

# MANAGER PERFORMANCE AND PERSISTENCE

Investors have long debated the merits of active versus passive management of stock portfolios. Active investment management is predicated on the notion that risk-adjusted excess return (alpha) is available for the taking by skilled managers. But efficient-market theory holds that true non-random alpha is unavailable if markets are highly competitive and prices reflect all available information.

Tests of market efficiency depend on the validity of the asset-pricing (i.e. risk-factor) model. Mladina and Germani ([The Journal of Portfolio Management, April 2022](#)) jointly test stock-market factor models and manager performance using the attributes of market efficiency as a benchmark to identify genuine common risk factors in traded equity portfolios.<sup>1</sup> Our sample was taken from a comprehensive universe of actively-managed US equity mutual funds in the Morningstar database from 1973 to 2020, using the lowest-expense share class for funds with multiple share classes. We found that a modified Fama French three-factor model with an intertemporal risk-free asset is the best factor model overall. This model employs market-weighted US Treasury bonds as the risk-free asset (instead of the standard 30-day Treasury bills) and market, size and value factors to risk-adjust returns.

Whether using the intertemporal (I-FF3) or standard (FF3) version of the Fama French three-factor model, we found no evidence of manager skill net of expenses. Exhibit 1 shows our results, both net-of-fund expenses (top panel) and gross-of-fund expenses (bottom panel), where we add fund expenses back to the reported net returns.

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**EXHIBIT 1: ALPHA PREVALENCE IN ACTIVE EQUITY**

<b>Net</b>	<b>Mean Adj. R<sup>2</sup></b>	<b>Mean Alpha</b>	<b>Actual % Sig. Alpha</b>	<b>Bootstrap % Sig. Alpha</b>
FF3	87.3%	-1.27%	2.9%	3.0%
I-FF3	89.0%	-1.32%	2.5%	2.9%
<b>Gross</b>	<b>Mean Adj. R<sup>2</sup></b>	<b>Mean Alpha</b>	<b>Actual % Sig. Alpha</b>	<b>Bootstrap % Sig. Alpha</b>
FF3	87.3%	-0.28%	7.3%	3.0%
I-FF3	89.0%	-0.33%	6.3%	2.9%

<sup>1</sup> Mladina and Germani, "Stock-Market Risk Factors and Manager Performance," The Journal of Portfolio Management (2022).

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Investors pay expenses in the real world, so the net-of-expense view should be the primary view for investment decision-making. The average net alpha is -1.3% in the sample, which captures both average fund expenses and trading costs. We expect about 3.0% of funds to show statistically significant (Sig.) net alpha just by chance (using the empirical bootstrap method of Fama French 2010)<sup>2</sup>. However, we observe less than 3% of funds have significant net alpha in the actual sample, which indicates those alphas are random. The results support market efficiency, at least as a practical matter net of expenses.

The debate on gross alpha (before expenses) is less settled. Some large investors have the ability to negotiate very low management fees in separate accounts due to their size and scale, which may result in net alpha if they can identify and hire truly skilled managers for a low fee. The bottom panel in Exhibit 1 supports this hypothesis. The average gross alpha is -0.3%, which captures average trading costs but not management fees. And we observe materially more than 3% of funds have statistically significant gross alpha in the actual sample, which is consistent with the gross returns of a small subset of top-performing funds benefiting from manager skill (i.e. about 3-4% of the sample, which is the difference between actual and bootstrap results). Taking the net and gross alpha results together, however, one might conclude that a skilled manager's gross alpha accrues back to the manager as their fee.

An important question in practice is whether alpha persists. Most prudent investors will evaluate a performance track record for evidence of alpha prior to hiring an active manager. Does evidence of past alpha tend to manifest as future alpha for new investors? We run a persistence test on funds in our sample with at least a five-year history using their gross returns and the standard Fama French three-factor model.<sup>3</sup> Our pre-hire evaluation period is the first five years of a fund's history and the post-hire investment period is the next five years. Exhibit 2 shows how funds sorted by category of gross-alpha significance in the first five years performed over the next five years (rows sum to 100%).

### EXHIBIT 2: GROSS ALPHA PERSISTENCE

		NEXT 5 YEARS				
Alpha Significance		Closed	Sig. Negative	Insig. Negative	Insig. Positive	Sig. Positive
First 5 Years	Sig. Negative	50.0%	2.5%	22.5%	24.2%	0.8%
	Insig. Negative	39.7%	3.2%	27.4%	25.1%	4.6%
	Insig. Positive	26.4%	3.1%	29.1%	36.3%	5.1%
	Sig. Positive	9.6%	3.9%	30.9%	44.1%	11.4%

Of the funds that produced statistically significant positive gross alpha in the first five years (Sig. Positive), only 11.4% continued to produce statistically significant positive gross alpha in the next five years. This compares to a similar number (9.6%) that closed sometime over the next five years, which is typically due to poor performance. A little more than half of this initially high-performing category (44.1%+11.4%) produced positive gross alpha (either significant or insignificant) over the next five years.

<sup>2</sup> Fama and French, "Luck versus Skill in the Cross Section of Mutual Fund Returns," *The Journal of Finance*, (2010)

<sup>3</sup> We also tested other pre/post evaluation periods and factor models with similar results.

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In stark contrast, 50% of funds that produced statistically significant negative gross alpha (Sig. Negative) in their first five years closed sometime over the post-hire investment period. Fully three quarters of these funds (50.0%+2.5%+22.5%) either eventually closed or went on to produce negative gross alpha (significant or insignificant).

These persistence results show that while good past performance does not reliably persist, poor past performance tends to persist. Investors who remain interested in active management should pay close attention to fees and carefully monitor poor performance in particular.

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