DENYING THE ODDS

The History of Active Management in US Securities Markets

By Mark J. Higgins

A reliable rule of thumb for investors is that they can only hope to achieve exceptional returns by daring to be different than the crowd. This is because opportunities to produce exceptional returns are rare and quickly evaporate once the herd becomes aware. Among the great ironies of investing in the 21st century is that the most daring strategy—investing entirely in index funds—also happens to offer investors the highest probability of achieving their objectives and at a considerably lower cost. Understanding the history of active management reveals why index funds usually offer the most attractive prospects for both individuals and institutions.

The Peculiar Wisdom of Crowds

"It appears then, in this particular instance, that the vox populi is correct to within 1 per cent of the real value… This result is, I think, more creditable to the trustworthiness of a democratic judgement than might have been expected."

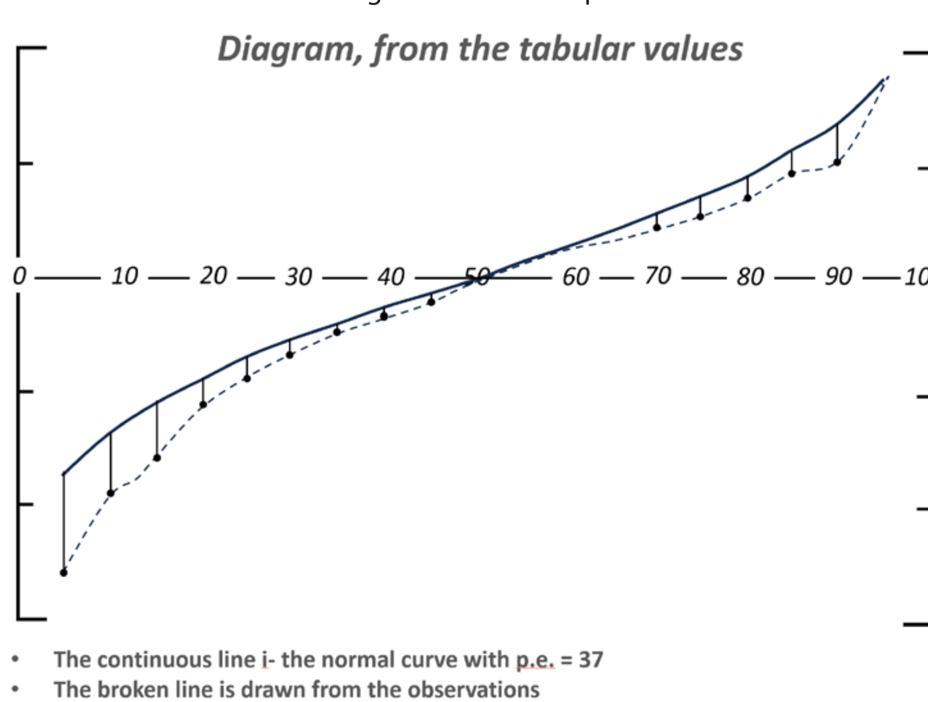
—Francis Galton (1907)

In the fall of 1906, an English statistician named Francis Galton strolled the grounds of a livestock fair in a rural town about 200 miles from London. Galton was studying the effects of various breeding techniques, but on this day, he was captivated by a popular contest. For six pence, contestants guessed the weight of an ox, and the person closest to the actual weight received a prize.

After the contest ended, Galton persuaded the organizer to hand him the tickets submitted by participants. Galton's subsequent analysis revealed that the median guess of the ox's weight (1,207 pounds) was remarkably close to the actual weight (1,198 pounds). Even more fascinating was that approximately 90% of individual guesses were worse than the median because the errors above tended to offset the errors below.

The relative accuracy of the median guess—a phenomenon Galton dubbed *vox populi* (voice of the people)—was later described in a probability theorem known as the law of large numbers. The theorem proved that results observed in an experiment that involves *repeated* and *independent* iterations will converge on the average. The law of large numbers has many practical applications. In situations in which independent estimates are made using a common set of information, the average estimate tends to be superior to most individual estimates. In other

Diagram from Vox Populi



Source: Galton, F. Vox Populi. Nature 75, 450–451 (1907). https://doi.org/10.1038/075450a0 words, beating the wisdom of crowds is an extremely difficult feat.

