

Shooting the Messenger

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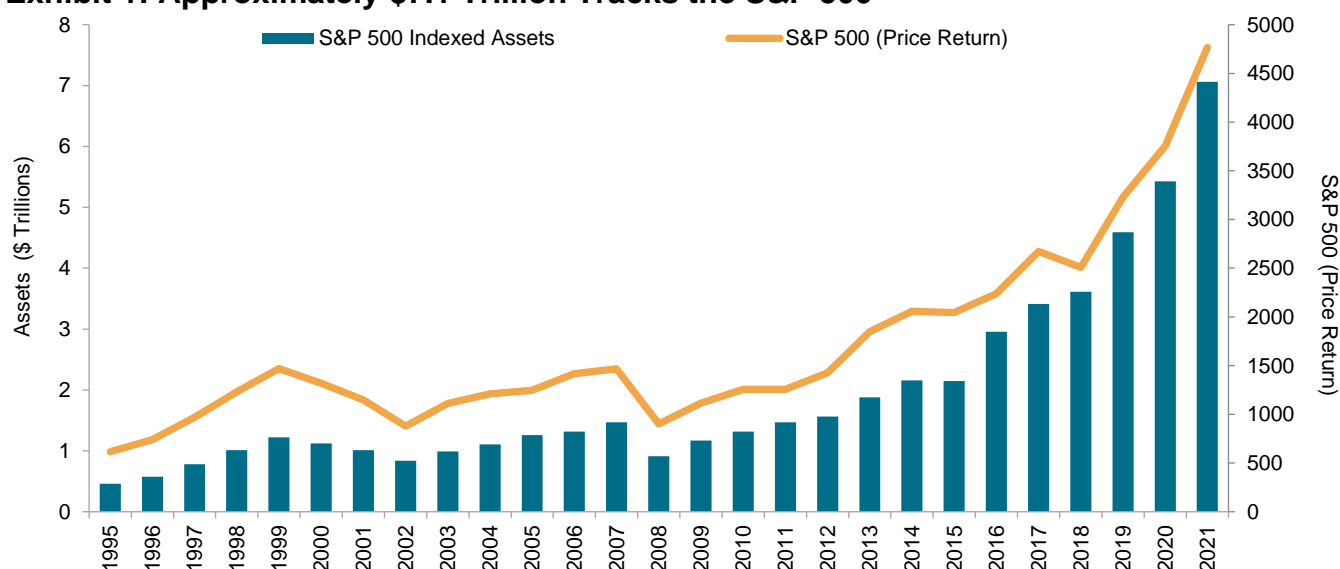
“Active investing has been subjected to increasing abuse, particularly by those whose opinions are driven by the persistent accumulation of hard data and logical arguments.”¹

- Charles D. Ellis

Executive Summary

Index funds, which hardly existed 50 years ago, now play a prominent role in global financial markets. Exhibit 1 illustrates the growth of assets tracking the **S&P 500®**, the most prominent index in the world's largest equity market, but this trend has not been limited to the U.S. (nor to equities).

Exhibit 1: Approximately \$7.1 Trillion Tracks the S&P 500



Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

¹ Ellis, Charles D., “[In Defense of Active Investing](#),” *Financial Analysts Journal*, July/August 2015.

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The growth of indexing has been driven by the inability of active managers, in aggregate, to outperform passive benchmarks. This is not a new development—it was first reported 90 years ago. **The rise of passive management is the consequence of active performance shortfalls.**

These shortfalls can be attributed to three factors:

- The professionalization of investment management;
- Cost; and
- The skewness of stock returns.

Since each of these factors is likely to persist, the advantage of indexing over active management is likely to persist as well.

Some Important Observations

Until the early 1970s, there were no index funds; all assets were managed actively. The subsequent shift of assets from active to passive management, as illustrated in Exhibit 1, surely must count as one of the most important developments in modern financial history. Our intent in this paper is to suggest why this transformation came about; the answer, in our view, lies both in a *set of observations* and in the subsequent *explanation* of those observations.

The observations to which we refer are designed to document the degree to which active managers are able to add value to the performance of passive benchmarks. The earliest study of active management of which we're aware dates to 1932. Alfred Cowles examined the stock selection records of both financial services and fire insurance companies (what we would today call property and casualty insurers). Both sets of forecasters underperformed the average common stock during the period Cowles examined. The same was true of a number of financial publications that made predictions of the overall level of the stock market. For all these cases, "statistical tests...failed to demonstrate that they exhibited skill, and indicated that they more probably were [the] results of chance."²

Forty years later, by the 1970s, financial markets had grown dramatically as professionals, rather than the retail investors of Cowles' day, had come to dominate asset management and trading. The growth of professional investment management led to the formation of a number of performance measurement services. Their verdict, by mid-decade, was ominous: "Disagreeable data are streaming out of the computers of Becker securities and Merrill Lynch and all the other performance measurement firms. Over and over and over again, these facts and figures inform us that investment managers are failing to perform. Not only are the

