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Point: Quest for Holy Grail Falls Short for Active Investment Managers



BY LARRY SWEDROE

Competing Market Theories

There are two competing theories about how markets work and which investment strategy is most likely to allow you to achieve your financial goals. The first theory is based on the conventional wisdom that markets are inefficient and that smart people who work diligently can discover pricing errors, buy undervalued stocks, and sell overvalued stocks. That is called the art of stock selection. This theory also holds that smart people can correctly time the market.

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The two strategies—stock selection and market timing—are the basis of active management. If markets are inefficient, the winning strategy is to use past performance to identify the managers with the ability to exploit market inefficiencies.

The second theory is based on about 60 years of academic research. The body of work is called Modern Portfolio Theory (MPT). One tenet of MPT is that markets are efficient: The market price of a security is the best estimate of the right price. If markets are efficient, efforts to outperform are unlikely to prove productive after expenses.

There are two important insights about the Efficient Market Hypothesis (EMH) that are critical to understand. The first insight is provided by James Lorie and Mary Hamilton, authors of *The Stock Market: Theories and Evidence*. They explain: "The most general implication of the efficient market hypothesis is that most security analysis is logically incomplete and valueless. . . The logical incompleteness consists of failing to determine or even consider whether the price of the stock already reflects the substance of the analysis."¹

The second insight comes from economics professors Dwight Lee and James Verbrugge of the University of Georgia:

"The efficient markets theory is practically alone among theories in that it becomes more powerful when people discover serious inconsistencies between it and the real world. If a clear efficient market anomaly is discovered, the behavior (or lack of behavior) that gives rise to it will tend to be eliminated by competition among investors for higher returns. . . (For example) If stock prices are found to follow predictable seasonal patterns. . . this knowledge will elicit responses that have the effect of eliminating the very patterns that they were designed to exploit. . . The implication

¹ Ron Ross, "The Unbeatable Market," (Eureka, Calif.: Optimum Press, 2002).

is striking. The more the empirical flaws that are discovered in the efficient markets theory the more robust the theory becomes. (In effect) Those who do the most to ensure that the efficient market theory remains fundamental to our understanding of financial economics are not its intellectual defenders, but those mounting the most serious empirical assault against it.”

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How do we know which theory is right? It is easy to identify the managers and funds that have outperformed. All you need is a database. Since databases are readily available, we are left with the question: Is the past prologue? We answer that question by examining the evidence from academic studies on:

- mutual funds,
- pension plans, and
- hedge funds.

Mutual Funds: The Evidence

There are many studies on this subject, providing evidence that’s both consistent and compelling. For example, a 1997 study by Mark Carhart analyzed the performance of 1,892 funds for the period 1962–93 and found:

- There was no persistence in performance beyond what would be randomly expected.

- Expenses reduce returns on a one-for-one basis and explain much of the persistent long-term underperformance of mutual funds. It is important to note that expenses include not only the expense ratio, but trading costs as well.

- Turnover reduces pretax returns by almost 1 percent of the value of the trade.

Carhart’s conclusion: “While the popular press will no doubt continue to glamorize the best-performing mutual fund managers, the mundane explanations of strategy and investment costs account for almost all of the important predictability in mutual fund returns.”³

Historical evidence covering the 20-year period 1979–1998 has demonstrated that the average mutual fund underperforms its benchmark by almost 2 percent per year after taxes.⁴

When You Wish Upon a Morningstar. One of the most common investment strategies employed by individual investors is to buy mutual funds that are highly rated by Morningstar. However, these investors forget that past performance is not a predictor of the future. Consider the performance of domestic equity funds with five-star ratings:

- The five-star class of 2004 carried a five-year rating of slightly more than three stars by 2009.

- The 2005 group did slightly worse, with an average rating of 3.05 stars for three years.

- The 2006 group now had an average rating of less than three stars for three years.

² Dwight Lee and James Verbrugge, “The Efficient Market Theory Thrives on Criticism,” *Journal of Applied Corporate Finance* (Spring 1996).

