

# THE INCONVENIENT TRUTH ABOUT ACTIVE INVESTING

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Someone once said there are two kinds of people in the world: those who divide the world into two kinds of people and those who don't. I don't know about that, but I do know that there are two kinds of investors in the world: those who favor active management and those who don't.

Active investors try to gain a performance advantage by moving in and out of the market or by buying and selling securities they think are mispriced. Passive investors, on the other hand, see little value in trying to outguess the market. Their goal is to capture market returns as efficiently as possible. Active management involves frequent trading and relatively short holding periods. Passive portfolios usually have very low turnover and very long holding periods.

The debate between active and passive managers is one of the most animated and interesting in the world of finance. If you want a sense of how intense this debate can get, picture guys in green eyeshades going at each other in an all-out professional wrestling grudge match. Though I started out believing in active management, I am now a fully persuaded member of the passive investing camp. Personal experience and

simple arithmetic made my conversion inevitable.

## Personal experience

Before converting to passive management, I spent 15 years as a foot soldier in the war for active investing. My work as a senior portfolio manager for a major financial institution was directly tied into the active management philosophy. Looking back, I admit I felt threatened by the numerous studies that showed the inability of most active managers to beat their benchmark indices. "Of course I'm adding value," I protested. "Just take a look at my results."

And my results were good. The portfolio I managed from December 1993 through February 2000 was ranked first in its category by Lipper for the ten years ended December 31, 1999. Still, I felt a nagging sense of unease that perhaps I wasn't allowing myself to see the full picture.

My active management moorings started to come loose when the emerging markets collapsed in 1998. The implosion in Asia, Latin America and Russia and the ensuing implosion in my portfolio made it obvious that my strong relative performance came from my large relative exposure to those

markets. In reality, I *appeared* to outperform my benchmark in the good years because I took risks that were not measured by my benchmark. Had my performance been controlled for emerging market risk, my results would likely not have been as impressive.

### Empirical evidence

My experience is consistent with that of most other active fund managers.

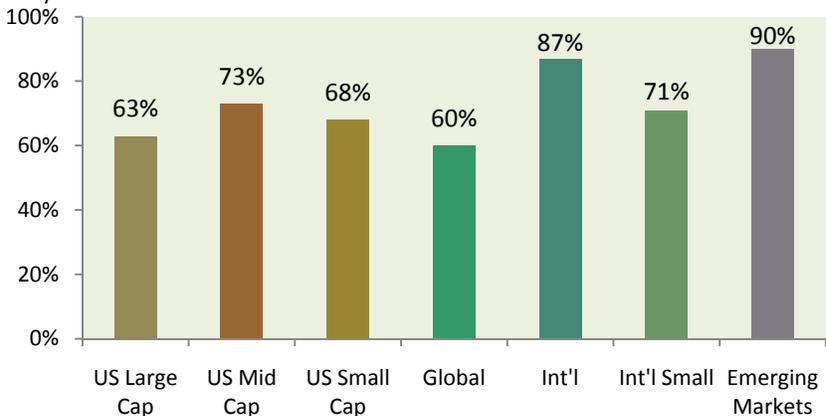
**Figure 1** shows the percentage of active managers who failed to beat their benchmark index during the five years ended June 30, 2009 for various fund categories. In every category, the majority of active managers underperformed their benchmark. This disturbing fact bedevils active managers and holds for every time frame I have measured.

Perhaps more disturbing, the list of managers who outperform their benchmark changes from one period to the next. In other words, the fact that a manager outperforms her benchmark in one year, tells us nothing about whether she will outperform in subsequent years. The disclaimers at the bottom of mutual fund marketing materials are apparently true: *past performance is no indication of future performance*. As an aside, it would be interesting to know how many of the outperforming managers did so like I did (i.e., by taking risks not consistent with their benchmark.) I suspect it would be a very high percentage.

**Figure 1: The Failure of Active Management**

Percentage of Active Public Equity Funds that Fail to Beat the Index

July 2004 - June 2009



Source: DFA, Standard & Poors Indices Versus Active Funds Scorecard, April 20, 2009. Index used for comparison: US Large Cap--S&P 500 index; US Mid Cap--S&P Midcap 400 index; Global--S&P Global 1200 index; International--S&P 700 Index; International Small--S&P Developed ex. US Small Cap index; Emerging Markets--S&P IFCI Composite. Data for the SPIVA study is from the CRSP Survivor Bias-free

### Sharpe's argument

If my conversion to passive management began in the 1998 emerging markets crisis, I found the courage of my new convictions a few years later when I attended a presentation by Nobel Prize laureate William Sharpe. Sharpe's argument in favor of passive investing was simple, logical, and thoroughly convincing.