² Cowles 3rd, Alfred, "[Can Stock Market Forecasters Forecast?](#)" *Econometrica*, July 1933. See also Edwards, Tim, "[Eighty-one years later...](#)" S&P Dow Jones Indices, Dec. 19, 2013.

nation's leading portfolio managers failing to produce positive absolute rates of return...but they are also failing to produce positive relative rates of return. Contrary to their oft articulated goal of outperforming the market averages, **investment managers are not beating the market: The market is beating them.**"³

In reaction to such data, some academics and forward-looking professionals began to argue for the establishment of a new kind of investment vehicle. **Since active managers were generally not able to beat the market, why not buy the market instead?** Such a vehicle—an index fund—would buy stocks not because a manager thought they had above-average performance potential, but simply because they were there. "What we need is a no-load, minimum-management-fee mutual fund that simply buys the hundreds of stocks making up the broad stock-market averages and does no trading from security to security in an attempt to catch the winners."⁴

Nobel laureate Paul Samuelson suggested in 1974 that "some large foundation should set up an in-house portfolio that tracks the S&P 500 Index—if only for the purpose of setting up a naïve model against which their in-house gunslingers can measure their prowess."⁵ Samuelson's evaluation of active management was acerbic: "...[M]ost portfolio decision makers should go out of business—take up plumbing, teach Greek, or help produce the annual GNP by serving as corporate executives."

Samuelson's wish for an S&P 500 index fund was granted, more rapidly than he expected, as index funds became available, even to retail investors, in the 1970s.⁶ Although many things have changed in the intervening 50 years, the performance data that animated Ellis, Malkiel, and Samuelson have been remarkably robust. Our firm's SPIVA® reports have documented the performance of U.S. managers since 2001 (with shorter histories for other markets), and the results have been almost uniformly discouraging for the advocates of active management. Exhibit 2 illustrates the most recent update.⁷

³ Ellis, Charles D., "[The Loser's Game](#)," *Financial Analysts Journal*, July/August 1975. Emphasis added.

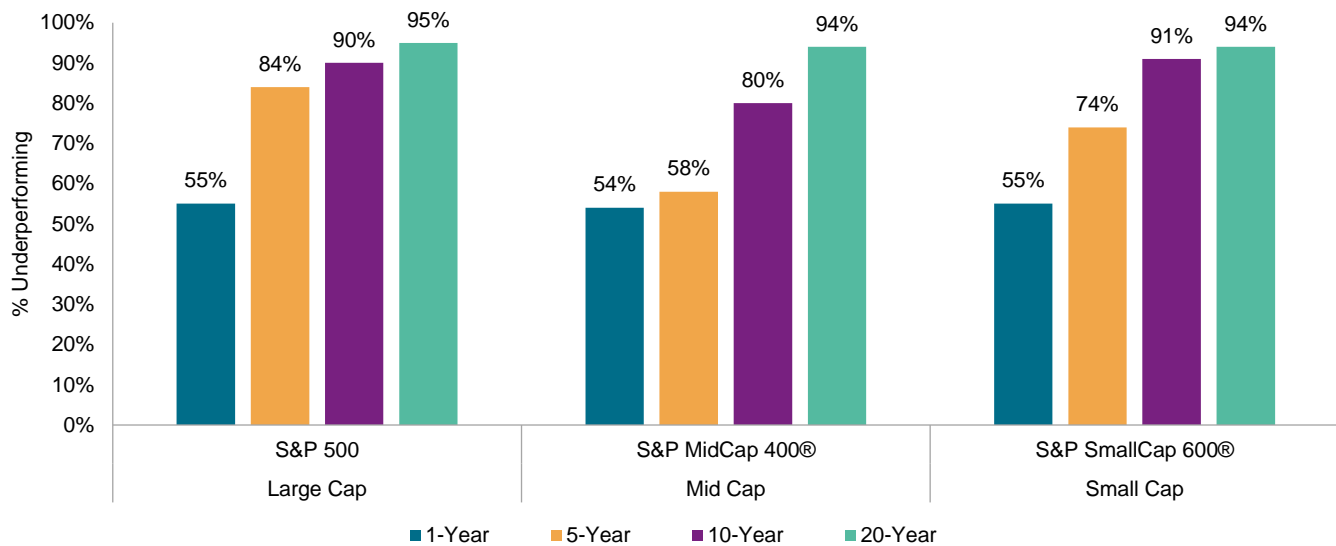
⁴ Malkiel, Burton G., *A Random Walk Down Wall Street*, first edition, 1973, p. 226.

⁵ Samuelson, Paul A., "[Challenge to judgment](#)," *Journal of Portfolio Management*, Fall 1974. Interestingly, John Bogle credited this article with inspiring him to start the first index mutual fund at Vanguard in 1976.

⁶ Bogle, John C., "[The Professor, the Student, and the Index Fund](#)," Sept. 6, 2011.

