

Voyager Capital Management continues to follow the investment philosophy debate surrounding active-vs.-passive. The following pages contain the most recent information surrounding the debate, and should be digested in conjunction with Voyager Capital Management's previous publication "Understanding the Passive Advantage."

Active vs. Passive: Man or the Market?

Many academics consider the active-vs.-passive debate settled. Yet, despite the strong evidence supporting a passive approach, many investors still assume that skillful active management can increase returns, net of costs. DFA's own Brad Steiman offers fresh insight on the debate and provides content you may find useful.

The recent market turmoil has caused some investors to reevaluate all aspects of their portfolio as they seek a successful investment experience. This process may include a reexamination of the relative merits of active versus passive investing, regardless of the approach they have adopted in the past. Many questions could ensue. The common ones are presented here, along with a discussion of salient points that you might include in a response.

Furthermore, it is unlikely the debate will end any time soon, so don't bother trying to settle it. Described as "man versus the market" (i.e., capitalism) certainly goes back as far as Adam Smith, yet many years later it remains unresolved in the mind of most investors. This reflects incentives rather than evidence. After all, a lucrative and influential industry, which includes most of the mainstream media, has every reason to keep the debate going. Investors who place their hope in manager skill are less likely to jump ship for lower-cost (and lower-margin) passive solutions. This does not preclude us for doing what we believe is best for our clients, given that in our fee-based model, we have no incentive to give anything other than our best advice.

With that in mind, here are some frequently asked questions, and responses regarding active vs. passive.

Q: If an active manager can gather information and gain insight or knowledge through research into a company, shouldn't he be able to beat the market?

A: Not necessarily. You and I could have a different set of information or a different interpretation of the same information, while other investors may have no information at all. However, neither of us is at an advantage or disadvantage because the aggregate of all information is already contained in prices. So, rather than gaining insight or knowledge, the manager is

simply gathering information the market has already digested.

One way to look at it is that in order to beat the market with skill rather than luck, you don't just need to have more information and insight than the "average" investor. You theoretically need to have more information and insight than all investors combined. An active manager has only two arrows in his quiver—market timing and stock picking. All nuanced forms of active management ultimately boil down to some combination of these two elements. Both fundamentally rely on predicting the future, and the informa-

-tion presented in support of the forecast is typically quite compelling. Statements are made such as "we think the price of oil will rise because . . ." or "we think the economy will recover next year because. . ." No matter how convincing the case may seem, however, you should always ask why this information that is readily available to the market would not already be reflected in prices.

Q: It seems reasonable to conclude that the US market is fairly efficient since most of the studies in this area have relied on US data. But do these arguments break down in less developed markets where local knowledge can still play a role?

A: It is true that many studies of market efficiency focus on the US, but this is due to data availability and reliability. This does not mean that other markets cannot be as efficient, but only that tests have not been conducted to the same extent in other countries.

Furthermore, the US studies originated in the '60s, and it seems reasonable to assume that most markets are now at least as efficient as the US market was over forty years ago. It is also plausible that investors in emerging markets face greater uncertainty with regard to political developments, currency trends, and so forth. But this says nothing about market efficiency.

Security prices reflect local knowledge in both developed markets and less developed markets, but the evidence from mutual fund investing in emerging markets suggests that professional managers find it just as difficult, if not more so, to outperform passive strategies in emerging markets as they do in developed markets.

The active manager's real challenge is found in the principle of "equilibrium accounting." Since passive investors hold the market, the aggregate of all active investors must hold the market, too. Consequently, active investors cannot earn more, in aggregate, than passive investors, and both groups will earn the market return minus fees and expenses. Since active management typically generates much higher fees and expenses, the aggregate returns are lower than those of passive investors. Some active managers may outperform the market, but their success comes

at the expense of other active investors. Consequently, active management is a zero sum game before expenses—and a negative sum game after costs. This adding-up constraint exists in markets around the world, whether developed or emerging.

