INVESTLOGIC
Your Investment Connection

Doing Less Returns More !

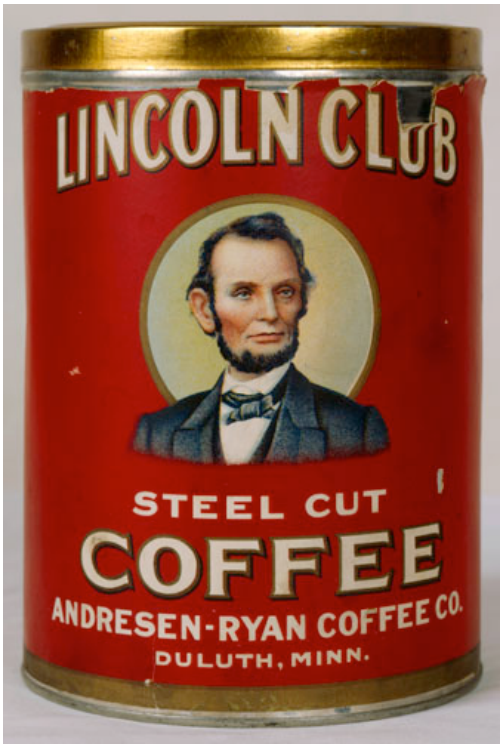
The coffee can approach

Inactivity strikes us as intelligent behavior. Warrant Buffet

It is awfully hard work doing nothing. Oscar Wilde

'The coffee can portfolio concept harkens back to the Old West, when people put their valuable possessions in a coffee can and kept it under the mattress. The success of the program depended entirely on the wisdom and foresight used to select the objects to be placed in the coffee can to begin with.'

G. Kirby, "The Coffee Can Portfolio: You Can Make More Money Being Passively Active than Actively Passive," The Journal of Portfolio Management, Fall 1984, 76-80



- **Investors often make changes to their portfolios—with the best of intentions—that do not add value**.
- **These mistakes include reallocation of a portfolio from one asset class to another as well as switching from one manager to another within an asset class.**
- **Analysis through simulation shows that investors would be better off extending the industry standard three-year window for manager assessment.**

Brewing a Profit

Robert Kirby, one of the founders of Capital Guardian Trust, told a story of a couple he worked with as an investment counselor for about a decade through the mid-1950s. Since wealth preservation was the primary objective of the client, Kirby followed his firm's guidelines and bought and sold investments to make sure that the portfolio was sensible and well-positioned. Kirby worked primarily with the husband on a portfolio in the wife's name.

After the husband died suddenly, the wife called to say that she had inherited his estate and was adding his investment portfolio to hers. Kirby reviewed the man's portfolio and was amused and shocked. He was amused to see that the man had piggybacked the firm's buy recommendations to his wife. The man purchased about $5,000 of each stock, tossed the certificates into a safe deposit box, and simply ignored the investments. Kirby called it the "coffee can portfolio" because it reminded him of a time when it was common for someone to place his valuables in a coffee can and stick it under his mattress. Since it incurred no transaction or administrative costs, the can's value hinged solely on what the owner placed in it.

Kirby was shocked when he saw the value of the man's portfolio, which greatly exceeded that of his wife's. It was an odd mix, to be sure. There were a number of holdings that had sunk to $2,000, several large positions that exceeded $100,000, and one stock with a value in excess of $800,000. That jumbo position was the result of a small commitment to a company called Haloid Photographic, which later changed its name to Xerox.

The lesson that Kirby took from the episode was not that an investor should buy stocks hoping to find the next Haloid (or Google or Apple). Rather, it was that a portfolio created by acting on only half of the firm's recommendations and with negligible costs handily outperformed the portfolio to which Kirby fully attended. 3 Buying undervalued stocks and doing nothing did better than attempting to navigate the market's ups and downs. Warren Buffett expressed a similar point when he said, "Lethargy bordering on sloth remains the cornerstone of our investment style.

Most of us are taught from a young age that effort leads to results. But if you take effort to mean activity, the lesson doesn't apply for long-term investors. The message here is simple: investors often make changes to their portfolios—with the best of intentions—that do not add value. This is as true for sophisticated institutions as it is for the unsophisticated individual. Doing less can leave you with more.