The idea behind Sharpe's argument is that the market's return equals the weighted average return for all investors in the market, when properly adjusted for transaction costs and management fees. Therefore, the above-market (or above-average) performance by one group of investors must be offset by the below-market (or below-average) performance of another group of investors. Likewise, if one subset of investors has average performance (i.e., performance equal to the market return), then all other investors, as a group, must also have average

performance. We understand this because we know how averages work. Averages balance.

*The logical implication is that the returns of passive managers as a group and the returns of active managers as a group must be equal to the market average.* (Note that this relationship holds before transaction costs and

management fees.) By definition, passive investors produce market returns. But if this is true, then all active managers, as a group, must also produce average returns. True, some active investors might perform better than the market, but only if a group of other investors perform commensurately worse.

### The Proof is in the Math

A simple example will illustrate this point. The tiny, mythical country of Ministan has a very tiny stock market, on which are traded four very tiny companies: Alpha Co., Petite, Inc., Small Co. and Micro, Inc.

**Table 1** shows the value of these four tiny stocks. As of yesterday, these tiny companies had a combined market value of \$250,000. Today, they are worth \$310,000 or 24% more than yesterday.

The return on the portfolio can be calculated in a couple of different ways. The most direct way is simply to calculate the percentage change in the portfolio's total value between yesterday and today:

Table 1: Stocks on the Ministan Stock Exchange

	Market Value Yesterday	Weight	Market Value Today	Percent Change
Alpha Co.	\$ 100,000	0.40	\$ 120,000	20.0%
Petite Inc.	70,000	0.28	80,000	14.3%
Small Co.	50,000	0.20	75,000	50.0%
Micro Inc.	30,000	0.12	35,000	16.7%
<b>Total</b>	<b>\$ 250,000</b>	<b>1.00</b>	<b>\$ 310,000</b>	<b>24.0%</b>

$$\$310,000 / \$250,000 - 1 = .24 \text{ or } 24\%$$

Another way to calculate the overall return is to calculate the weighted average return of all the stocks in the portfolio:

$$(20\% \times .40) + (14.3\% \times .28) + (50\% \times .20) + (16.7\% \times .12) = 24\%$$

The mythical country of Ministan has only six investors – Klein, Poco, Petty, Nitt, Speck and Mite – and between them they own all the shares traded on the Ministan Stock Exchange. Their portfolios are shown in **Table 2**. The top panel shows the value of their holdings yesterday, while the lower panel shows the value of their holdings today.

Because Klein and Poco are *passive* investors, their portfolios are designed to look like the market and perform like the market, just like an index fund. The other four investors are *active*, so their portfolios look very different from each other and from the market.

**Table 2**  
**Ministan Investor Portfolios -- Yesterday**

	Passive		Active				Total
	Klein	Poco	Petty	Nitt	Speck	Mite	
Alpha Co.	\$ 14,000	\$ 10,000	\$ 30,000	\$ 25,000	\$ 15,000	\$ 6,000	\$ 100,000
Petite Inc.	9,800	7,000	25,000	10,200	8,000	10,000	70,000
Small Co.	7,000	5,000	15,000	7,000	16,000	-	50,000
Micro Inc.	<u>4,200</u>	<u>3,000</u>	<u>10,000</u>	<u>-</u>	<u>6,000</u>	<u>6,800</u>	<u>30,000</u>
<b>Total</b>	<b>\$ 35,000</b>	<b>\$ 25,000</b>	<b>\$ 80,000</b>	<b>\$ 42,200</b>	<b>\$ 45,000</b>	<b>\$ 22,800</b>	<b>\$ 250,000</b>

**Ministan Investor Portfolios -- Today**

Alpha Co.	\$ 16,800	\$ 12,000	\$ 36,000	\$ 30,000	\$ 18,000	\$ 7,200	\$ 120,000
Petite Inc.	11,200	8,000	28,571	11,657	9,143	11,429	80,000
Small Co.	10,500	7,500	22,500	10,500	24,000	-	75,000
Micro Inc.	<u>4,900</u>	<u>3,500</u>	<u>11,667</u>	<u>-</u>	<u>7,000</u>	<u>7,933</u>	<u>35,000</u>
<b>Total</b>	<b>\$ 43,400</b>	<b>\$ 31,000</b>	<b>\$ 98,738</b>	<b>\$ 52,157</b>	<b>\$ 58,143</b>	<b>\$ 26,562</b>	<b>\$ 310,000</b>