⁷ Edwards, Tim et al., "[SPIVA U.S. Mid-Year 2022 Scorecard](#)," S&P Dow Jones Indices, September 2022.

Exhibit 2: Most Active Managers Underperformed Most of the Time



Source: S&P Dow Jones Indices LLC. Data as of June 30, 2022. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Most active funds underperformed benchmarks appropriate to their investment style. This is not unusual—in fact, over the history of the SPIVA database, underperformance is far more common than not. Moreover, **extending the time horizon makes active management look worse, not better.** This is consistent with the view that the true odds of outperformance are less than even. Consider: if the likelihood of outperformance were greater than 50%, we would expect to see fluctuations above and below 50% over short periods, but over time we would expect to see more outperformers than underperformers. In fact, we observe the opposite.

This effect is analogous to the roulette wheel in a casino. A lucky player may win on a small number of spins, but over many spins, the house's advantage is insurmountable. The data suggest that an active equity manager is like a roulette player—he has a small probability of winning in the short run, but an overwhelming probability of losing in the long run.⁸

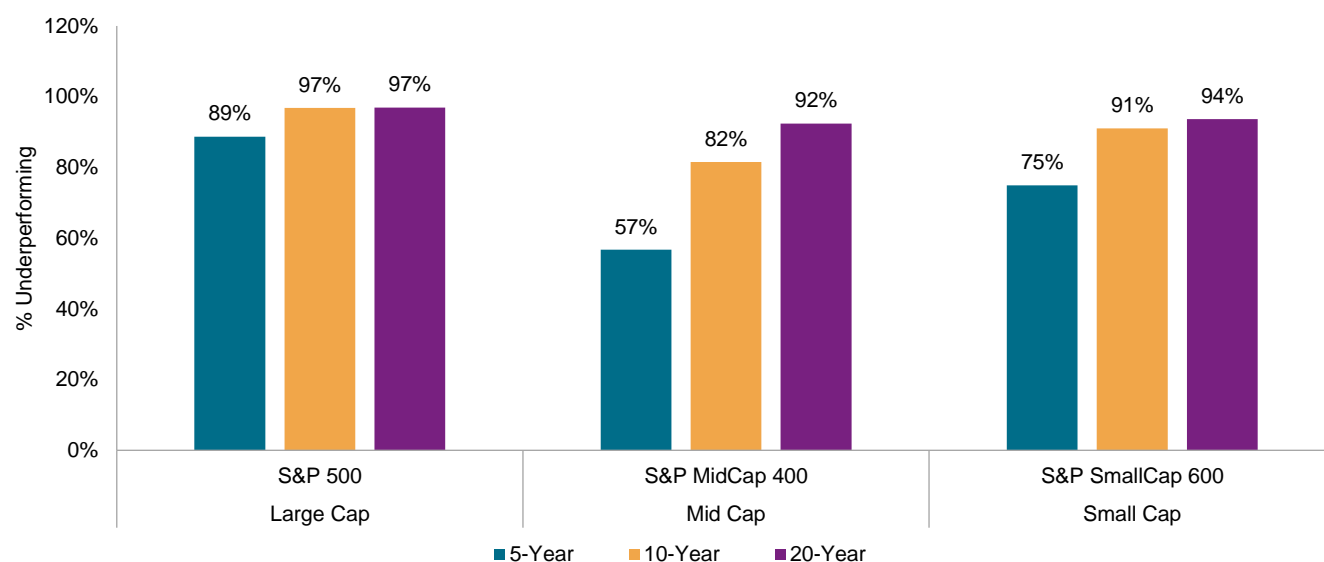
Moreover, it's notable that **active managers of mid- and small-cap portfolios have had just as much difficulty as their large-cap peers.** This is not an intuitive conclusion; in fact it's sometimes argued that investors should index large-cap, well-researched, relatively "efficient" stocks and use active managers in the less well-covered mid- and small-cap arenas. At first blush, this is plausible, and it's certainly true that research coverage is tilted toward larger companies. However, the scarcity of research coverage implies only that the likelihood of *misvaluation* is higher among smaller companies. There's no reason to assume that the likelihood of *undervaluation* is higher, and it's the assumption of undervaluation that's critical to the argument for active management of smaller stocks.

⁸ Readers who prefer basketball to roulette should consult Lazzara, Craig, "[Shooting Hoops with Michael Jordan: An Allegory](#)," S&P Dow Jones Indices, Sept. 29, 2022.

We would argue, in fact, that overvaluation is at least as likely as undervaluation among smaller names. A manager who thinks he sees undervaluation can readily take advantage of it by buying the undervalued stock. A manager who thinks he sees overvaluation can sell his position down to zero. After that, he's helpless—unless he wants to borrow stock in order to short it. However, smaller names can often be quite difficult (or expensive) to borrow. This implies that small-cap overvaluation is likely to be more persistent than undervaluation; it's simply harder to get rid of it.⁹

Active managers sometimes argue that even if they are unsuccessful in outperforming indices, they nonetheless benefit their clients by managing portfolio volatility and therefore improving risk-adjusted returns. In general, this premise is incorrect—most active portfolios are *more* volatile than the benchmarks against which they're compared.¹⁰ SPIVA data on risk-adjusted performance are therefore comparably grim, as Exhibit 3 shows.