We examine two kinds of decisions that are deleterious to long-term results. The first is the reallocation of the weightings of the portfolio from one asset class to another. The second is the swapping of active managers within an asset class. The sources of these mistakes include applying a time horizon that is too short, failing to recognize reversion to the mean, seeking job preservation, and succumbing to recency bias—the tendency to overweight what has happened in the recent past.

Most of the studies showing that investors would be better off with less activity rely on counterfactual analysis—a careful study of what would have been. For example, this approach would ask, "what would our returns have been had we stuck with money manager A instead of firing A and hiring manager B?"

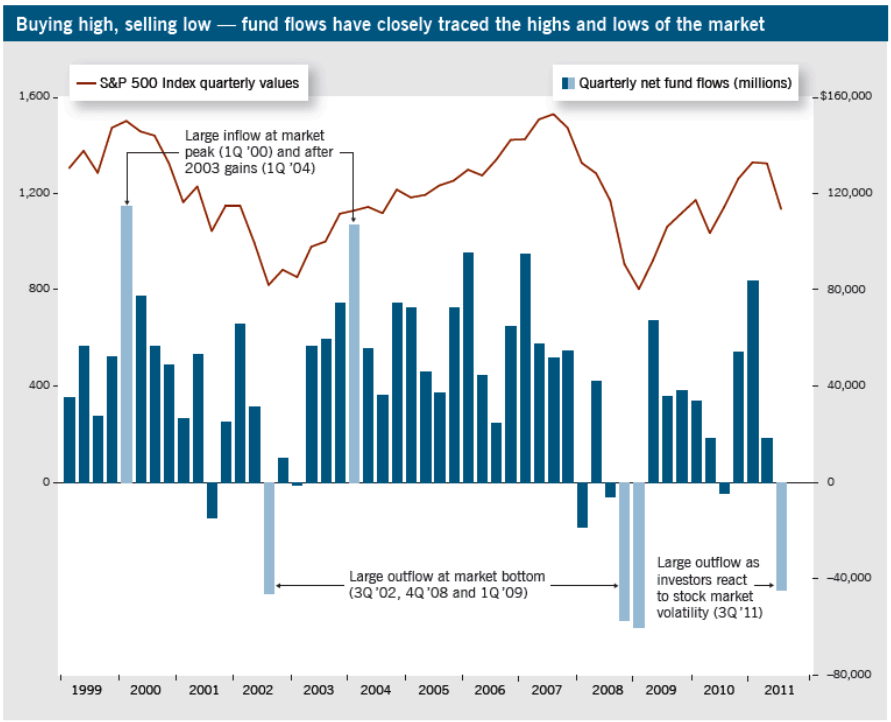
Naturally, the very act of hiring or firing a manager helps determine the manager's returns just as the act of increasing or decreasing exposure to an asset class affects its returns. Inflows for a fund or asset class contribute to positive relative returns and outflows are linked to negative relative returns. 6 This observation limits counterfactual analysis because the outcomes are not independent of the actions. But that the returns from activity are poor even after considering that the buying helps, and selling hurts, returns indicates the degree to which investors struggle to make good decisions.

The Asset Allocation Decision: What Have You Done for Me Lately?

Researchers have documented that individual investors earn lower returns than those achieved through a buy-and-hold strategy. 7 For example, John Bogle, founder of the Vanguard group, examined the performance of exchange-traded funds (ETFs) for five years through mid-2009 and found that investors earned annualized returns that were on average 4.5 percentage points lower than the reported returns of the ETFs they invested in. 8 The reason is the timing of the flows into and out of the ETFs. The central concept is the distinction between a fund's return and an investor's dollar-weighted return. The fund's return is simply the compounded annual growth rate in net asset value per share. The dollar-weighted return considers an investor's timing. Because investors have a tendency to buy a fund after it has done well, they miss the upside but suffer from the subsequent underperformance. Further, they sell after a drop and fail to enjoy the subsequent rebound.

The Investment Company Institute maintains excellent records of the investments in and out of mutual funds. 10 The overall pattern is clear. Investors buy when the market has done well (see the late 1990s into 2000) and sell when the market has fared poorly (see 2002 and 2008). This analysis does not suggest that all you need is a simple buy-and-hold strategy. Such an approach would have yielded a negative return for the first decade of the 2000s, for instance. The analysis does feature the virtue of buying undervalued securities and holding them. 11 Investors are notoriously poor at doing this. Only time will tell how the massive inflows into bond funds and exodus from equity funds in 2008 and 2009 will play out, but it's hard to make the math show that bonds will do better over the next decade, even adjusted for risk.

