

the tortoise & the hare



| Luck vs. Skill

Time and time again, new evidence is presented that creating excess, benchmark-beating returns with security selection is a highly difficult task. It is a rare achievement to do so after all investment management costs are considered. The recent SPIVA report released by S&P provided another piece of evidence, comparing active manager performance with indices. Today we look at taking a different approach to make the same point.

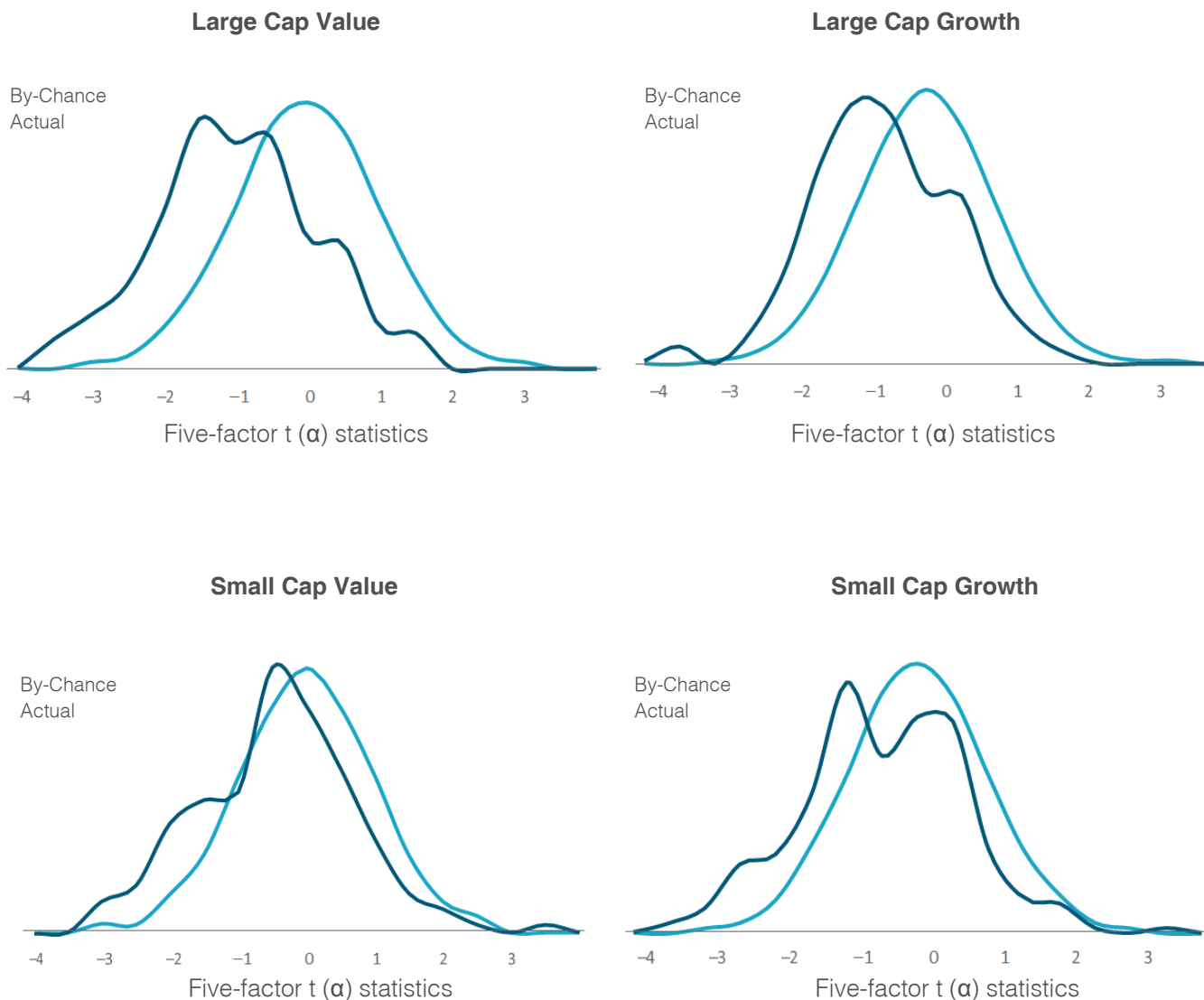
A study in 2016 by Dimensional Fund Advisors (DFA) showed that, as a peer group, active US equity mutual funds appear similar to the market yet exhibit lower returns as a result of fees and costs. Following Fama and French (2010), DFA simulated hypothetical performance figures to account for the effect of random chance (or luck) on performance. Their results indicate the unlikelihood that most traditional active managers could cover their costs after accounting for their exposure to the market, size,

value, profitability, and investment factors used by Fama and French (2015). But does the ability of active managers to outperform the Fama/French five-factor model vary across fund categories?