Exhibit 3: Most Active Managers Underperformed Most of the Time, Even Adjusting for Risk



Source: S&P Dow Jones Indices LLC. Data as of June 30, 2022. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

The SPIVA database focuses on mutual funds, net of fees, and critics sometimes argue that manager underperformance is entirely due to fee levels. It's also fair to observe that institutional asset owners have substantial bargaining power, resulting in lower fees and potentially better performance outcomes than mutual fund investors realize. **These**

⁹ While there's little evidence of stock selection skill *within* the mid- and small-cap universe, rotation *across* capitalization segments can sometimes improve active results. For example, if a manager benchmarked against the S&P 500 tilts toward mid caps in a year when mid caps outperform, his results might benefit from that tilt. See Ganti, Anu R. and Craig J. Lazzara, "[Style Bias and Active Performance](#)," S&P Dow Jones Indices, March 2021.

¹⁰ Edwards, Tim, Craig J. Lazzara, and Luca Ramotti, "[The Volatility of Active Management](#)," S&P Dow Jones Indices, September 2016.

objections are accurate, but not decisive. Even ignoring fees altogether, Exhibit 4 shows that the majority of active managers still underperformed.¹¹

Exhibit 4: Ignoring Fees Mitigated, but Did Not Eliminate, Active Underperformance

Fund Category	Comparison Index	Percentage of Underperforming U.S. Equity Funds			
		Mutual Funds (Net)	Mutual Funds (Gross)	Institutional Accounts (Net)	Institutional Accounts (Gross)
Large Cap	S&P 500	83	78	83	78
Mid Cap	S&P MidCap 400	72	63	68	63
Small Cap	S&P SmallCap 600	79	71	77	69

Source: S&P Dow Jones Indices LLC, CRSP, eVestment Alliance. Data for 10-year period ending Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes. Gross-of-fee data adds each fund's expense ratio to its net performance.

If *most* active managers underperform, it's nonetheless theoretically possible that *some* managers can be consistently above average. Despite his cynicism, Samuelson acknowledged as much: "People differ in their heights, pulchritude, and acidity. Why not their P.Q. or performance quotient?"¹²

When an active manager beats his benchmark, how can we tell whether that result is a product of genuine skill or merely of good luck? One answer is that **genuine skill is likely to persist, while luck is random and soon dissipates.** Therefore one key measure of active management skill is the *consistency* of a fund's outperformance. SPIVA data let us test for this possibility in a number of ways.¹³

Exhibit 5 uses 10 years of SPIVA history. We sorted managers into quartiles based on the first five years' performance, and then examined quartile rankings for the second five years.

Exhibit 5: Top Quartile Performance Did Not Persist

Fund Category	% Repeating in Top Quartile	% Moving to Bottom Quartile
Large Cap	27.1	5.0
Mid Cap	1.5	14.9
Small Cap	0.9	22.8

Source: S&P Dow Jones Indices LLC. Data for 10-year period ending Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

If performance were completely random, we'd expect 25% of the top-quartile managers from the first five years to be in the top quartile for the second five years. That's more or less what happened for large-cap managers, but their mid- and small-cap counterparts fell well short of

¹¹ Edwards, Tim et al., "[SPIVA Institutional Scorecard Year-End 2021](#)," S&P Dow Jones Indices, September 2022.

¹² Samuelson, *op. cit.*, p 19.

¹³ Liu, Berlinda, "[U.S. Persistence Scorecard Year-end 2021](#)," S&P Dow Jones Indices, April 2022.

the mark. Indeed, mid- and small-cap top-quartile managers were more likely to move to the bottom quartile than they were to remain at the top.¹⁴

The evidence, over many years, is clear:

- Most active managers underperform most of the time.
- Outperformance, when it occurs, tends not to persist.

These facts cry out for an explanation! Active managers are smart people, they're well educated, they work hard, and they're motivated (financially and otherwise) to a fault. Despite all that, why do they fail more often than they succeed?

The Explanation: Why Indexing “Works”

The most important thing to realize about SPIVA (and related) results is that **they are not a coincidence**. Active underperformance happens for a set of readily identifiable reasons, of which we'll mention three: professionalization, cost, and skewness.

The Professionalization of Investment Management

Investment management is a zero-sum game. There is no *natural* source of outperformance, or “alpha;” the only source of outperformance for above-average investors is the underperformance of below-average investors. “Investors” in this sense encompass not just professional money managers, but any owner of securities. These owners may well be undiversified owners of concentrated positions who are not aware that they're in a zero-sum game. Indeed, they may not be aware that there's a game at all.