³ Mark Carhart, “On Persistence in Mutual-fund performance,” *Journal of Finance* (March 1997).

⁴ Robert Arnott, Andrew Berkin and Jia Ye, “How Well Have Taxable Investors Been Served in the 1980s and 1990s?” *Journal of Portfolio Management* (Summer 2000).

The bottom line is that using Morningstar’s ratings system is like driving while looking at the rearview mirror.

Pension Plans: The Evidence

It seems logical to believe that if anyone could beat the market, it would be the pension plans of U.S. companies.

- First, pension plans control large sums of money, giving them access to the best portfolio managers. They can also invest with managers that most individuals don’t have access to.

- Second, pension plans hire managers with track records of outperformance.

- Third, it’s safe to say they never hired managers who didn’t make great presentations, explaining why they succeeded and why they would continue to succeed.

- Fourth, many (if not the majority) of these pension plans hire professional consultants—such as Frank Russell, SEI, and Goldman Sachs—to help them perform due diligence in interviewing, screening and ultimately selecting the very best. You can be sure that these consultants have thought of every conceivable screen to find the best fund managers. Surely, they have considered not only performance records but also such factors as management tenure, depth of staff, consistency of performance, performance in bear markets, consistency of implementation of strategy, turnover, costs and so on. It’s unlikely there is something you or your financial advisor would think of that they had not already considered.

- Fifth, as individuals, it is rare that we would have the luxury of being able to personally interview money managers and perform as thorough a due diligence. And we generally don’t have professionals helping us avoid mistakes in the process.

- Sixth, the fees they pay for active management are much lower than the fees individual investors pay.

How does the performance of pension plans stack up against risk-adjusted benchmarks? The 2008 study “The Performance of U.S. Pension Plans” sought the answer to that question and found:

- Returns relative to benchmarks were close to zero.

- There was no persistence in performance.

- Neither fund size, degree of outsourcing, nor company stock holdings were factors driving performance, refuting the claim that large pension plans are handicapped by their size. Small plans did no better.

The authors concluded: “We show striking similarities in net performance patterns over time, which makes skill differences highly unlikely.”⁵

Counterproductive Activity. A study, “The Selection and Termination of Investment Management Firms by Plan Sponsors,” provides us with further evidence. The authors examined the hiring and firing of investment management firms by public and corporate pension

⁵ Rob Bauer, Rik Frehen, Hurber Lum and Roger Otten, “The Performance of U.S. Pension Plans,” Unpublished Working Paper (January 2008).

plans, unions, foundations and endowments. They found:⁶

- Plan sponsors hire investment managers after large positive excess returns up to three years prior to hiring.

- The return-chasing behavior does not deliver positive excess returns thereafter.

- Post-hiring excess returns are indistinguishable from zero.

- Plan sponsors terminate investment managers after underperformance, but the excess returns of these managers after being fired are frequently positive.

- If plan sponsors had stayed with the fired investment managers, their returns would have been larger than those actually delivered by the newly hired managers.

It's important to note that these results didn't include the trading costs of moving holdings to those preferred by the new manager. The bottom line: All of the activity was counterproductive.

Section 401(k) Plan Fund Performance. The evidence from tax code Section 401(k) plans is similar. The 2006 study "Participant Reaction and the Performance of Funds Offered by 401(k) Plans" examined the performance of all 401(k) plans that filed Securities and Exchange Commission annual reports on Form 11-K in 1994 and used publicly available mutual funds as choices offered to participants. The authors traced the sample through 1999. Here is what they found.⁷

Fund Selection Skills. On average, plan sponsors chose funds that outperformed randomly selected funds of the same type, which suggests sponsor skill. However, the alphas (excess return compared to its benchmark) for the average plan were negative, meaning per-

formance would have improved if index funds had been substituted for the active funds actually chosen. The outperformance was likely the result of plans choosing funds from well-known fund families with significant amounts of assets under management. Mutual funds have economies of scale. Thus, funds with more assets can charge lower fees.