Understanding the wisdom of crowds is essential for investors because it explains why it is so difficult to profit from the identification of mispriced securities. Doing so requires investors to repeatedly formulate superior price estimates using the same information that is accessible to other market participants. Using the weight-guessing contest as an analogy, successful investors must compete in hundreds of contests and consistently outperform the crowd.

To this day, few investors appreciate how difficult it is to accomplish this feat. Even fewer appreciate that the stock operators who dominated Wall Street more than 100 years ago did appreciate the difficulty.

The Gilded Age Dark Arts

"Cheating at cards was always disgraceful. Transactions of similar character under euphemistic names of 'operating,' 'cornering,' and the like were not so regarded."

—Trumbell White, journalist (1893)

During the latter half of the 1800s—an era commonly referred to as the Gilded Age—securities markets were a dangerous place. Few rules existed, and those that did exist were rarely enforced. As a result, Wall Street's robber barons rarely bothered to perform securities analysis. Instead, they employed the "Gilded Age dark arts" of market manipulation and insider trading. They knew that outsmarting the market was a crapshoot at best, but cheating the market could be quite lucrative.

It may seem strange today, but use of the dark arts was not a secret while it remained legal in the United States. Newspapers regularly reported the latest stock pools, market corners and bear raids. Journalists were often complicit either because they accepted bribes to publish false information, or they were under direct orders from newspaper owners who were part of these operations. The frequency of schemes varied from year to year, but it was not until the public suffered devastating losses during the Great Depression that they finally pressured Congress to outlaw them.

The Shaming of the Street

"Men have been swindled by other men on many occasions. The Autumn of 1929 was, perhaps, the first occasion when men succeeded on a large scale in swindling themselves."

—John Kenneth Galbraith, author of *The Great Crash 1929*

In 1925, the US stock market slowly began a legendary rise. By 1928, it had reached bubble status, but it continued inflating further until the fall of 1929. Like all bubbles, the Great Bull Market of the 1920s was explained by the convergence of many powerful forces. These included overly accommodative monetary policy, liberal use of margin debt for speculation and the emergence of a large shadow banking system.

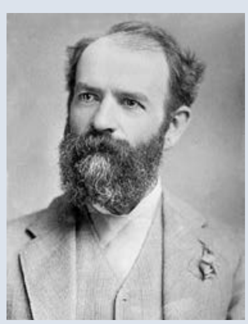
The Roaring Twenties ended with a devastating crash. The Great Depression that followed was then made considerably worse by flawed monetary and fiscal policies. One of the few silver linings of the Great Depression, however, was that the breadth of financial suffering created just enough pressure on Congress to pass overdue reforms. Even though the average investor in the Roaring Twenties knew that stock operators routinely manipulated markets and traded on insider information, they accepted their disadvantaged position while the market was rising. But when the market turned and the depression deepened, tolerance for such behavior evaporated.

The resulting securities reforms upended the power structure on Wall Street. The Securities Act of 1933 required extensive and truthful disclosure for new issues of securities, while the Securities

Portrait of a Gilded Age Dark Artist: Jay Gould, "The Mephistopheles of Wall Street"

"If ever a man's gold was 'cankered' it was his. He was throughout his entire financial life not only a gambler on a large scale, but a gambler with marked cards and loaded dice."

—Reverend Louis Albert Banks (1892)



To qualify as a robber baron on Wall Street during the Gilded Age, a person required a healthy combination of greed, intelligence, subtlety, disloyalty and a general deficit of morality. Jay Gould mastered these vices, enabling him to quietly pull the strings on many of the most ambitious schemes. Each one was meticulously planned and brilliantly disguised. His victims often lamented that they were unaware they were under attack, much less of who was orchestrating it. If there was a loophole in a contract, Gould would find it. If a contract lacked loopholes, he created them. He also never hesitated to bribe politicians, journalists, judges, police officers and any other protector of the common good.

Among the more impressive of Gould's deeds was a perfectly executed bear raid on the Pacific Mail Steamship Company. Gould began his conquest by using several allies on the Board to spread rumors of a federal investigation into alleged bribery of government officials. He then planted negative stories with journalists to further depress the stock. Meanwhile, he acquired shares in secret. Once the dust settled, Gould owned a controlling stake in the Pacific Mail, which he acquired at a steep discount to fair value. He then reset shipping rates at a more profitable level for both the Pacific Mail and the Union Pacific (a Gould-controlled railroad). He had wielded the Gilded Age dark arts to execute a perfect bear raid.

