

CHAPTER FIFTEEN

The Nature of Value Allocation

THE NATURE OF VALUE APPROACH to investing informs the allocator's understanding of economic value flows, from the smallest unit of information (the ino) to seeing the entire interconnected economic network acting as one of evolution's adaptive network panarchies creating ever-increasing Φ_m capacities. There are some practical ways a nature of value approach can improve your allocating success. Here are a few thoughts on the implications for allocators.

Missing the Hits

The economic and ecological domains are like hits-based businesses; over time, one either makes a killing or gets killed. There isn't a lot of sitting around, and things are constantly either growing or dying out. Instinctively it seems like chasing the fast growing hits would be a lucrative pursuit. The problem is that as one

concentrates a portfolio to chase hits, the chances of underperforming the average increase as well. Let's take a closer look at why this is the case, and what this means for the allocator.

Index Funds

Buying and holding broad indexes—versus chasing the “hits”—is the safest means for the majority of people to benefit from the nature of value creation at the level of economy.

With 388 funds managing \$1.1 trillion dollars, index funds are the undisputed allocator champion strategy.¹ Index funds that follow stock market indexes are naïve or purely random, uninformed strategies, and embedded in them is the assumption that one can't predict future winners and losers. Broad stock market indexes reflect a whole economies network of public growing and dying clusters, filled with firms struggling to create excess value and live. A naïve index represents the arithmetic mean performance of shares²; academics broadly call this result beta³ or the market.

Professionals use indexes to benchmark their performance and to set investors' expectations. Figure 15.1 shows the 110-year inflation-adjusted index returns for various major economies. Most active managers will underperform these metrics (I'll explore why in a moment) while charging investors 0.70 to 2.00 percent annually for the favor.

The S&P 500 index, for instance, is a set of rules for buying and holding the five hundred largest firms in the U.S. economy, with a bit of rebalancing. This buy and hold approach may sound easy to outperform, but it's not. There are 178 million U.S. equity mutual fund holders who trust fund managers with \$11 trillion dollars to beat the S&P 500 index, but despite that faith the long-term returns of the S&P 500 stock market index beat almost all professional managers and investors over time. So—why is a naïve “buy and hold” index strategy so difficult to beat?

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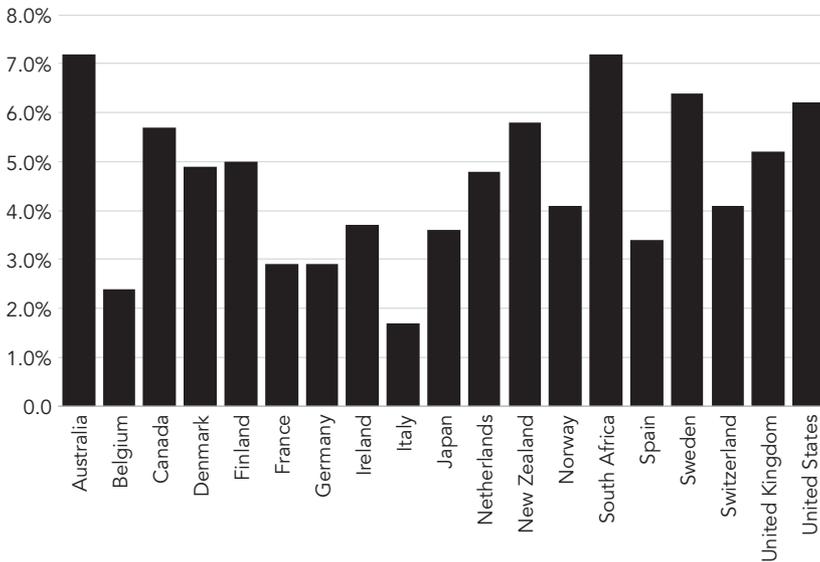


FIGURE 15.1 1900–2011, Real Equity Index Returns

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, *Credit Suisse Global Investment Returns Yearbook*, Credit Suisse Research Institute 2012.