Please Don't Do Something, Stand Still. As expected, plan sponsors chose funds that did well in the past when changing offerings. Funds that were added to plans had positive alphas for both one- and three-year periods prior to the change. Unsurprisingly, managers fire poorly performing funds. Funds that were dropped had negative alphas for both one- and three-year periods before they were dropped. However, when a plan deleted a fund and replaced it with a fund with identical objectives, the deleted funds outperformed the ones they replaced by about 2.5 percent per year over the next three years.

The authors also examined what happened when a plan replaced all of its offerings from one fund family and added funds from a new fund family. Not surprisingly, they found that the *past* Sharpe (risk versus return) ratios were higher for the portfolio of added funds than the portfolio of dropped funds. After replacement, the *future* Sharpe ratios were higher for the portfolio of dropped funds than for the funds they replaced. Once again, inaction would have proved better for investors than action. Adding to this body of evidence is a study done each year.

The Value of Consultants. The following table compares the returns of the passive asset class funds of Dimensional Fund Advisors (DFA) with those of the comparable funds of SEI and Frank Russell, two of the largest institutional money managers/consultants in the world, for the period 1997–2009. Together, they manage or administer \$726 billion in assets. As you can see, the actively managed funds of SEI and Russell underperformed the passively managed funds of DFA in every case.

DFA, SEI and Russell Fund Returns 1997-2009

<i>Domestic Large Cap</i>	Annualized Return (%)	<i>Emerging Markets</i>	Annualized Return (%)
SEI Institutional Large Cap Growth A	3.1	SEI International Emerging Markets A	5.7
Russell US Core Equity I	4.3	Russell Emerging Markets S	7.7
DFA US Large Company	4.9	DFA Emerging Markets	9.2
<i>Domestic Small Cap</i>		<i>Developed International Markets</i>	
SEI Institutional Small Cap Growth A	3.0	SEI International Trust Equity A	1.9
Russell US Small & Mid Cap I	6.4	Russell International Developed Markets I	4.0
DFA US Small Cap Portfolio	7.5	DFA Large Cap International	4.8

⁶ Amit Goyal and Sunil Wahal, "The Selection and Termination of Investment Management Firms by Plan Sponsors," *Journal of Finance* (August 2008).

⁷ Edwin J. Elton, Martin J. Gruber and Christopher R. Blake, "Participant Reaction and the Performance of Funds Offered by 401(k) Plans," Unpublished Working Paper (May 11, 2006).

DFA, SEI and Russell Fund Returns 1997-2009 – Continued

<i>Domestic Large Cap</i>	Annualized Return (%)	<i>Emerging Markets</i>	Annualized Return (%)
DFA US Micro Cap Portfolio	8.0	DFA International Small Company	6.7
<i>Domestic Large Value</i>		DFA International Value Portfolio III	7.4
SEI Institutional Large Cap Value A	5.1	DFA International Small Cap Value Portfolio Class I	8.3
DFA US Large Cap Value Class III	6.8		
<i>Domestic Small Value</i>			
SEI Institutional Small Cap Value A	8.0		
DFA US Small Cap Value	9.6		

Behavioral Funds. And finally, we take a look at behavioral funds, which are funds specifically designed to exploit pricing errors. The authors of the study “Behavioral Finance: Are the Disciples Profiting From the Doctrine?” identified 16 self-proclaimed or media-identified behavioral mutual funds. They found that while the funds actually outperform S&P 500 Index funds, they do so because they have significant exposure to value stocks. After adjusting for risk, they don’t earn abnormal returns. The authors concluded: “Behavioral mutual funds are tantamount to value investing and not much more.”⁸

Why Is Persistent Future Alpha So Hard to Find? The EMH explains why investors cannot use publicly available information to beat the market. The same is also true of trying to use publicly available information to select active managers. Any excess return should go to the active manager in the form of higher expenses. The process is simple. Investors observe benchmark-beating performance, and funds flow into the top performers. The investment inflow eliminates return persistence because fund managers face diminishing returns to scale.⁹

The study, “Scale Effects in Mutual Fund Performance: The Role of Trading Costs,” provides evidence on this issue. The authors studied the annual trading costs for 1,706 U.S. equity funds during the period 1995–2005 and found:

- On average, trading costs for mutual funds are even greater in magnitude than the expense ratio.
- The variation in returns is related to fund trade size.
- Annual trading costs are negatively related to performance.
- Trading fails to recover its costs, as \$1 in trading costs reduced fund assets by 41 cents. However, while trading does not adversely impact performance at funds

with a relatively small average trade size, trading costs decrease fund assets by roughly 80 cents for large relative trade size funds.