For example, imagine a conservative retail investor who owns a few high-quality, dividend-paying electric utility companies because she values their relatively secure income stream. Such an investor is a potential source of alpha for every professional manager who is underweight utilities. Similarly, every corporate executive who owns a concentrated position in his own company's stock is a potential source of alpha for every professional manager who is underweight that industry or company. If professional investors represent a relatively small fraction of a market's assets, such undiversified amateurs can be an important source of the professionals' outperformance. **The outperformance garnered by professionals, in other words, could be provided by the underperformance of amateurs.**¹⁵

However, if professionals become the dominant force in a market and amateur investors become relatively less important, the game changes—**the professionals are now competing**

¹⁴ See also Lazzara, Craig, “[Getting What You Pay For](#),” S&P Dow Jones Indices, Oct. 27, 2017.

¹⁵ Mauboussin, Michael J. and Dan Callahan, “[Alpha and the Paradox of Skill](#),” Credit Suisse, July 15, 2013, p. 7.

against each other. In the U.S., professionals had come to dominate by the mid-1970s, as Ellis' 1975 assessment makes clear: "Gifted, determined, ambitious professionals have come into investment management in such large numbers during the past 30 years that it may no longer be feasible for any of them to profit from the errors of all the others sufficiently often and by sufficient magnitude to beat the market averages."¹⁶ This is why indexing began in the 1970s—not 20 years sooner or 20 years later.

It's important in this discussion to distinguish between *absolute* and *relative* skill. Absolute skill in active investing requires managers to access information and to form, based on some combination of fundamental, technical, and quantitative metrics, an assessment of the difference between a stock's current price and its true value. To criticize active managers' performance is by no means to impugn the absolute level of their skill.¹⁷ But managers don't operate in a vacuum. Absolute skill may be *necessary* for success as an active manager, but it is not *sufficient*. It's relative skill that determines outperformance and underperformance.¹⁸ It's not enough to be *good* at valuing companies; a successful active manager has to be *better* than his competitors.

If investment management is not unique in this respect, it at least is highly unusual. An average physician may be able to cure most illnesses, and an average lawyer may be a perfectly adequate source of legal representation for most needs.¹⁹ However, investment management is different: an average investment manager is of no value at all. "Investing is unusual, in that the collective judgement of all the participants (weighted by the amount of money they control) is...available for free....**If a professional investor is to earn excess returns for his client, being good is insufficient—he must be exceptional.**"²⁰

The difficulty is compounded when we consider what happens when assets move from active managers to index funds. Presumably, **the least capable active managers lose the most assets.** This means that the quality of the surviving active managers rises as assets move to passive alternatives, making the competition for outperformance tougher.²¹ Active managers thus find it increasingly difficult to stay above average as index funds cull the weakest competitors.²²

¹⁶ Ellis (1975), *op. cit.*, p.19.

¹⁷ See Pastor, Lubos, Robert F. Stambaugh, and Lucian A. Taylor, "[Scale and Skill in Active Management](#)," February 2014.

¹⁸ Swedroe, Larry, "[Has The Rise of Indexing Made Active Outperformance Even Harder](#)," The Evidence-Based Investor, October 2022.

¹⁹ Indeed, below-average physicians and lawyers may still be sources of considerable value to their clients.

²⁰ Arbit, Hal, "[The Nature of the Game](#)," *Journal of Portfolio Management*, Fall 1981, pp. 5-9. Emphasis added.

²¹ Huang, Da, "[Passive Investing, Mutual Fund Skill, and Market Efficiency](#)," August 2022.

²² An analogy of which we're fond: The lion catches the slowest zebra in the herd. After that, the speed of the herd goes up. It will be more challenging for the surviving zebras to be above average tomorrow. *Mutatis mutandis*, the same principle applies to active managers.

Cost

Low cost is the simplest explanation for the success of passive management. Imagine a market in which all assets are actively managed, and into which a passive alternative, *deus ex machina*, is inserted. This passive alternative buys a pro-rata slice of every company in the market. Since the passive portfolio owns a pro-rata share of every stock's capitalization, its portfolio will be identical to the *aggregate* portfolio of the active managers. Before costs, therefore, the passive and active portfolios will have the same return.

However, active managers' costs—for research, trading, management fees, etc.—are inherently higher than those of passive managers. Thus, “properly measured, the average actively managed dollar must underperform the average passively managed dollar, net of costs. Empirical analyses that appear to refute this principle are guilty of improper measurement.”²³

To illustrate the importance of costs, consider that the average expense ratio for active U.S. equity mutual fund managers in 2021 was 0.68%, compared to only 0.06% for their passive competitors.²⁴ This difference of 62 bps offers investors an automatic advantage for choosing a passive manager versus an active one. The growing popularity of index funds, along with industry consolidation and economies of scale, has the potential to lower the costs of passive vehicles further.

Skewness

In a normal distribution, observations array symmetrically around their average value. The cross-sectional distribution of stock returns is not normal, but rather is positively skewed—i.e., the average value is typically greater than the median. We might suspect that there is a natural tendency toward skewed equity returns since a stock can only go down by 100%, while it can appreciate by much more than that. Large positive values can pull the average level of the distribution above its midpoint.