Take a look at figure 15.2, which shows the lifetime return of U.S. shares broken into performance buckets. Notice something weird? This distribution has a really long tail of big winners rather than a normal bell-shaped curve distribution. Only 5.25 percent of shares return more than 100 percent in a year, but a few rare lottery ticket-type companies produce returns far greater than 200 percent. The stock returns are shrunk on the right into a few bins for presentation on the page, but the basic meaning remains; the extreme positive performance outliers significantly increase the average (arithmetic mean) return. Out of three thousand yearly companies over twenty years, the median annual return is 4.9 percent less than the arithmetic mean annual return. This tells us the most likely annual occurring company return is 4.9 percent

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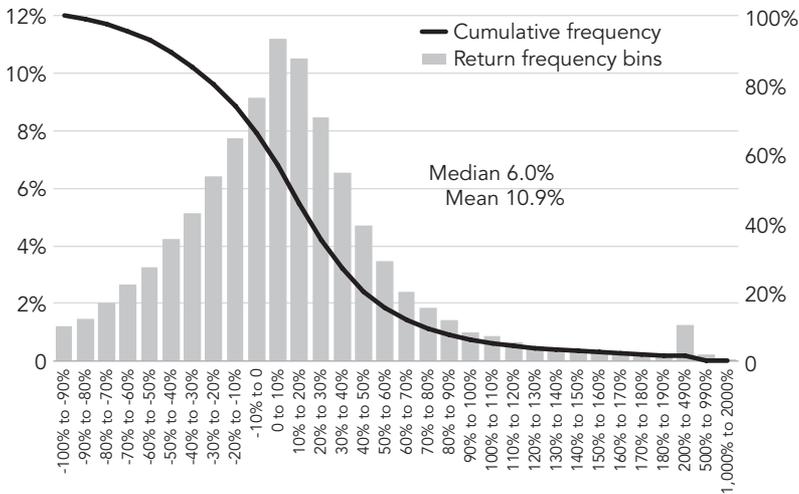


FIGURE 15.2 Cumulative Frequency and Histogram of Annual Returns of 3,000 Equities, 1991–2011
 Source: Longboard Asset Management

lower than the market index “average” return. This factor, along with others, contributes to managers underperforming the index.

A concentrated “rifle shot” bet on a few shares during any given year is likely to underperform by 4.9 percent, with a few concentrated bets hitting their target and outperforming. Without understanding the nature of the moat inside a firm and the cluster dynamics, the allocator is left to predict others opinions of price if they want to beat the mean or index.

To clearly illustrate how this works, let’s examine a grossly simplified model economy with a stock market of one hundred companies and a very fat tail. Every year each company starts out with a value of \$1/share. The price of one of the companies then climbs to \$9/share, returning 800 percent. The arithmetic mean of the index is 8 percent, but the most likely mean return for any company is basically 0 percent (fig. 15.3).

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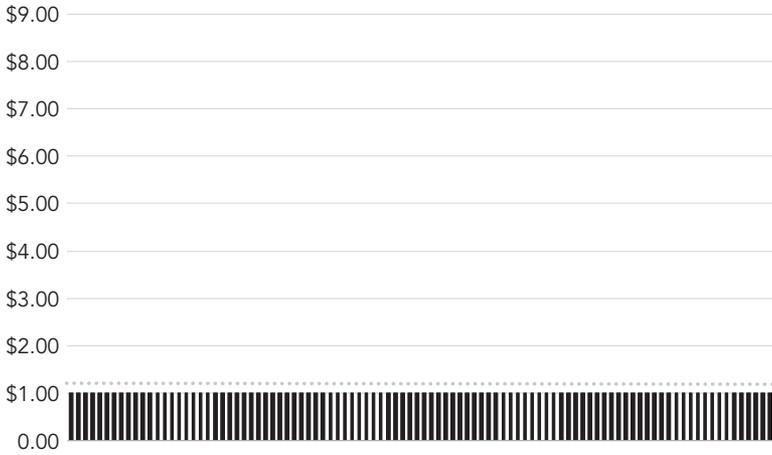


FIGURE 15.3 Profile of 1:100 “Hits” Index

A “hits” index returns 8 percent per year when 1 out of 100 firms is a hit returning 800 percent.