Exhibit 1: Equity Funds Flow and Market Results



Sources: Standard & Poor's and Strategic Insight. Net fund flows in US$ represent domestic and international equity mutual funds and exchange-traded funds. Standard & Poor's 500 Composite Index is a market capitalization-weighted index based on the average weighted results of 500 widely held common stocks.

You might reason that the poor asset allocation decisions are to be expected from retail investors, who lack the training and resources to make better decisions, but that institutional investors would be immune to such mistakes. However, research shows that institutional plan sponsors, including retirement plans, unions, endowments, and foundations, also fail to add value when they move from one asset class to another.

A recent paper summarized a study of the decisions of plan sponsors controlling thousands of products and trillions of dollars over a span in excess of 20 years. The authors conclude that, "Portfolios of products to which they allocate money underperform compared with the products from which assets are withdrawn." In other words, the plan sponsors would have been better off in the aggregate had they done nothing. The exception to the general pattern was global fixed income investors. The researchers estimate that plan sponsors had forgone over $170 billion in value through their purchases and sales of products, a sizeable sum even considering the size of the asset base.

The authors show that asset allocation was not the only source of the value slippage. In fact, asset allocation represented only about one-third of the relative underperformance of assets getting inflows versus those seeing outflows. The other two-thirds was attributable to what the authors call "product selection," which reflects how well investors pick individual managers.

Manager Selection: If You're Hot, You'll Soon Be Not

Investors have a tendency to allocate capital to funds that have done well in the recent past. Andrea Frazzini and Owen Lamont, professors of finance, call the predictable propensity of investors to lower their realized returns through reallocation decisions the "dumb money" effect. 13 The researchers quantified the effect by comparing the realized returns to the returns for a portfolio assuming the investor had stayed put. This counterfactual analysis shows that activity costs investors over one percentage point a year in returns, which when added to the fees from active management, contribute to the overall underperformance of investors versus their benchmarks. Research shows that investors in hedge funds also earn dollar-weighted returns that are much lower than buy-and-hold returns.

Just as with allocation decisions between asset classes, institutions struggle to allocate funds to managers fruitfully. Professors Amit Goyal and Sunil Wahal did a careful analysis of the selection and termination moves of 3,400 plan sponsors, reflecting over 9,600 distinct decisions. They concluded that the moves of the plan sponsors did not add value. For example, the managers whom the sponsors hire recently outperformed the market and the managers whom they fire have underperformed on average (although the termination decisions are complex). But "the performance of the fired firms exceeds that of the hired firms" in subsequent periods.

Goyal and Wahal ask why plan sponsors make decisions that look poor in retrospect. They first suggest hubris, an unfounded belief among plan sponsors that they can hire and fire successfully. My experience suggests that few plan sponsors operate with much hubris. They call the second explanation "job preservation." The idea is that plan sponsors have to show some hiring and firing activity in order to demonstrate that they are doing something of value. Lethargy bordering on sloth is much more likely to frustrate an investment committee than impress it. This raises a crucial question of how patient a chief investment officer (CIO) of a plan sponsor should be when evaluating the returns of an investment manager.

The standard evaluation period in the investment industry appears to be about three years, a seemingly sensible amount of time given the tenure of most CIOs. Yet some research methods claim that you need well in excess of a decade of results to confidently conclude that a manager has skill (i.e., a confidence interval of 95 percent). A time horizon that long is impractical. 16 The issue is whether CIOs are too patient, too impatient, or about right.

David Donoho, Robert Crenian, and Matthew Scanlan address this question in a recent paper. 17 Rather then scouring historical results, they did simulations using set assumptions. This approach allowed them to evaluate the results that the various investment time horizons and simulations produced.
Their setup had a group of 1,000 investment managers, 10 percent of whom the researchers endowed with skill. They specified skill through the Sharpe ratio, a measure of return per unit of risk, and designated high ratios for the skillful managers. 18 They also created a population of CIOs who had hiring and firing algorithms that reflected their personalities. They varied the parameters and ran each simulation 1,000 times.

