion at the one-year horizon.

When applying Prof. Cornell’s formula to this data, 92% of the differences in newsletters’ annual returns is due to luck. When he applied the same formula to a sample of large-cap U.S. equity mutual funds, he reached the almost-identical conclusion.

To be sure, there is no comprehensive database of day traders’ returns to which I could apply Prof. Cornell’s test. But he says he is confident that the role played by luck in day traders’ performance would, if anything, be even higher than it is for newsletters and mutual funds.

**Reversion to the mean**

A different test has been proposed by Michael Mauboussin, a managing director at Counterpoint Global, a division of Morgan Stanley Investment Management. In his book “The Success Equation: Untangling Skill and Luck in Business, Sports, and Investing,” he focuses on how quickly a top-ranked manager falls back to the middle of the pack. His rationale is that the faster this happens, the more luck is playing a role.

An example of pure skill would be chess, where the grand master will come out on top every time. When flipping coins, in contrast, the odds of coming up heads on the second flip are no different regardless of whether the first flip comes up heads.
I applied Mr. Mauboussin’s test to four decades of investment-newsletter returns. I
focused on all occasions since 1980 in which a newsletter was in the top 10% for a given
calendar year’s returns. If performance were a matter of pure skill, you’d expect each of
these newsletters to be in the top decile in the subsequent year as well—with an average
percentile rank of 95. If annual performance were pure luck, in contrast, you’d expect
their percentile rank in the subsequent year to be 50.

On average, these top-decile newsletters in the subsequent year were ranked at the 51st
percentile, barely above what you’d expect on the basis of pure randomness. Similar
results have been reached by the periodic reports produced by S&P Dow Jones Indices
into the performance of actively managed mutual funds. In fact, the report covering
performance though the end of 2019 cited results even worse than random, saying: “Only
3.84% of domestic equity funds in the top half of the distribution in 2015 maintained that
status annually through 2019, significantly below what random chance would predict.”

**Noise-reduced alpha**

A more-involved test for separating skill from luck has been proposed by Campbell
Harvey, a finance professor at Duke University’s Fuqua School of Business and Yan Liu of
Purdue University. In essence, they have devised a technique for isolating the portion of a
given manager’s return that was the result of skill—producing a measure they call Noise-
Reduced Alpha. Prof. Harvey says that this technique does a better job than prior
approaches in identifying managers able to beat the market. So investment skill definitely
exists.

Still, he adds, when applying his technique to the small subset of managers that
traditional performance evaluation finds to have beaten the market, he found that “more
than 90% of them did so because of luck.” So even though skill exists, it is rare. In fact,
Prof. Cornell says, skill plays so small a role that almost all individual investors should act
as though it plays no role whatsoever.
Exception That Proves the Rule

James Simons’s Medallion Fund is one whose success can’t be attributed to mere luck. Performance\(^\ast\) of a hypothetical investment of $10,000 since year-end 1987.

\(^\ast\)After subtracting fees, through 2018; logarithmic scale
Sources: Brad Cornell; HulbertRatings.com

One counterexample that inevitably comes up in discussions about luck and skill among day traders is the performance of Medallion Fund, a hedge fund managed by James Simons of Renaissance Technologies. That fund has been successful over the past three decades by pursuing day-trading strategies, as you can see in the accompanying chart. It is so successful, in fact, that according to Prof. Cornell it would be impossible to attribute it to mere luck.

But Mr. Simons is the exception that proves the rule for the rest of us. Prof. Cornell argues that Mr. Simons’s strategy isn’t one that you or I could replicate as individual day traders, since it involves constantly opening and covering thousands of short-term positions. The
fund reportedly is right in just barely more than 50% of these trades. But this is still enough that, when replicated over millions of trades, the fund is able to make billions of dollars.

“For most investors, deviations from an index fund are essentially all luck,” Prof. Cornell concludes. “They may just not know it.”

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