Clearly, chasing the 800 percent return target is a seductive strategy, and many will wish to pursue the 800 percent brass ring. Of course, if the manager allocates to only one firm in the hopes of achieving a full 800 percent return, he or she has a 99 percent chance of a 0 percent return. More moderately, if a manager uses a shotgun approach and randomly buys 50 shares, he or she has a 50 percent chance of a 16 percent return and 50 percent chance of a 0 percent return. This sounds like an interesting bet until one thinks like a mutual fund manager and considers personal career and fund risk. The manager or fund returning 0 percent in an 8 percent year could be shown the door rapidly. If the mutual fund manager wants a 90 percent likelihood of having a job next year, he or she would purchase 90 shares equally. This creates a 10 percent chance of returning nothing (getting fired) and a 90 percent chance of returning 8.8 percent or beating the index by 80 bps to keep his or her job.

Over time one might argue that our manager’s performance would revert to the index average. In reality, this is highly unlikely.

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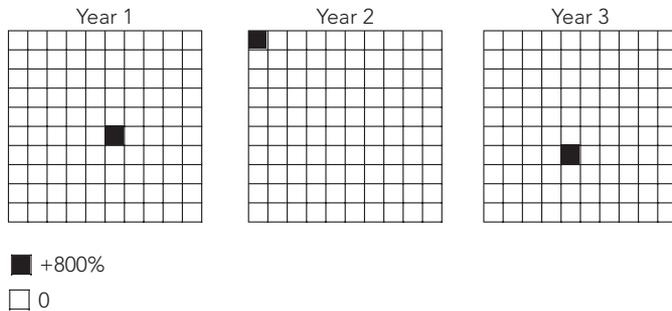


FIGURE 15.4 Hits Are Impossible to Predict

Predicting the location of next year's +800 percent hit company is nearly impossible. (The three Fama-French factors are an exception to the random distribution of returns.)

If a manager only understands price and not value, the movement of the 800 percent winner target appears quite random over time. Over the years, the 800 percent “winner” will show up in different sectors of the economy, as shown in figure 15.4. When the allocator chases the moving target sector, market, or area that had last year's winner, he or she can suffer from not choosing randomly enough. In selecting securities, this increases the chances of missing the target and underperforming.⁴

By aiming at last year's winning cluster or tilting portfolio exposure to the “hot” sector, the manager increases the likelihood of missing next year's randomly occurring winner or chasing last year's winner that may be reverting back to long-term median performance. Transaction costs will also impact returns. Misunderstanding the nature of value and chasing price increases is equivalent to picking random stocks—and as we saw in figure 5.4, in a random picking situation, the safest thing to do is to naïvely equally weight across all shares and hope to perform near the index by capturing the extreme positive outlier or outliers.

Clusters and Sector and Narrow Index Exchange Traded Funds

The middle ground between an index strategy and picking individual stocks are tools that allow investors to bet on a number of firms within a single sector. Sector- and narrow index-based Exchange Traded Funds (ETFs) are an example of this. Sector and narrow index ETFs trade like stocks, and often hold a portfolio of highly targeted, sector-specific stocks. Sector-based ETFs differ from clusters in that clusters are defined by customers, whereas sector-based ETFs often represent sectors or industries. However, they are similar enough that sector ETFs provide a good proxy for cluster and inter-cluster complexity.

When times are exciting in a product or sector, an investor might think, “I like this industry, so I will diversify and spread my bet around with an ETF.” However, people forget that a sector ETF allocation is actually a bet on the distribution of value capture among competitors in a cluster. Anticipated revenue growth means increased value will flow through the cluster—but does not guarantee sustained profits for any single firm, much less the aggregate cluster of firms. Competition and cluster instability can limit the cluster’s retained profits and the sector’s ability to retain value or build wealth.