Their research revealed at least three important points. The first is that the simulated results for skillful managers, defined as a Sharpe ratio of 0.5, showed wide variation for a five-year simulation. This is a natural consequence of variation, but underscores that skillful managers will have periods of underperformance. As the authors stress, there's a big difference between the expected Sharpe ratio and the realized Sharpe ratio. The realized ratio does surface for a large sample of funds, or for a single fund over a long period of time, but individual funds do see large divergences between expected and realized Sharpe ratios over multi-year periods.

The second point is that it is difficult to sort skill and luck through short-term results, even when a subset of managers is skillful. For example, only 35 of the 100 skilled managers show up in the top decile based on one-year results. Even if you expand the horizon to ten years, less than one-half of the skillful managers end up in the top decile. Said differently, a majority of top decile funds are there as the result of luck. So while long-term results are a very good indicator of skill—the probability that a top decile fund over ten years is skillful is vastly higher than the probability that it is lucky—results reflect a large dose of randomness. And this is in a simulated world where we know that 10 percent of the fund managers are skillful.

The final point is investors who employ patient, long-term decision rules outperform investors who use short-term rules. Exhibit 4 shows the annualized returns for short-term, long-term, and buy-and- hold investors over a ten-year span. 19 The authors write, "these simulated investment scenarios show that the selection rules of long-term investors yielded the highest annualized returns, lowest manager turnover rates, and highest proportion of time being invested in skilled managers." The authors conclude that, "the most profitable degree of patience is very different from that found in current industry practice."

Conclusion

On a continuum of skill and luck, with pure skill on one side and pure luck on the other, investing sits a lot closer to the luck side than the skill side. This should not be too surprising considering investing is a very competitive business that employs substantial resources and has relatively low barriers to entry. Still, there is evidence of skillful investment managers, even if they do not represent one-tenth of the population. 21 A reasonable interpretation of the deleterious effect of activity is that it reflects costly randomness chasing. There are three main lessons for long-term investors:

- *Watch out for reversion to the mean*. Nearly all professional investors believe they are familiar with the concept of reversion to the mean, but the aggregate results show that they don't behave as if they do. Reversion to the mean says that an extreme outcome will be followed by an outcome that has an expected value closer to the mean. For example, if returns from the stock market over a few years have been substantially below the historical average, it is reasonable to expect that future returns will be closer to the average. Yet this is in contrast to how investors behave. Above-average returns attract more capital and poor returns lead to withdrawals (see Exhibit 1). Consider carefully the distribution of outcomes for the system you are dealing with and make sure that you explicitly consider reversion to the mean in your decisions.

- *Just doing my job*. As noted earlier, doing nothing—especially in the face of poor short-term results—does not sit well with most investment committees. Since activity and results are correlated in most fields, most people believe they are correlated in the world of investing, too. Here again, the aggregate data show that activity tends to diminish, not enhance, long- term results. It is the rare organization or committee that can debate the issues and resolve to do nothing. The antidote to acting for the sake of acting is to constantly include counterfactuals as part of your feedback (i.e., what would have been) and to be open- minded about doing nothing in certain situations.

- *Recency bias*. Humans are natural pattern seekers. As a result, when something is going up, we expect it to continue going up. When it's going down, we expect it to continue going down. This strong tendency to overweight recent events and extrapolate them into the future is one of the main reasons we fail to heed the lessons from reversion to the mean. To deal with this bias, step back and make sure you are considering a larger set of instances. One particularly effective technique is adopting the outside view—a careful consideration of what happened to others when they were in the same situation.

The balance of evidence shows that long-term investors engage in activity, including switching between asset classes and from manager to manager, that does not add value. While investors certainly act in the belief that they will enhance their long-term returns, psychological forces cause them to make the wrong decisions.