- Flow-driven trades were much more costly than discretionary trades. This helps explain trading’s negative impact on performance.

- Relative trade size subsumes fund size in regressions of fund returns. Thus, trading costs are likely to be the primary source of diseconomies of scale for funds.

The authors concluded: “Our evidence directly establishes scale effects in trading as a source of diminishing returns to scale from active management.”¹⁰

The study “Performance Persistence in Institutional Investment Management” provides further evidence. The authors investigated the relation between performance and flows across portfolios in three asset classes — domestic equities, international equities and fixed income—for investment management firms between 1991 and 2004. The following is a summary of their findings.¹¹

- Unlike retail mutual funds, persistence in winner domestic equity portfolios is significant and economically large for up to one year. This is because retail investors incur little to no costs (at least in tax-advantaged accounts) to transition from one fund/manager to another. Thus, redemptions and capital inflows are rapid in retail mutual funds. In contrast, capital flows are sticky in an institutional setting because transaction costs from exiting one portfolio and entering a new one are large and potentially prohibitive. As a result, the equilibration process for institutional fund managers takes longer.

- Eventually, capital flows follow performance. Capital flows for domestic equity portfolios one year af-

⁸ Prithviraj Banerjee, Vaneesha R. Boney, Colby Wright, “Behavioral Finance: Are the Disciples Profiting from the Doctrine?” Unpublished Working Paper (Sept. 17, 2006).

⁹ Jonathan B. Berk, “Five Myths of Active Management.” *Journal of Portfolio Management* (Spring 2005).

¹⁰ Roger M. Edelen, Richard B. Evans, and Gregory B. Kadlec “Scale Effects in Mutual Fund Performance: The Role of Trading Costs,” Unpublished Working Paper (Dec. 13, 2006).

¹¹ Jeffrey A. Busse, Amit Goyal and SunilWahal, “Performance Persistence in Institutional Investment Management,” *Journal of Finance* (April 2010).

ter portfolio formation increased monotonically from loser to winner deciles. Similar results were found for fixed income and international equity portfolios.

■ Top performers draw an influx of assets from plan sponsors. The large capital inflows have severe consequences for future performance. In the year following such inflows, alphas sharply declined, as there is a strong negative relationship between incremental flows and future performance, especially among larger funds. After the first year, domestic and international equity alphas were statistically indistinguishable from zero, even before fees. Similar results were found for fixed income portfolios, once an adjustment was made to address high-yield assets.

Hedge Funds: The Evidence

We now have a significant body of research on the performance of hedge funds.

The 1999 study, “Offshore Hedge Funds: Survival and Performance 1989–95,” found that most of the funds had underperformed the S&P 500 Index. Once again, there was no evidence of any persistent ability of managers in a particular style classification to earn returns in excess of their style benchmark.¹²

A *Forbes* article presented a performance index of 2,600 hedge funds for the period from January 1993 to October 1998. After subtracting fees, the average annualized return of the hedge funds was 13.4 percent, trailing the 19.9 percent return of the S&P 500.¹³

The 2006 study, “The A, B, Cs of Hedge Funds: Alphas, Betas and Costs,” covering the period from January 1995 through March 2006, found that the average

hedge fund had returned 9.0 percent per year, lagging the S&P 500 by 2.6 percent per year.¹⁴

The 2001 study “Hedge Fund Performance 1990–2000: Do the ‘Money Machines’ Really Add Value?” investigated whether hedge funds did indeed offer investors a superior risk-adjusted return profile.¹⁵ The study covered 13 hedge fund indexes and 77 individual funds. The following is a summary of the study’s findings:

■ Twelve of the 13 indexes (92 percent) showed signs of inefficiency, with the average efficiency loss (risk-adjusted return) on these 12 indexes amounting to 3.0 percent per year.