Exchange Act of 1934 outlawed market manipulation and insider trading. Recognizing that the end of a nearly 150-year era was upon them, the famed stock operator William Durant lamented: "We may as well tell the truth and put the blame where it belongs. It's up to Washington now. We have stepped aside."

The Servants Become the Masters of Wall Street

"The infant profession of securities analysis obviously prospered by [securities reform]. Indeed, if the profession can be said to have had 'founding legislation,' then this clearly was it."

—Timothy C. Jacobson, author of *From Practice to Profession: A History of the Financial Analyst Federation and the Investment Profession* (1997)

Benjamin Graham, who is often regarded as the father of the value investing philosophy, began his career on Wall Street as a statistician at a brokerage firm in 1914. At the time, statisticians were considered lowly employees. They spent their days tucked away in back offices where they sifted through reams of paperwork to collect basic data on stocks and bonds. Brokers considered this information necessary, but far less valuable than insider information. After the passage of the Securities Act of 1933 and the Securities Exchange Act of 1934, however, the skills of statisticians were suddenly in high demand. Market manipulation and insider trading were illegal; companies were disclosing massive amounts of information and few investment professionals had the skills to make sense of it.

In the early 1920s, Graham launched his own investment management firm. He was fortunate to have voluntarily shunned market manipulation and insider trading even though it was legal. Instead, he relied solely on his relentless due diligence to parse through publicly accessible information and profit by finding value that others had overlooked. Graham developed a strong track record during the 1920s, which earned him a reputation as one of the leading investors in the post-securities reform era. He documented his techniques in his books *Securities Analysis* and *The Intelligent Investor*. He also became a leading voice among a loose confederation of financial analysts that eventually evolved into the CFA Institute.

The Golden Age of Financial Analysis

The 1950s and 1960s were a time of plenty for the emerging financial analyst profession. Securities markets were flooded with new issues after World War II, and the population of trained securities analysts was limited. But within a few decades, the supply began to exceed the demand. In 1963, the first 268 individuals received a CFA charter; by 1979, the cumulative number of CFA charters exceeded 6,000. Moreover, this was only a small percentage of the number of investment professionals analyzing securities each day. By the 1970s, the wisdom of the crowd presented a formidable challenge for analysts. Finding information that was not baked into market prices was a rarity.

During the 1970s and 1980s, leading academics and investment professionals also began studying the performance of securities markets. A common observation was that comparable market indices consistently outperformed actively managed investment funds. Further, as the time horizon of analysis lengthened, the number of outperformers contracted. This phenomenon is observed in every game of chance, as luck explains the outperformance of gamblers over short periods of time. Just like the number of winners at a roulette table dwindles with each turn of the wheel, the number of successful active fund managers dwindles with each passing year.

The Flaw of Large Numbers

"An investment trust should be good and large, because this tends to make the expenses of running it a negligible percent of the whole. But when the trust is big in size, the investing problem becomes increasingly difficult."

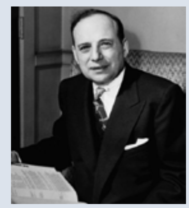
—Fred Schwed, Jr., author of *Where are the Customers' Yachts?* (1940)

Over the past several decades, actively managed funds have continued to attract new investors even though index funds have steadily gained market share. Figure 1 shows the total assets under management (AuM) of actively and passively managed mutual funds in the United States

An Inconvenient Truth and the Birth of the Index Fund

"My basic point here is that neither the Financial Analysts as a whole nor the investment funds as a whole can expect to 'beat the market,' because in a significant sense they (or you) are the market."