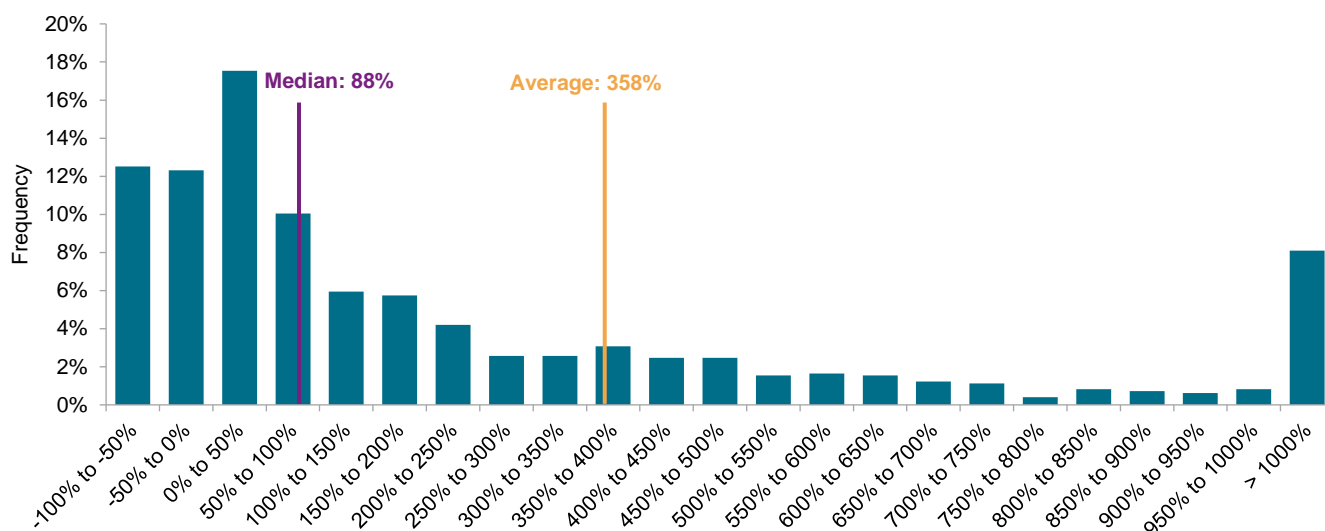
We observe this in Exhibit 6, which plots the distribution of cumulative returns for the constituent stocks of the S&P 500 for the past 20 years. The median return was 88%, far less than the arithmetic average of 358%. Importantly, the positive skew in equity returns illustrated by the exhibit is not simply an artifact of a small number of highly skewed years: in the 31 years between 1991 and 2021, the average S&P 500 stock outperformed the median 27 times.²⁵

²³ Sharpe, William F., “[The Arithmetic of Active Management](#),” *Financial Analysts Journal*, January/February 1991, p. 7-9.

²⁴ Investment Company Institute, [2022 Investment Company Fact Book](#), p. 107.

²⁵ We find similar results in other markets. The average stock outperformed the median in 19 of the last 24 years for the [S&P/TSX Composite](#), 14 of 21 years for the [S&P Europe 350®](#), 25 of 26 years for the [S&P/TOPIX 150](#), 13 of 21 years for the [S&P/ASX 200](#), and 25 of 25 years

Exhibit 6: Constituent Returns for S&P 500 Members Are Highly Skewed



Source: S&P Dow Jones Indices LLC, FactSet. Data from Dec. 31, 2001, to Dec. 31, 2021. The frequency distribution shows the returns of all S&P 500 constituents during the period of their index membership. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

If stock returns were normally distributed, a randomly chosen stock would have an even chance of delivering above-average performance. When the distribution is skewed, selection becomes much harder. Of the 975 stocks that were constituents of the S&P 500 at some point between 2002 and 2021, only 253 beat the average. The probability that a randomly chosen stock would deliver above-average performance, in other words, was 26%, not 50%. **When fewer stocks outperform, active management is harder.**

Active managers compound the natural challenges of skewed returns by their tendency to run relatively concentrated portfolios.²⁶ Exhibit 7 is a simple example of clearly skewed returns; we posit a market with five stocks, one of which dramatically outperforms the others.²⁷ We assume that at the beginning of the year, the stocks' capitalizations are identical, so that the market's return is 9%, driven by the outstanding performance of stock E.

Exhibit 7: Hypothetical Returns in a Five-Stock Market

Stock	A	B	C	D	E
Return (%)	5	5	5	5	25

Source: S&P Dow Jones Indices LLC. Table is provided for illustrative purposes.

for the [S&P Pan Asia ex-Japan BMI](#). For a longer-term perspective, see Bessembinder, Hendrik, "[Do Stocks Outperform Treasury Bills?](#)," November 2017.

²⁶ Edwards, Tim and Craig J. Lazzara, "[Fooled by Conviction](#)," S&P Dow Jones Indices, July 2016.