■ Of the 77 funds studied, 72 (94 percent) showed signs of inefficiency, with the average efficiency loss amounting to 7.0 percent per year. Only five funds offered superior performance, with an average efficiency gain of just 1.5 percent per year.

■ All 15 of the event-driven funds showed signs of inefficiency with an average efficiency loss of 3.8 percent per year.

■ Of the 28 global hedge funds, 24 (86 percent) showed some level of inefficiency with an average cost of 8.5 percent per year.

■ Of the 11 market-neutral funds studied, 10 (91 percent) showed some level of inefficiency. For this group, the average efficiency loss was 6.8 percent per year.

The authors reached the conclusion that, even without taking into account the significant survivorship bias that exists in hedge fund data, their results clearly contradict the claim that hedge funds generate superior investment results on a stand-alone basis.

The failure of hedge funds to deliver on their promise is readily apparent in the data in the following table:

¹² Stephen J. Brown, William N. Goetzmann and Roger G. Ibbotson, “Offshore Hedge Funds: Survival and Performance, 1989–95,” *Journal of Business* (January 1999), p. 98.

¹³ David Dremen, “Las Vegas on Wall Street,” *Forbes*, January 11, 1999.

¹⁴ Roger G. Ibbotson and Peng Chen, “The A, B, Cs of Hedge Funds: Alphas, Betas, and Costs,” Unpublished Working Paper (September 2006), p. 5 and 13.

¹⁵ Gregory Zuckerman, “Hedge Funds Weather Stormy Year,” *Wall Street Journal* (Jan. 2, 2008).

Index Returns 2003-2009

	Annualized Return (%)
<i>HFRX Index</i> (Hedge Fund Research)	2.4
<i>Domestic Indexes</i>	
S&P 500	5.5
MSCI (Morgan Stanley Capital) US Small Cap 1750	9.9
MSCI US Prime Market Value	6.0
MSCI US Small Cap Value	9.3
Dow Jones Select REIT	8.8
<i>International Indexes</i>	
MSCI EAFE (Europe, Australasia, and Far East)	10.3
MSCI EAFE Small Cap	14.5
MSCI EAFE Value	11.4
MSCI Emerging Markets	22.0
<i>Fixed Income</i>	

Index Returns 2003-2009 – Continued

Merrill Lynch One-Year Treasury Note	2.9
Five-Year Treasury Notes	4.2
20-Year Treasury Bonds	5.1

The HFRX Index underperformed not only the major equity asset classes, but also fixed income indexes as well. And, as was the case with mutual funds and pension plans, there is no evidence of any persistence of performance beyond the randomly expected. Without persistence of performance, there is no way to identify the future alpha generators ahead of time.

Demonstrating this problem, a 2003 study, “10 Things That Investors Should Know About Hedge Funds,” found that for the period from 1994 to 2001, the average fund of hedge funds underperformed an equally-weighted portfolio of randomly selected (from the sample) hedge funds by 3 percent per year.¹⁶¹⁶

¹⁶ Harry M. Kat, “10 Things That Investors Should Know About Hedge Funds,” *Journal of Wealth Management* (Spring 2003), p. 7.

Summary. Fiduciaries and investors are confronted with potent evidence that the application of expertise, investigation and diligence in efforts to “beat the market” ordinarily promises little or no payoff, or even a negative payoff after taking account of research and transaction costs. Evidence shows that there is little correlation between fund managers’ earlier successes and their ability to produce above-market returns in subsequent periods.

While active management does provide the hope of outperformance, the evidence demonstrates that the far greater likelihood is underperformance. In other words, in a land of active managers, low-cost, passively managed funds actually do live in Lake Wobegon. By earning *market* returns, they deliver *above-average* results.