Many forget this and approach “growth” sectors with the belief that by betting on the whole sector using an ETF, everything will work out. But if an index is equally weighted and 95 percent of firms go bust, the 5 percent that emerge victorious must grow twentyfold for the index to break even. In hyped sectors, due to individual lottery pricing psychology effects, price is often far ahead of value for most participants. To illustrate this, let’s examine how an ETF with all firms trading at a “discount” to individually touted expectations can still be a loser.

Take a sector ETF with ten firms, in which each of the firms is valued at \$1 billion with future expected earnings of \$100 million—but with all firms chasing a \$1 billion revenue cluster opportunity. Each firm may claim it deserves a \$1 billion valuation due to 10 percent

future earnings margins and a 10 percent yield or 10:1 PE multiple. Firms will seem to be trading at a 90 percent discount relative to “their” \$1 billion golden opportunity just around the corner. With a hundred firms each telling and selling the same story, the reality is potentially \$10 billion worth of market capitalization chasing maybe a \$1 billion opportunity. Remember that the final surviving firm or firms has to make the \$100 million in earnings and trade at a 10:1 PE ratio; but even if this happens, it means a 90 percent loss for the “safe” index investor spreading bets across the ten firms.

The Internet phenomenon is a real-world example of a hyped sector like this. The Internet bubble 1.0 was built on expensive firms with impressive top-line initial revenue growth, many of which were quickly eviscerated by highly unstable clusters and hypercompetition analogous to a mini-Cambrian explosion. Many single-product or feature-based innovation markets can grow to billions in annual revenues but never pay a penny in aggregate net returns to investors when measured at the cluster or index level. The Internet bubble combined incredibly short product innovation cycles, uncertain clusters, and hyped prices to destroy allocated capital. The person who got “in on the Internet” by index investing using the Internet Holders Index (HHH) at its launch in 1999 was down 36 percent, not including inflation, taxes, and fees, as of late December 2011.⁵ Due to Siegel’s paradox, a 57 percent return from December 2011’s prices is required for breakeven after holding the index for twelve years. Many narrowly targeted indices and ETFs in “hot” innovation or story sectors are like this; the clean tech/solar sector in the late 2000s did the same thing.

Consumers and society at large won the Internet 1.0 bubble due to the knowledge and capabilities for value creation that diffused into the economic network. A handful of companies are lottery winners, but Internet firms in total haven’t done much for the lottery ticket investors. Narrative survivorship bias means people easily recall the storied giants like eBay and Amazon, but not the hundreds of tiny noBays that didn’t survive. The investment

bankers selling lottery tickets, IPOs, and M&A deals did well for themselves. Putting on a suit and tie to sell dreams is easier than competing to deliver them.

The Internet and solar sector ETFs are examples of lottery clusters that turned into a collection of mostly Red Queen clusters, offering limited value capture potential. Too few innovation diffusion effects and too little price discounting was factored in relative to final value capture.

Other Things Working Against Trader Returns

Many factors are at work that erode returns below the index or arithmetic average, besides just chasing the “hot” firm or sector. Other major drags for traders and portfolio managers include psychological biases, taxes, and transaction costs.

Psychological Biases

One return shrinking psychological trait exhibits itself when many people act as price traders with an asymmetrical reaction to pain and reward. As is evidenced in many studies, people have a psychological bias to let losing trades run long and take money off the table with winners too early. This lets them feel secure and avoid the pain of accepting a loss. This bias means that extreme positive outliers, like the Walmarts and Home Depots of the market, become under-represented by portfolio managers selling early. After a huge gain and in the absence of understanding the forces growing value are still at work, many people convince themselves to “take some money off the table and not be greedy.”