<b>Return</b>	<b>24.0%</b>	<b>24.0%</b>	<b>23.4%</b>	<b>23.6%</b>	<b>29.2%</b>	<b>16.5%</b>	<b>24.0%</b>
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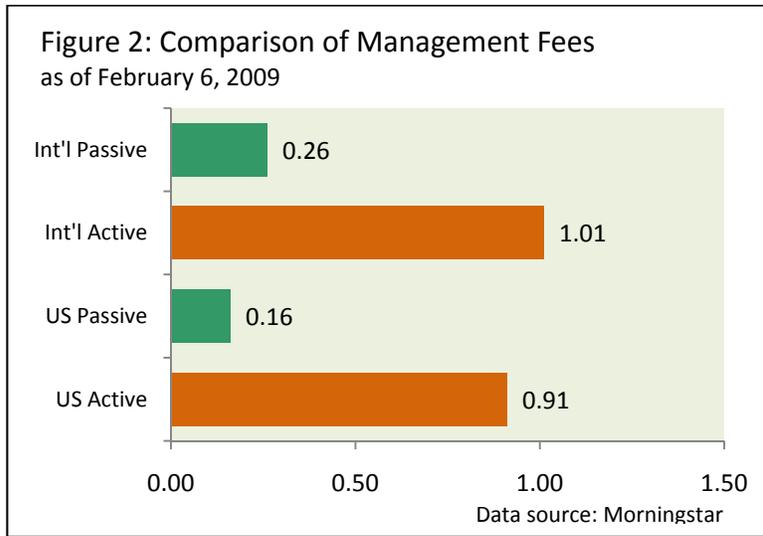
Examining the data in Table 2 reveals five important facts (which you can easily verify with a calculator, if you have a doubting nature):

1. The value of the portfolios for all six investors equals the value of the overall market.
2. The weighted average return earned by all investors.
3. The return earned by the passive investors equals the market return.
4. The overall weighted average return earned by the group of active investors also equals the market return.
5. Speck's dramatic outperformance was subsidized by Mite's dramatic underperformance and the slight underperformance of Petty and Nit.

While we have illustrated these five facts using the tiny, mythical nation of Ministan, these results can be expanded to any market of any size. Because the return on the market portfolio always equals the weighted average of the returns of its constituent parts, active managers – as a group – can never perform better than the market as a whole, nor can they systematically outperform passive managers, before accounting for transaction costs and management fees. The math simply doesn't work. The case for active management grows even more dismal when we take into account transaction costs and management fees.

**Figure 2** compares the average expense ratios for actively managed and passively managed mutual funds. Whether investing in the U.S. or overseas, the average active manager charges 0.75 percent more than the

average passive manager. Therefore, in order to be worth the effort, active managers as a group need to outperform passive managers by an average of 0.75 percent. As we saw in the Ministan example, that would be mathematically impossible. Furthermore, as we saw in Figure 1, the odds of any one manager consistently outperforming the benchmark is very small.



### Counterarguments

Despite logic and evidence, there are always plenty of people who argue vehemently in favor of active investing. Mostly, the evidence they cite, like my performance as a mutual fund manager, is subject to measurement bias. But biased or not, the fact that a few active managers outperform does not change the fundamental case for passive management.

As we saw in the Ministan example (see Table 2), the only way Speck could outperform so dramatically was because Mite had such poor performance. The average must balance. Therefore, exceptional active managers must always be a small minority. The greater their success, the worse everyone else must fail. The unhappy arithmetic of the markets is that the presence of a few strong active managers dramatically weakens the case for every other active manager in the market.

### Michael Jordan lives

To avoid overstating my case, I need to be clear that there are some very talented active managers in the world. Just as Michael

Jordan dominated the NBA in the 1990s, a few active managers dominate the ranks of active investors. The problem is that it is very difficult to identify these managers ahead of time.

Peter Lynch, the erstwhile manager of the Fidelity Magellan Fund, was able to retire with his exceptional track record intact so he is lauded as a star and accorded Michael Jordan status. Bill Miller, on the other hand, has not been as fortunate. Miller, the once-venerated manager of the Legg Mason Value Fund, was regarded with Jordan-like awe for many years. However, his performance has been so bad in recent years, Value Fund now lags its passive benchmark for trailing 3, 5, and 10 year time periods. Was Peter Lynch really a better manager than Bill Miller or did Lynch just retire at the right time? It is impossible to know for sure.

### Conclusion

In summary, active investing suffers from several fundamental problems:

- Active investors, as a group, can never do better than the market.

- The outperformance by one set of active investors can only come at the expense of all other active investors.
- The majority of actively-managed mutual funds underperform their index benchmark.
- Actively-managed funds have significantly higher expenses than passive funds.
- An active manager's outperformance rarely persists from one year to the

next making it difficult to select the best performing managers in advance.

Though the battle between active and passive investors continues, for me the debate is over. My personal experience and the simple mathematical logic of Nobel Prize laureate William Sharpe have led me to the conclusion that strategies built on passive investing principles are the optimal way to manage investor wealth.

#### Suggested reading

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