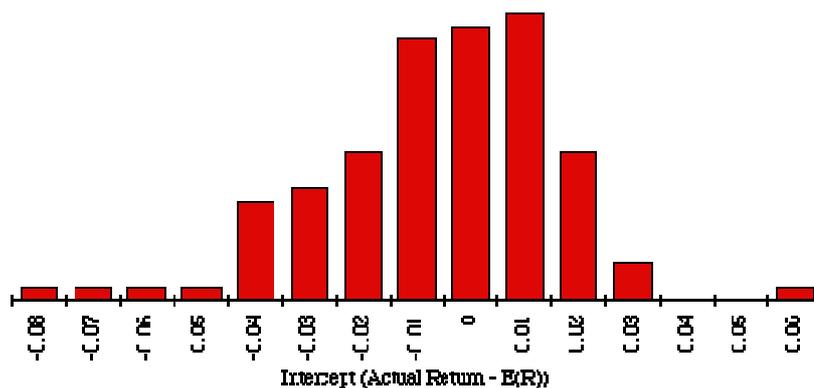


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The Case Against Active Asset Selection

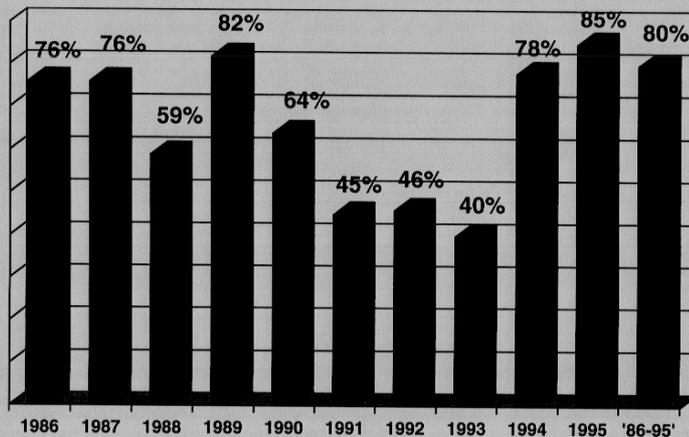
The best case against active asset allocation is made, ironically, by active portfolio managers. Professional money managers operate as the experts in the field of investments. They are supposed to be better informed, smarter, have lower transactions costs and be better investors overall than smaller investors. The earliest study of mutual funds by Jensen suggested that this supposition might not hold in practice. His findings, summarized in Figure 10, as excess returns on mutual funds, were that the average portfolio manager actually underperformed the market between 1955 and 1964.

Figure 8: Mutual Fund Performance: 1955-64 - The Jensen Study



These results have been replicated with mild variations in the conclusions. In the studies that are most favorable for professional money managers, they break even against the market after adjusting for transactions costs, and in those that are least favorable, they underperform the market even before adjusting for transactions costs. To those who would argue that these results are because of "risk" adjustments that are unfair to money managers, the underperformance of active money managers can be illustrated by looking at their performance relative to the S&P 500. Figure 11 summarizes the percentage of active equity money managers who were beaten by the S&P 500 index between 1986 and 1995.

Percentage of General Equity Funds Outperformed by the Standard & Poor's 500



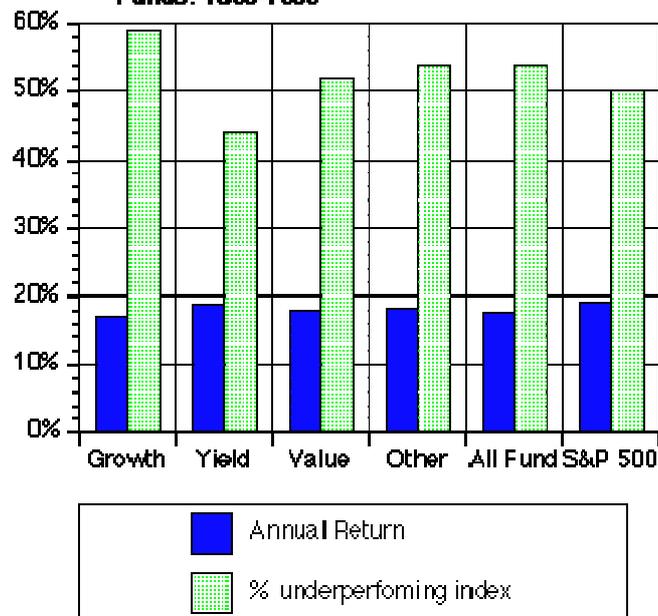
Source: Lipper Analytical Services and The Vanguard Group

The evidence is no more promising when we look at Figure 12, which summarizes the performance of active bond fund managers relative to a bond index.