²⁷ This example is drawn from Heaton, J.B., Nick Polson, and Jan Hendrik Witte, "[Why Indexing Works](#)," October 2015.

We can form portfolios of various sizes from these five stocks, as shown in Exhibit 8. For example, since there are five stocks, there are five possible one-stock portfolios. Four of them underperform the market as a whole. Similarly, there are also five possible four-stock portfolios, four of which outperform the market as a whole. Since the market, on our assumptions, is up 9%, the *average* return of the portfolios is always 9%—if the market gives us 9%, it doesn't matter how we divide it. What changes is the *distribution of returns* across portfolios. **Holding more stocks increases the likelihood of outperformance.**²⁸

Exhibit 8: More Concentrated Portfolios Are More Likely to Underperform

Number of Stocks	Number of Portfolios	Average Return (%)	Probability of Outperformance (%)	Winners' Alpha (%)	Losers' Alpha (%)
1	5	9.0	20	16.0	-4.0
2	10	9.0	40	6.0	-4.0
3	10	9.0	60	2.7	-4.0
4	5	9.0	80	1.0	-4.0

Source: S&P Dow Jones Indices LLC. Table is provided for illustrative purposes.

The intuition here is simple: a manager's picks are more likely to underperform than to outperform simply because there are more underperformers than outperformers from which to choose.²⁹ If returns are positively skewed, more concentrated portfolios are less likely to hold one of the relatively small number of outperforming stocks.

Market Efficiency

Notice that we have not mentioned the notion of "market efficiency." Nobel laureate Eugene Fama defined the term as "a market in which prices always 'fully reflect' available information."³⁰ Obviously, *if* markets fully reflect available information, market prices will reflect true value, which makes security selection pointless. The challenge for advocates of the efficient markets hypothesis is that it's easy to find *ex post* evidence of times when value and price did not correspond—for example, during the technology bubble of the late 1990s.

But while the assumption of efficiency may be *sufficient* to make the case for index funds, the assumption is not *necessary*. Even if we acknowledge that prices may not always reflect fair value, the factors we've identified—professionalization, cost, and skewness—will continue to challenge active managers relentlessly.

²⁸ See also Livnat, Joshua, Gavin Smith, and Martin B. Tarlie, "[Modified IR As a Predictor of Fund Performance](#)," October 2015, for evidence that among comparably skillful active managers, greater diversification is an indicator of better future performance.

²⁹ The challenge for stock pickers is exacerbated when the outperformers include the largest stocks in the index. See Chan, Fei Mei and Craig J. Lazzara, "[Degrees of Difficulty: Indications of Active Success](#)," S&P Dow Jones Indices, January 2022, pp. 8-9.

³⁰ Fama, Eugene F., "[Efficient Capital Markets: A Review of Theory and Empirical Work](#)," *Journal of Finance*, May 1970, pp. 383-417.

The challenge is relentless because the factors which account for underperformance are robust and sustainable. Investment management will stay professionalized, active costs will always exceed index costs, and, in most years, most stocks underperform the average return in most markets.

Where Are We Now?

Estimating the extent to which U.S. asset owners have adopted passive management can be an arduous and frustrating task. Calculating the market share of passive assets under management requires us to get both the numerator (passive AUM) and denominator (total market capitalization) correct, and much commentary is mistaken about one or both. Moreover, since data on exchange-traded and mutual funds are relatively easy to find, other pools of assets are sometimes ignored as they are not publicly reported.³¹

We can, of course, make a reasonably accurate estimate of assets tracking our own indices.³² At the end of 2021, approximately \$7.1 trillion was indexed to the S&P 500; those assets account for 17% of the S&P 500's float-adjusted market capitalization.³³ But 17% obviously understates the importance of indexing, since most of the stocks in the S&P 500 are also included in our competitors' large-cap U.S. indices.

A recent attempt to gauge the size of the passive market using trading data around index changes resulted in an "estimate that passive investors held at least 37.8% of the U.S. stock market."³⁴ While a useful contrast to our own work, this estimate assumes that every trader at the close on an index reconstitution day is a "strict end-of-day indexer;" in fact some such trading may come from active funds proactively managing their tracking error.

If we assume that the correct answer is certainly higher than 17% but probably lower than 38%, we can justify an estimate that **approximately 25%-35% of total float-adjusted U.S. market capitalization is held by passive index trackers.**³⁵ More precision is probably impossible, and we at least can stand on the principle that "it is better to be roughly right than exactly wrong."³⁶

In Exhibit 9, we use data from our own indices to estimate the cumulative savings that investors have achieved from passive investing. At the end of 2021, approximately \$7.4 trillion tracked the S&P 500, S&P 400®, and S&P 600®. We previously noted the 62 bps current fee

³¹ See, e.g. Ganti, Anu, "[Don't Shoot the Messenger](#)," S&P Dow Jones Indices, Sept. 27, 2017.