In 2017 DFA examined this question by analysing four separate categories of US equity mutual funds: large cap value, large cap growth, small cap value, and small cap growth. The same methodology as before was applied to this new dataset. Comparing statistical measures for alpha t (α) in Exhibit 1, based on actual fund performance against the results of new simulations, the distribution of t (α) for actual fund performance sits almost entirely to the left of what would be expected in a left-to-chance situation if all managers could cover their costs. The interpretation therefore is that there is little evidence to suggest this may be the case.

Luck vs. Skill

Exhibit 1: By-Chance and Actual Distributions of Five-Factor $t(\alpha)$ across US Equity Mutual Fund Categories, January 2000–June 2016



Source: DFA; By-chance distribution is the average of 10,000 bootstrapped simulation runs in which benchmark-adjusted (zero- α) fund returns are regressed, fund by fund, on the five benchmark factors of Fama and French (2015). Source: CRSP, Ken French's data library. A bootstrap simulation is a method of analysis that can be used to approximate the probability of certain outcomes by running multiple trial runs, called bootstrapped samples, using historical returns.

As with earlier results for US equity mutual funds, the best-performing funds perform no better than would be expected if left to chance alone in a zero alpha world. For example, the by-chance distributions indicate that if all funds could cover their costs, slightly more than 2% of funds should be expected to have $t(\alpha)$ statistics greater than 2 across the X axis. Looking at the actual distributions across fund categories, we find that in two

of the four (large cap value and large cap growth) not a single fund had a $t(\alpha)$ -statistic greater than 2. For the remaining categories, (small cap value (1.8%) and small cap growth (1.1%)) the percentage was lower than would be expected by chance.

Furthermore, the reverse is true when looking at the number of funds with reliably negative t-statistics. Again,

Luck vs. Skill

about 2% of funds should be expected to fall into this category by chance alone if all funds were able to cover their costs. However, the results show that substantially more than 2% of funds consistently underperformed the five-factor benchmark; 18.8% of large cap value funds, 8.2% of large cap growth funds, 10.3% of small cap value funds, and 11.4% of small cap growth funds all had $t(\alpha)$ statistics below -2 . Taken together, this evidence across different fund categories suggests that the vast majority

of active managers have been unable to produce excess returns with respect to the Fama/ French five-factor model and large enough to cover their costs.

All in all, this study is just the latest example of an increasingly strong body of evidence reinforcing the understanding that real alpha is a very rare commodity. Odds are stacked against investors in their attempt to benefit from sufficient alpha which covers the total cost

References

Fama, Eugene F. and Kenneth R. French. 2010.

“Luck vs. Skill in the Cross-Section of Mutual Fund Returns.” *The Journal of Finance*, 65(5), 1915–1947.

Fama, Eugene F. and Kenneth R. French. 2015.

“A Five-Factor Asset Pricing Model.” *Journal of Financial Economics*, 116(1), 1–22.

Meyer-Brauns, Philipp. 2016. “Mutual Fund Performance through a Five-Factor Lens.” Dimensional Fund Advisors.

Meyer-Brauns, Philipp. 2017. “Luck vs. Skill Across Different Fund Categories.” Dimensional Fund Advisors.

This article has been adapted from an article by Dimensional Fund Advisors.

All expressions of opinion are subject to change without notice and are not intended to be a guarantee of future events. This document is for information only and does not constitute a solicitation to buy or sell securities nor does it purport to be a complete description of our investment policy, markets or any securities referred to in the material. Opinions expressed herein are not intended to be a forecast of future events or a guarantee of future results or investment advice and are subject to change without notice or based on market and other conditions. Any reference to model portfolios, which is used for internal purposes, is purely illustrative. The value of investments and the income from them may fluctuate and can fall as well as rise. Past performance is not a guarantee of future results. You may not recover what you invest.

Although information in this document has been obtained from sources believed to be reliable, MASECO LLP does not guarantee its accuracy or completeness and accepts no liability for any direct or consequential losses arising from its use. Throughout this publication where charts indicate that a third party (parties) is the source, please note that the source references the raw data received from such parties.

MASECO LLP does not provide tax or legal advice and levels and bases of taxation can change. To the extent that this material or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law. Any such taxpayer should seek

advice based on the taxpayer's particular circumstances from an independent tax advisor.

Neither asset allocation nor diversification assures a profit or protects against a loss in declining financial markets. Currency fluctuations may increase or decrease the returns of any investment.

Investments or investment services referred to may not be suitable for all recipients.

In the UK, certain services are available through MASECO LLP (trading as MASECO Private Wealth and MASECO Institutional) which is registered in England and Wales, number OC337650, with registered offices at Burleigh House, 357 Strand, London, WC2R 0HS, telephone +44 (0)20 7043 0455, email enquiries@masecopw.com. MASECO LLP is authorised and regulated by the Financial Conduct Authority for the conduct of investment business in the UK. The Financial Conduct Authority does not regulate tax advice or offshore investments. Messages and telephone calls to and from MASECO Private Wealth may be monitored to ensure compliance with internal policies and to protect our business.

MASECO LLP is a FINRA/SEC Registered Investment Advisor in the United States of America.