The average bond fund underperformed the Lehman index by approximately 1.5%.

The results, when categorized on a number of different basis, do not offer much solace. For instance, Figure 13 shows excess returns from 1983 to 1990, and the percentage of money managers beating the market, categorized by investment style.

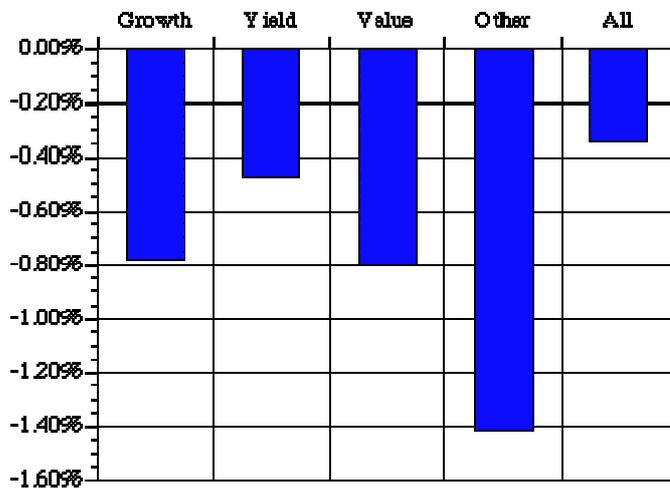
Figure 9.21: Performance of Equity Funds: 1983-1990



Money managers in every investment style underperform the market index.

Figure 14, from the same study, looks at the payoff to active portfolio management by looking at the added value from trading actively during the course of the year and finds that returns drop from 0.5% to 1.5% a year as a consequence.

Figure 9.22 The Payoff to Active Money Management: Equity Funds



This table measures the difference between actual return on equity funds and return on hypothetical portfolio frozen at beginning of period.

Finally, the study, like others before it, found no evidence of continuity in performance. It classified money managers into quartiles and examined the probabilities of movement from one quartile to another each year from 1983 to 1990. The results are summarized in Table 5.

Table 5: Probabilities of Transition from One Quartile to Another

Ranking this period	Ranking next period			
	1	2	3	4
1	26%	24%	23%	27%
2	20%	26%	29%	25%
3	22%	28%	26%	24%
4	32%	22%	22%	24%

This table indicates that a money manager who was ranked in the first quartile in a period had a 26% chance of being ranked in the first quartile in the next period and a 27% chance of being ranked in the bottom quartile. There is some evidence of reversal in the portfolio managers in the lowest quartile, though some of that may be a reflection of the higher risk portfolios that they put together.

The sole hopeful note in the studies is that there are a few areas where active money managers seem to have outperformed the indices. One area is in international asset allocation, where active money managers have beaten the "passive" allocation model recently, though almost all of the outperformance in recent years can be attributed to

managers underweighting Japanese stocks in their portfolios. The other is active funds in "emerging" and "information poor" markets, which do better than passive funds in these markets. This may be attributable to the better information and superior execution skills that these funds may have over other investors in these markets.

In summary, active portfolio managers, on average, underperform market indices. The underperformance is broad based and cannot be attributed to "risk" adjustments or to a few poor active money managers. Given that investors have to pay extra fees for active money management, it is not surprising that many of them turn to indexing.

Indexing

The case against active investing is strong enough for some investors to consider an alternative, which is to allocate the portfolio across assets in the asset class based upon the market value of each asset. This approach is called indexing, and an index fund attempts to replicate a market index for the asset class; with stocks, index funds often try to replicate the S&P 500, with bonds, the Lehman bond index, and with international stocks, the Morgan Stanley Capital Index.