Q: Less developed markets have fewer participants. Does the lack of competition reduce market efficiency?

A: The question of how many active investors are required for a market to be efficient is an interesting one, and the comments on this topic from Richard Posner are worth contemplating.

"No one knows just how much stock picking is necessary in order to assure an efficient market, but comparisons with other markets suggest that the required amount is small. In markets for consumer durables, homes and other products, unlike the securities markets, the amount of search is highly variable across consumers, many of whom do little or none; trading may not be frequent; products may not be homogenous (no two homes are as alike as all the shares of the same common stock); bids and offers may not be centrally pooled so as to maximize the information available to buyers and sellers. Yet these markets are reasonably efficient, albeit less so than the securities markets."

John H. Langbein and Richard A. Posner, "Market Funds and Trust Investment Law II," *American Bar Foundation Research Journal* 1 (1977).

To visualize this in a simple example, let's imagine that someone is having a garage sale after cleaning out his parents' attic. Among the seemingly useless artifacts just happens to be an original Van Gogh painting. The seller doesn't know it's a masterpiece, so he sets the price at an ambitious \$10. If the buyer also doesn't know it is authentic, he will pay \$10 and potentially profit from good luck if he eventually realizes what he has acquired. On the other hand, if the buyer is an art connoisseur, he will pay \$10 but profit immediately from what you could call skill due to his information asymmetry over the seller (i.e., he knows it is worth a lot more but the seller does not).

However, what if one more art connoisseur is attending the garage sale? At that point the price is unlikely to remain at \$10 if both buyers know it is an original Van Gogh, and the eventual purchase price will rise to something much closer to fair market value.

It no longer matters that the seller doesn't have all the information because as long as both buyers have the information, neither can use this information asymmetry to gain advantage over the seller. In this story, it took only two informed market participants to strike fair value, and not all market participants needed to have all the information for prices to become much more "efficient."

As Ken French has described, markets theoretically contain an "efficient amount of inefficiency" where the marginal benefit of active investing equals the marginal cost. In reality, the incentives mentioned earlier have attracted far more active investors than necessary for market equilibrium, so the aggregate cost seems to far outweigh the benefit. This idea is relevant to less-developed markets because these markets typically impose much higher frictional costs on investors. If the costs are higher, the "efficient amount of inefficiency" would also theoretically be higher, which would limit opportunities to systematically which would limit opportunities to systematically profit from active investing, net of these costs.

Q: How could the market remain efficient if everyone were a passive investor and no one was gathering information and trading on it?

A: The Grossman-Stiglitz paradox (Sanford Grossman and Nobel laureate Joseph Stiglitz, 1980) says that if a market is informationally efficient—that is, all information is already reflected in prices—then no single agent will have sufficient incentive to acquire the information on which prices are based. If we assume markets are not perfectly efficient, the question is how much inefficiency exists and how many market participants can successfully exploit it? In equilibrium, the marginal cost of researching mispriced securities would just equal the marginal profits associated with exploiting these pricing errors. But studies of active manager performance offer compelling evidence that we have far more resources devoted to analyzing opportunities than we need to keep markets efficient. How do we know this? Because managers in aggregate not only fail to recoup their research costs, they underperform by an even greater degree.

The argument that too much passive investing would hinder price discovery has been raised repeatedly

since the advent of the index fund in the 1970s. The irony is that one of the most frequent criticisms of a passive approach is to ask what would happen if everybody adopted it.

Unfortunately, after nearly four decades since passive investment vehicles became available, we are still nowhere near a point where the preponderance of passive investors would affect price discovery. If we were fortunate enough to reach that point, and the market became less efficient as a result (it is not clear that it would), then active investors would reenter the market until the marginal benefit of active investing would not exceed the marginal cost. Richard Posner summed it up perfectly in 1977:

"If the disinvestment of resources now employed in futile attempts to beat the market ever proceeds to the point where the market can be beaten, that will be a signal for some investors to resume the active strategy." "The optimum amount of market information is surely not infinite. At some point, the cost of additional information must outweigh the social gain. The evidence is that this point has been reached—in fact, passed."