This move to safety effectively truncates the right-hand long tail side of the distribution, pushing the realized portfolio returns to the left below the index returns. Cutting off the tail is psychologically

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comforting in the absence of any other information about value. What would you do in the earlier 1 in 100 portfolio after your single “lucky” share price initially jumped 500 percent? Would you hold on for the full year’s 800 percent? If you wouldn’t, over time you would underperform the index.

The act of selling or pruning large price “winners” from a portfolio is often justified as an act of portfolio rebalancing or de-risking by diversifying. Allocating based on an understanding of the nature of value rather than price can mitigate this risk as increased price should reflect growing value. The flawed idea behind pruning large, significant winners is that it de-risks overly concentrated portfolios. This focus on overconcentration is correct from a short-term naïve statistical perspective, but incorrect when one has an understanding of the nature of the source of value in the underlying portfolio firms. Deeply understanding a few sources of value creation beats knowing nothing about many sources of value creation. The paradox of doing well by humbly understanding nothing about everything (the index) still stands as the best strategy for most investors.

Tax and Trading Issues

Continuous transactions contribute to long-term underperformance due to tax and transaction impacts. Thinking long term can show how these seemingly small impacts contribute to long-term significant underperformance.

Taxes vary for each situation. A simple example of tax impacts: imagine our portfolio manager selling his 800 percent annual winner at the end of the year. A theoretical 20 percent tax would yield a \$1.60 cost to the initial \$100 portfolio of 100 shares each initially priced at \$1. The 8 percent annual index yield of \$8 would now become a post-tax 6.4 percent yield.

Active trading costs also impact returns. Even with high-frequency algorithmic trading and other high-tech financial

techno-wizardry, there is still a real cost to trading. Most managers want to be seen “managing,” which often means an annual portfolio turnover of more than 85 percent in many funds. Using a conservative estimate of 0.25 percent cost per transaction in our \$100 portfolio, this works out to a 0.21 percent yearly cost, which is yet another drag on performance. On top of this, managers and management companies need to get paid. Another 1.30 to 0.80 percent is a likely cost factor weighing down the pursuit of beating the index.

Investors can have a negative impact on managers’ actions as well. Mutual fund managers trying to beat the S&P 500 are often stuck with short-term management guidelines or incentive structures driven by flighty investors’ assets under management who are intent on seeking out the latest hit. According to DALBAR research in 2012, over twenty years investors underperformed the index by a massive 5.7 percent annually just due to the investors’ own buying high and selling low of the funds in which they invested. Investors who chase yesterday’s seemingly random victory tend to catch tomorrow’s mean-reverting defeat. Buy and hold if you know nothing else.

Nature of Value Portfolio

So if ETFs and hit-chasing stock picks won’t help you beat the index—and with biases and transaction costs adding to the problem—what *will* help the allocator find portfolio success? My answer is understanding how and why value performs. Buying a moated firm at a discount and holding on for a long time is a solid approach. Looking for growing moats with high ROEs that respond well over time to inflation is likely they best way to allocate capital, although it is very hard work.

Berkshire Hathaway’s strategy probably reflects one of the best nature of value type approaches to investing. By owning companies

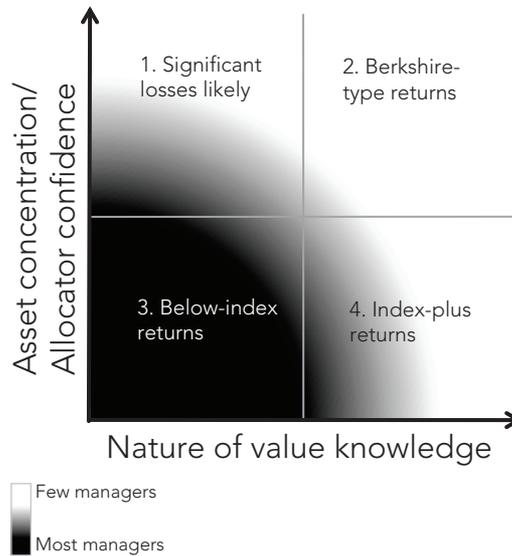


FIGURE 15.5 Investor Confidence and Knowledge Level Drive Portfolio Outcomes

and allocating capital internally between firms, many of the tax and transaction costs are avoided. Capital allocation is performed highly efficiently. Berkshire Hathaway's use of insurance company float as a form of ready capital and leverage is another unique strategic driver of its returns. Insurance company float is beyond the scope of this book, but a truly fascinating topic worthy of study for those deeply interested in capital allocation efficiency.