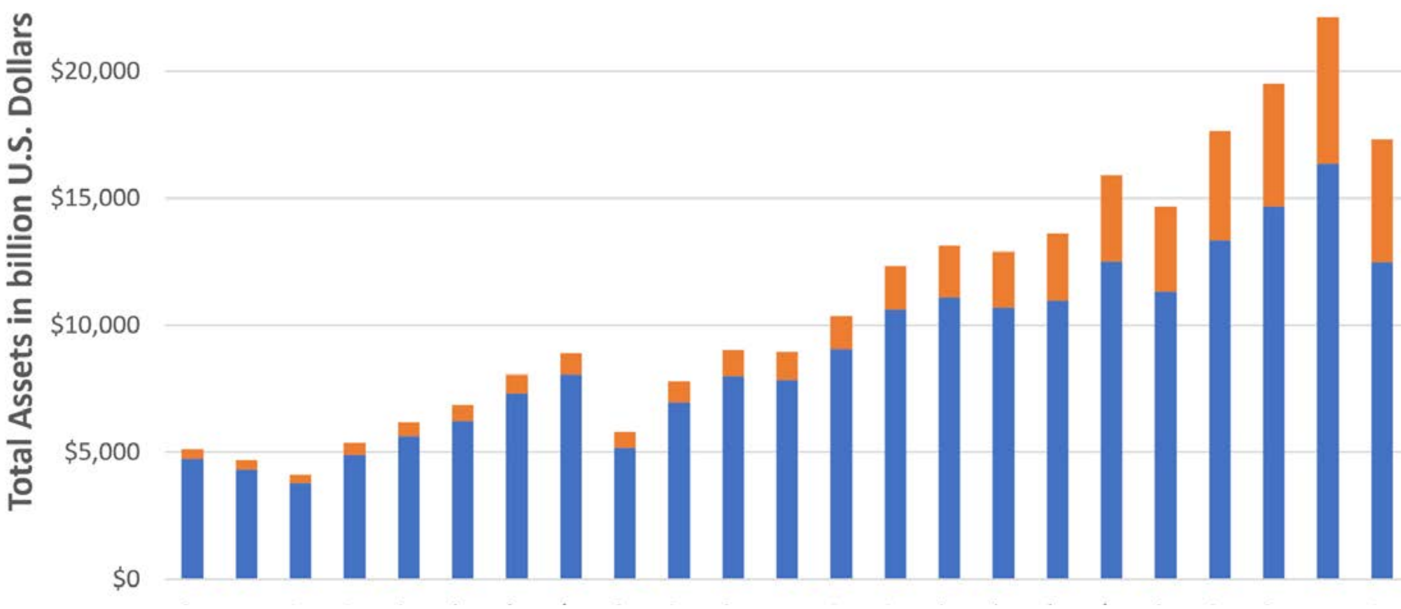
—Benjamin Graham (1963)



By 1963, Benjamin Graham concluded that the golden era of the financial analyst had ended. This did not mean he had lost faith in the overall value of the profession; he just knew with mathematical certainty that beating market averages was no longer a worthy endeavor for most analysts. Graham was not only convinced by the logic, but he was also persuaded by the evidence. For example, in 1940, the SEC observed that even in the relatively inefficient markets of the 1920s and 1930s, most actively managed funds failed to outperform a 90-stock index. Many studies that followed by Nobel laureates and famed academics—such as Eugene Fama, Burton Malkiel and William Sharpe—produced the same results.

Despite the irrefutable evidence, Graham's message was largely ignored. By the 1960s, there were simply too many firms and individuals who had wagered their businesses and careers on denying this reality. Despite a clear need for a low-cost fund that simply mirrored the performance of a market index, it was not until 1976 that Jack Bogle popularized index investing with the launch of the Vanguard 500 Index Fund.

Figure 1: Total AuM of Active and Passive Mutual Funds in the United States (2000–2022)



Source: Statista. (June 13, 2023). https://www.statista.com/statistics/1263822/active-passive-mutual-funds-total-net-assets-usa/

from 2000–2022. The percentage allocated to index funds rose from 7.5% in 2000 to 27.9% in 2022, but active funds still account for most assets.

The problem with this picture is that the ability of active managers to outperform comparable indexes diminishes as AuM increases. This is because the price of securities is affected by the demand for them. Even if managers identify mispriced securities, purchasing them in large amounts pushes the price back to fair value. The larger the fund, the harder it becomes to outperform. But the opposite is true for index funds: as AuM increases, index funds spread their fixed costs across a larger asset base, thus reducing fees as a percentage of assets. Unlike actively managed funds, size is an ally of index funds.