John H. Langbein and Richard A. Posner, "Market Funds and Trust Investment Law II," *American Bar Foundation Research Journal* 1 (1977).

Q: If market efficiency implies prices are right, then doesn't the fact that some stocks being 80%-90% below the level they were priced at a year ago challenge this fundamental premise? Which was the right price—today's price or the one a year ago?

A: The short answer is that both prices were probably wrong, but both prices were also your best estimate of the right price!

Market efficiency is not based on the premise of prices being "right" but on them being your best estimate of fair value. All prices may be wrong; but for markets to be inefficient, the errors would have to be systematic and identifiable. You, or your active manager, must also be able to identify these errors when other investors cannot, since your profit must be at someone else's expense. Not every investor can win in a zero sum game! However, the mistakes are mostly random rather than systematic (some prices are too high and others are too low), and there is little persistence in

the ability of active investors to exploit these pricing errors.

Besides, the fact that prices can change dramatically is not a sign of market inefficiency. This is a reflection of how quickly prices can adjust to a new equilibrium based on the latest information.

Furthermore, there is a dilemma facing active investors who believe that pricing errors are identifiable for profit at the expense of someone else. If the price is wrong today, how can one be sure the market will eventually arrive at the "correct" price in the future? Is the market inefficient today but efficient tomorrow, or is there a chance an investor will go to his grave as the only one who knows the right price?

Q: How can you say active managers won't beat the market when I just read about XYZ Investment Company, which has outperformed for the last twenty years?

A: We can't say there aren't any active managers who have beaten the market in the past, and we can't say there won't be any active managers who will beat the market in the future. What we can say is there haven't been, and likely won't be, any more than you would expect by chance. The problem isn't that there are managers who have beaten the market; it is that there are too few of them!

Let's assume there were 5,000 funds available for investment over this twenty-year period. The 95th percentile of the distribution of outcomes from this sample (i.e., the top 5%) would represent 250 managers with a twenty-year history of generating returns that are significantly above market. At that point, you may be thinking, "what more proof do I need than 250 managers over twenty years?!" What you need to consider, however, is that if you had 5,000 proverbial monkeys managing portfolios by

throwing darts at stock pages, you might observe even more than 250 who would have generated returns that put them in the top 5% of manager returns net of fees. Why? Because as David Booth likes to say, the monkeys work for bananas!

The monkeys would have clearly been dismissed as just being lucky, even over a twenty-year period. However, many investors are unwilling to dismiss the superior returns of an even smaller number of managers as being largely due to luck over the same time frame. I can't say for sure that it is all luck, but what I can say is that the outcomes don't look much different than if there were no skill at all. For many investors, hope springs eternal, but we are going to invest your money assuming it was mostly luck, because that assumption at least puts the odds of success in your favor.

As a result, your example of XYZ should only be viewed as anecdotal evidence, and we do not want to implement an investment strategy on that basis. Let's say you had a very serious illness for which a doctor was prescribing treatment. Would you be comfortable following a treatment plan if you asked the doctor for the basis of his diagnosis and he responded, "it worked for my last patient"? Probably not, as you likely want to hear about years of scientific tests examining the whole distribution of possible outcomes, both in and out of sample, as outlined in top-tier medical journals subject to intense scrutiny, refereeing, and peer review.

The basis for my prescription of a passive investment strategy rests on this type of scientific inquiry in the field of finance rather than on anecdotal evidence. The tests have been done and they are well documented. Unfortunately for many investors, the subjects of these tests are not lab rats, but real people with real money!

Voyager Capital Management, LLC.

*875 Townline Road., Ste 102
Lake Geneva WI 53147
Telephone: 262.348.9981
Fax: 262.348.9982
www.voyagercapitalmgt.com*