To understand the power of Berkshire's value knowledge applied compared with a typical mutual fund, take a look at figure 15.5. The y-axis shows portfolio concentration, as a proxy for allocator confidence. The x-axis shows a party's understanding of the value of his or her portfolio. This maps out four quadrants:

1. A highly concentrated portfolio combined with a low understanding of value. This increases the risk of underperformance, as discussed previously.

2. A highly concentrated portfolio combined with a high understanding of value. This is rare and difficult, but exemplifies nature of value investing when done right.
3. A diversified portfolio combined with a low understanding of value. This is how most mutual funds are structured and is usually sold as a safe bet, but the misunderstanding of value or structural short-term incentives and costs can lead to below index returns.
4. A diversified portfolio combined with a high understanding of value. This usually means outperforming the index. As figure 15.5 shows, misunderstanding the nature of value can be equivalent to picking random stocks. In a random picking situation, the safest thing to do is to equally weight across all shares hoping to perform near the index—which is tough after transaction and management fees. Figure 15.6 illustrates the risk of concentration and why understanding the nature of value is so

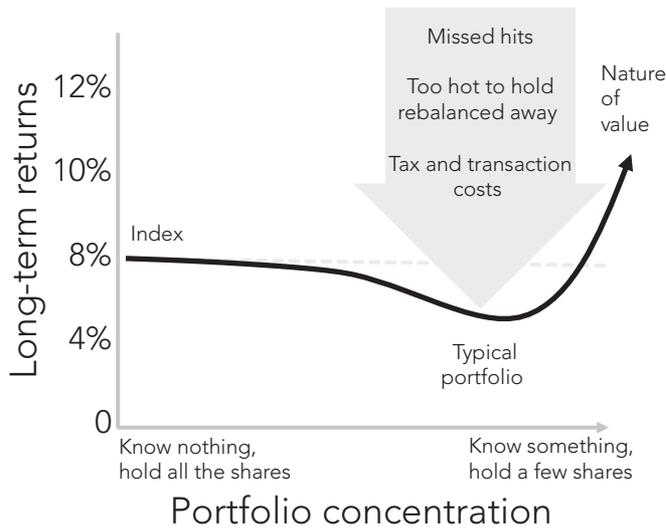


FIGURE 15.6 Humble Know-Nothing Index Returns Beat Concentrated Ignorance

important if one wishes to concentrate a portfolio. If you want to skip the broad-based index approach and are willing to do the work required, then nature of value investing might be for you. Most investors don't have the time, desire, or skills to study individual organizations in the required depth, but nature of value allocators have fun reading 10Ks and past annual and industry reports. The goal is to understand and allocate to a few firms with proven moats that can create good cash flow yields, and to hold them for many years. Charlie Munger and Warren Buffett claim the bulk of Berkshire's value came from twenty buy and hold decisions made over the course of forty years.