Endnotes

[1] Warren Buffett, "Chairman's Letter to Shareholders," *Berkshire Hathaway Annual Report*, 1996. [2] Oscar Wilde, "The Importance of Being Earnest: A Trivial Comedy for Serious People," performed first on February 14, 1895 at St. James Theatre in London. See http://www.gutenberg.org/files/844/844-h/844-h.htm. [3] Robert G. Kirby, "The Coffee Can Portfolio: You Can Make More Money Being Passively Active than Actively Passive," *The Journal of Portfolio Management*, Fall 1984, 76-80. [4] Warren E. Buffett, "Chairman's Letter to Shareholders," *Berkshire Hathaway Annual Report*, 1990. [5] Michael J. Mauboussin, "Was Harry Potter Inevitable? Cumulative Advantage, Counterfactuals, and the Halo Effect," *Mauboussin on Strategy*, September 7, 2007. [6] Paul A. Gompers and Andrew Metrick, "Institutional Investors and Equity Prices," *The Quarterly Journal of Economics*, Vol. 116, No. 1, February 2001, 229-260. [7] Ilia D. Dichev, "What Are Stock Investors' Actual Historical Returns? Evidence from Dollar Weighted Returns," *American Economic Review*, Vol. 97, No. 1, March 2007, 386-401. For a recent mention in the media, see Paul Sullivan, "When to Buy or Sell? Don't Trust Your Instincts," *The New York Times*, March 11, 2011. [8] Matt Hougan, "Bogle: Investors Are Getting Killed in ETFs," *IndexUniverse*, June 17, 2009. [9] Professor Ilia Dichev provides a good example. Say you buy 100 shares of a company at $10 a share, for a total investment of $1,000. The stock then doubles and you purchase an additional 100 shares ($2,000 investment) at the end of the year. The stock then goes back to $10 at the end of year 2. The buy and hold strategy yields a return of zero percent (you bought at $10 and the stock ended at $10). But if you had followed the described pattern, you would have lost money. Your initial $1,000 remained even but your $2,000 investment sunk to $1,000, which means that your $3,000 investment is now worth $2,000. In this case, your dollar-weighted return is -26.8 percent, vastly different than the fund return's return of zero. [10] Investment Company Institute, "2010 Investment Company Fact Book: A Review of the Trends and Activity in the Investment Company Industry." See http://www.icifactbook.org/pdf/2010_factbook.pdf. [11] Index Fund Advisors notes that investors in index funds that Dimensional Fund Advisors created have earned returns above their benchmark as the result of good timing. See http://www.ifa.com/12steps/step1/step1page2.asp. [12] Scott D. Stewart, CFA, John J. Neumann, Christopher R. Knittel, and Jeffrey Heisler, CFA, "Absence of Value: An Analysis of Investment Allocation Decisions by Institutional Plan Sponsors," *Financial Analysts Journal*, Vol. 65, No. 6, November/December 2009, 34-51. [13] Andrea Frazzini and Owen A. Lamont, "Dumb Money: Mutual Fund Flows and the Cross-Section of Stock Returns," *Journal of Financial Economics*, Vol. 88, No. 2, May 2008, 299-322. [14] Ilia D. Dichev and Gwen Yu, "Higher Risk, Lower Returns: What Hedge Fund Investors Really Earn," *Journal of Financial Economics*, Vol. 100, No. 2, May 2011, 248-263. [15] Amit Goyal and Sunil Wahal, "The Selection and Termination of Investment Management Firms by Plan Sponsors," *The Journal of Finance*, Vol. 63, No. 4, August 2008, 1805-1847. [16] Richard C. Grinold and Ronald N. Kahn, *Active Portfolio Management: A Quantitative Approach for Producing Superior Returns and Controlling Risk, Second Edition* (New York: McGraw-Hill, 2000), 480. [17] David L. Donoho, Robert A. Crenian, and Matthew H. Scanlan, "Is Patience a

Virtue? The Unsentimental Case for the Long View in Evaluating Returns," *The Journal of Portfolio Management*, Fall 2010, 105-120. [18] The formula for the Sharpe ratio is as follows, where R is the return of the portfolio, R_f is the return of the benchmark, and σ is the variance of the excess return ($R - R_f$). All things being equal, higher Sharpe ratios indicate higher skill.

$$S = R - R_f = \frac{E[R - R_f]}{\sigma \text{ variance}[R - R_f]}$$

[19] This simulation assumed that 10 percent of the managers were skillful (using a Sharpe ratio of 0.75), annualized volatility of 18 percent, and independent results. None of these assumptions are totally realistic, but the core finding likely applies with more accurate assumptions.

[20] Donoho, Crenian, and Scanlan, op. cit., 116 and 105. [21] Laurent Barras, Olivier Scaillet, and Russ Wermers, "False Discoveries in Mutual Fund Performance: Measuring Luck in Estimated Alphas," *The Journal of Finance*, Vol. 65, No. 1, February 2010, 179-216. [22] Dan Lovallo and Daniel Kahneman, "Delusions of Success," *Harvard Business Review*, July 2003, 56-63.