A. Mechanics of Indexing

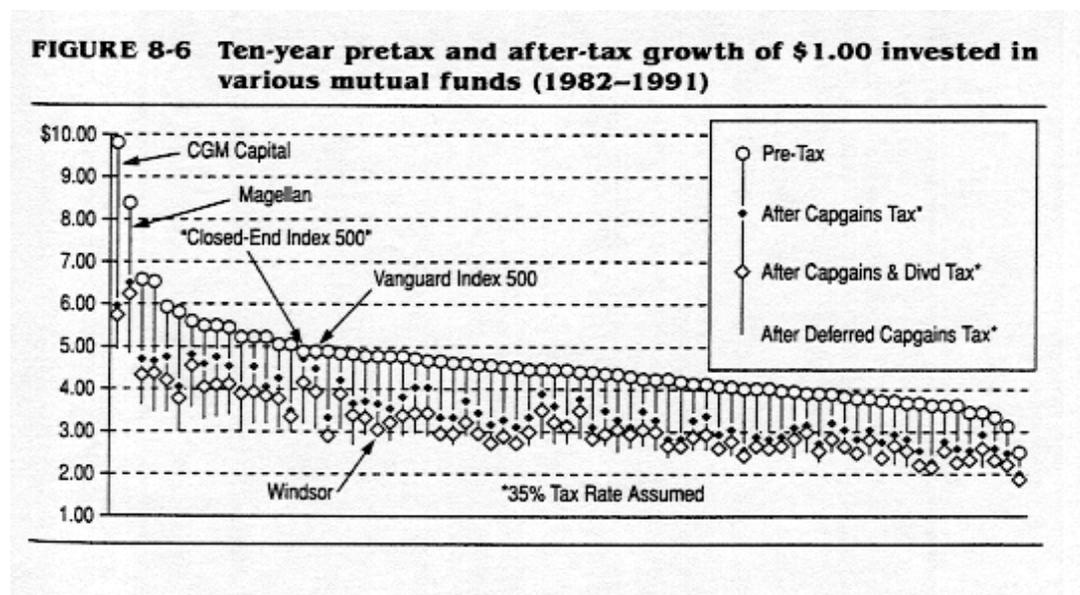
The mechanics of creating an index fund are simple. The first step is to identify the index that the fund plans to replicate. While diversification would argue for replication of the widest possible index, transactions costs and the dependability of the indices in use may result in narrower indices being chosen. Thus, in the United States, the most widely replicated index is the S&P 500 even though the NYSE composite or the Wilshire 5000 may be broader indices. The second step is to estimate the market values of the assets in the index, and calculate the market value weights of the assets. The final step is to create a portfolio of the assets in the index, with the same market value weights. This process, which allows for perfect replication, becomes costly when the index contains thousands of assets. In such a case, the index fund may reduce its costs by using sampling to create a portfolio with the same characteristics as the index (sector weights, market capitalization etc.). This sampling strategy does come with a cost - the index fund will no longer perfectly replicate the index, but will follow the index with noise.

Index funds are, for the most part, self-correcting, since assets in the fund and assets in the index essentially move together. It does need to be adjusted as new assets enter the index, and old assets leave the index.

B. Advantages of Indexing

Index funds have two advantages of traditional actively managed funds. First, there are no information costs or analyst expenses associated with running these funds, and there are little transactions costs associated with trading. Most index funds have turnover ratios of less than 5%, indicating that the total dollar volume of trading was less than 5% of the market values of the funds. This results in transactions costs at these funds of 0.20%-0.50%, which is less than one third the costs at most actively managed funds. Second, the index funds' reticence to trade also reduces the tax liabilities that they create for investors. In a typical actively managed fund, the high

turnover ratios create capital gains and tax liabilities even for those investors who buy and hold these funds. The following figure, replicated from John Bogle's book on mutual funds, measures the difference between pre-tax and after-tax returns at several funds.



C. Limitations of Indexing

The primary limitation of index funds is that they cannot deliver more than they promise, which is to keep up with the index. To the extent that an investor wants to beat the market, this may not be satisfactory. It can also be argued that the tendency of index funds to replicate just a few well know indices (such as the S&P 500) can result in the stocks in these indices becoming over valued, especially as index funds become more popular. Furthermore, the most popular indices may not be the most diversified ones, either. This is not a problem with index funds per se, but with how most of them are constructed.

Conclusions

Investment strategies that claim to find misvalued assets abound, and can be categorized into four groups - strategies that use discounted cash flow models to value assets, relative valuation strategies that compare the pricing of individual assets to the pricing of assets that are "comparable" to them, technical analysis strategies that use price and volume indicators to predict shifts in market sentiment and strategies that attempt to use private information to find assets that are under or over valued. Many investors subscribe to more than one of these groups of strategies, but very few investors seem to succeed in using them to earn returns in excess of what they would have earned adopting a passive strategy of buying and holding a diversified portfolio of the assets. This gap between the performance that is promised by those who develop these strategies and the performance that is delivered by those who use these strategies suggests that there are significant costs and problems in execution - higher transactions costs, price impact while trading and imitation by other investors. The promise of "beating the market" is powerful enough, however, to induce investors to keep trying to come up with "new and improved" strategies. Far from bemoaning this

fact, we should be celebrating it, since it is precisely this search for value that makes market price reflect information and value in the first place.