The Future of Active Management

Sound mathematical principles and a preponderance of evidence reveals that actively managed funds outlived their utility long ago. Over the past several decades, a relatively small but growing number of institutional and individual investors have recognized this reality and allocated an increasing percentage of their portfolios to low-cost index funds. Nevertheless, actively managed funds still dominate the market.

On May 5, 2021, David Swensen, the famed CIO of the Yale Investments Office, passed away. During his 36 years at the helm of the Yale University Endowment, he substantially outperformed his peers. Accomplishing this feat required him to traverse a vast minefield of investment challenges. Reflecting on his experience, he expressed his appreciation for the rarity of this accomplishment and that it was virtually impossible to replicate. Therefore, rather than advising his peers to embark on a similarly unlikely journey, he recommended that they adopt a more simple, reliable and shockingly unconventional path that would likely bring them to a similar destination. In 2012, Swensen stated, "You either have the passive strategy that wins the majority of the time, or you have this very active strategy that beats the market… For almost all institutions and individuals, the simple approach is best." $

Mark Higgins, CFA, CFP® is a financial historian and experienced institutional investment advisor. His book, Investing in US Financial History *(Greenleaf Book Group, 2024), recounts the full financial history of the United States from 1790 to 2023. He is a frequent contributor to* Financial History *magazine and a member of its editorial board.*

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Employees and Taxpayers in the State of Nevada Benefit From a Bold Decision to Refrain from Gambling

Investment committees that oversee institutional investment plans suffer from governance vulnerabilities that have existed since the US Navy established the first funded pension plan in 1800. The vulnerabilities derive from the fact that committees meet infrequently, trustees bring variable levels of investment expertise and chronic turnover of trustees often leads to strategic and tactical errors. This forces trustees to rely heavily on advice provided by agents, such as investment consultants, outsourced chief investment officers (OCIOs) and full-time staff.

The problem is that agents have strong incentives to recommend active managers (not to mention expensive alternative asset classes), because the viability of their business models and careers depends on the claim that their advice adds value. Trustees are, therefore, led to believe that the use of active managers has a positive expected value, even though a preponderance of evidence reveals otherwise. For example, each year the S&P Dow Jones Indices, LLC reports the aggregate performance of institutional accounts. The results are depressingly consistent. In the latest report, issued in July 2023, 78% of equity institutional accounts and 59% of fixed income institutional accounts underperformed comparable indices on a net-of-fees basis over the trailing 10-year period.

According to the previously explained rule of thumb, it is only by deviating from the pack that investors can hope to produce relative outperformance—provided, of course, that their strategy is sensible. In the early 2000s, the investment leadership at Nevada PERS decided to leave the pack.

Abiding by the Law of Large Numbers

Steve Edmundson joined the Nevada PERS in 2005 and was appointed to the position of deputy CIO in 2006. Prior to his arrival, the portfolio was roughly divided equally between actively managed funds and index funds. Over the next seven years, Edmundson and the CIO, Kenneth Lambert, steadily migrated the portfolio to a heavier index orientation. In 2012, Lambert departed and Edmundson was promoted to CIO. At the time, 75% of publicly traded securities were allocated to index funds, but Edmundson continued the transition until 100% of publicly traded securities were allocated to index funds by 2014. The remaining 12% of the total portfolio remained in private assets. Edmundson's simple rationale was that, in the long-run, gross-of-fees returns of index funds would differ little from active funds, but net-of-fees returns would be considerably higher.

For nearly 20 years, the performance of Nevada PERS has validated their unconventional approach. The table below shows the annualized gross-of-fees returns relative to public pension plans with greater than $1 billion in assets, as well as the percentile ranking of Nevada PERS in a peer universe provided by the investment consulting firm Callan Associates. It is also worth noting that this analysis substantially underestimates Nevada's performance advantage because it does not account for the fact that their fees are much lower than those of their peers.

Annualized Gross-of-Fees Returns of Nevada PERS

Period Ending March 31, 2024

	5- Year	7-Year	10-Year	15-Year	20-Year
Nevada PERS	10.12	9.59	8.59	10.49	7.79
Median Plan (>$1 Billion)	8.40	8.20	7.40	9.74	7.21
Relative Outperformance	1.72	1.39	1.19	0.75	0.58
Nevada PERS Percentile Ranking	2nd	2nd	4th	10th	11th