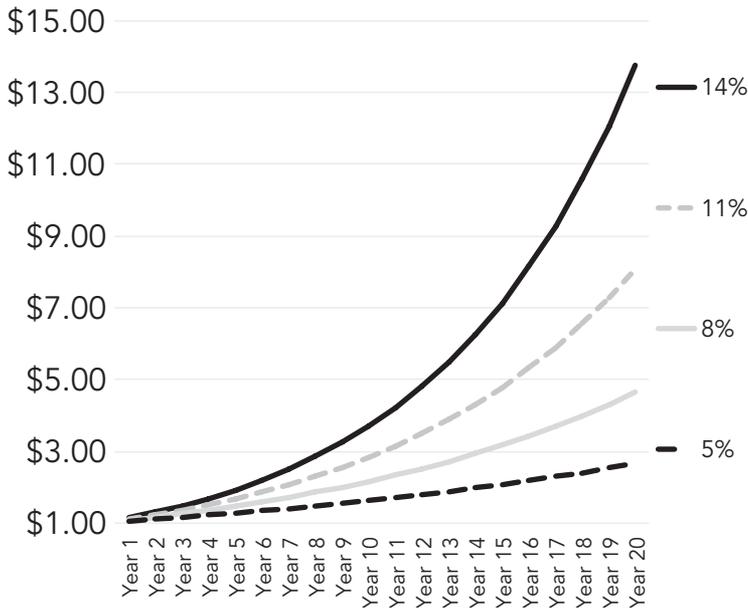


FIGURE 15.7 Impact of Twenty Years of Compounding Growth

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The nature of value approach requires patience, research, and effort. These skills must be met with equally large doses of humility on the behalf of the manager and his or her capital resources thinking in five- to ten-year increments versus quarterly or annual performance metrics. The work required to apply the nature of value approach can be substantial, but the payoffs over time are great, as seen in figure 15.7 and table 15.1.

Table 15.1
Twenty Years of Growth Compounded

| | 5% | 8% | 11% | 14% |
|---------|--------|--------|--------|---------|
| Year 1 | \$1.05 | \$1.08 | \$1.11 | \$1.14 |
| Year 2 | \$1.10 | \$1.17 | \$1.23 | \$1.30 |
| Year 3 | \$1.16 | \$1.26 | \$1.37 | \$1.48 |
| Year 4 | \$1.22 | \$1.36 | \$1.52 | \$1.69 |
| Year 5 | \$1.28 | \$1.47 | \$1.69 | \$1.93 |
| Year 6 | \$1.34 | \$1.59 | \$1.87 | \$2.19 |
| Year 7 | \$1.41 | \$1.71 | \$2.08 | \$2.50 |
| Year 8 | \$1.48 | \$1.85 | \$2.30 | \$2.85 |
| Year 9 | \$1.55 | \$2.00 | \$2.56 | \$3.25 |
| Year 10 | \$1.63 | \$2.16 | \$2.84 | \$3.71 |
| Year 11 | \$1.71 | \$2.33 | \$3.15 | \$4.23 |
| Year 12 | \$1.80 | \$2.52 | \$3.50 | \$4.82 |
| Year 13 | \$1.89 | \$2.72 | \$3.88 | \$5.49 |
| Year 14 | \$1.98 | \$2.94 | \$4.31 | \$6.26 |
| Year 15 | \$2.08 | \$3.17 | \$4.78 | \$7.14 |
| Year 16 | \$2.18 | \$3.43 | \$5.31 | \$8.14 |
| Year 17 | \$2.29 | \$3.70 | \$5.90 | \$9.28 |
| Year 18 | \$2.41 | \$4.00 | \$6.54 | \$10.58 |
| Year 19 | \$2.53 | \$4.32 | \$7.26 | \$12.06 |
| Year 20 | \$2.65 | \$4.66 | \$8.06 | \$13.74 |

Summary

The simple broad-based index system which captures most of an economy's returns is tough to beat. Indexing means placing faith in an entire complex economic network⁶ of information and value flows while humbly acknowledging total ignorance about any single companies, and yet ignorant indexing is probably the best way for 99.9 percent of people to invest. Most managers and investors have many things working against them. Managers may not understand the sources of value or may be forced to chase price in a game that is weighted against them.

The nature of value approach involves long-term allocation to a few well-understood moated firms. The implications of long-term transaction reduction, tax reduction, and compounding effects associated with a nature of value capital allocation approach should not be underestimated.