³² [S&P Dow Jones Indices Annual Survey of Assets](#) as of Dec. 31, 2021.

³³ Ganti, Anu, "[The Importance of Being Indexed](#)," S&P Dow Jones Indices, October 2022.

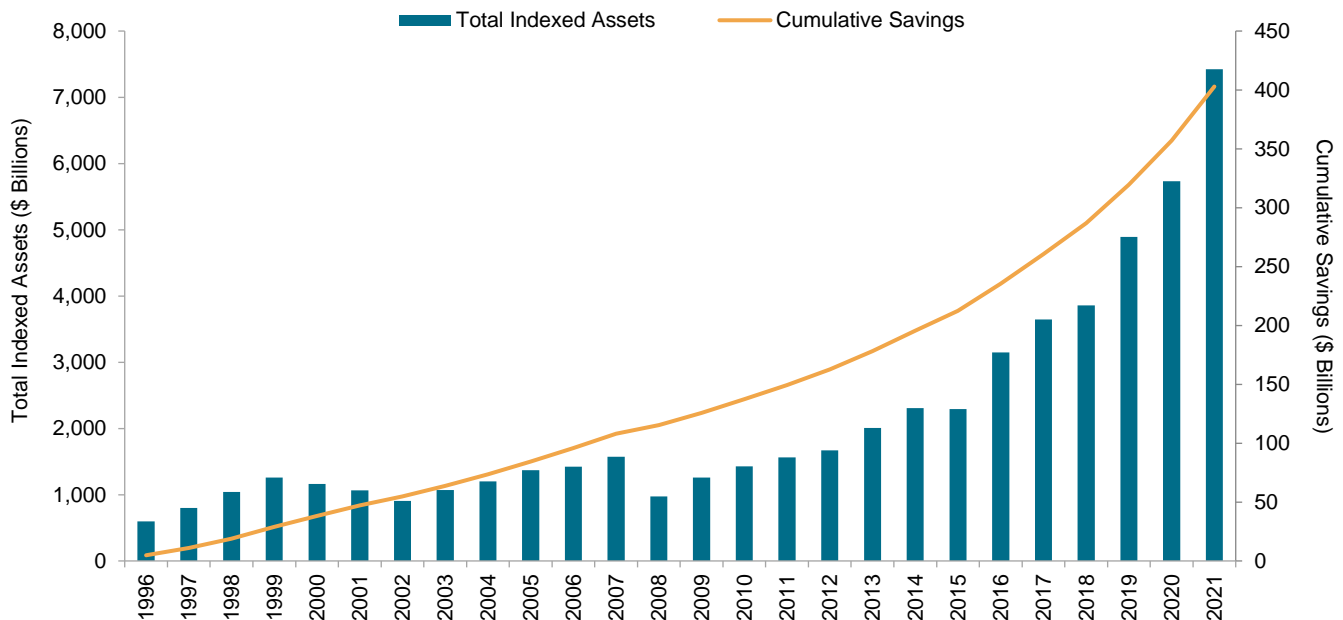
³⁴ Chincio, Alex and Marco Sammon, "[The Passive-Ownership Share Is Double What You Think It Is](#)," September 2022.

³⁵ Wigglesworth, Robin, "[How passive are markets, actually?](#)," *Financial Times*, Sept. 4, 2022.

³⁶ This sentiment is often attributed to Lord Keynes, but in fact originated with his older contemporary [Carveth Read](#) in *Logic: Deductive and Inductive*, 1898.

differential between active and passive U.S. mutual fund managers, and historically the gap has been much higher.³⁷ Multiplying the current fee differential by \$7.1 trillion tells us that **passive management, for the S&P 500 alone, saves investors \$43.8 billion annually. Cumulatively, and across the large-, mid-, and small-cap spaces, the savings amount to \$403 billion over the past 26 years.**³⁸

Exhibit 9: Cumulative Savings from Passive Amount to Approximately \$403 Billion



Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

It would, of course, be penny wise and pound foolish for investors to save a few basis points on management fees if those savings caused them to miss an even larger increment of active performance, but as we've already seen, it isn't because they don't. **These savings accrue entirely to the benefit of index fund investors.**

Final Thoughts

Fifty years ago, index funds amounted to a negligible share of the equity market. Edward Johnson of Fidelity spoke for most active managers of that time when he said (criticizing the nascent Vanguard), "I can't believe that the great mass of investors are going to be satisfied with receiving just average returns."³⁹ Ironically, of course, **above-average returns are**

³⁷ Investment Company Institute, *op. cit.*, p. 107.

³⁸ Ganti, Anu, "[The Importance of Being Indexed](#)," *op. cit.*

³⁹ Swedroe, Larry, "[Passive Investing Won't Break Market](#)," Sept. 6, 2016.

exactly what index investors have received—and what most active investors have missed.

If active managers had delivered above-average performance, the index fund would not have been invented, and the passive investment industry would not exist today. Evidence of active underperformance is nearly a century old, and we've suggested some of the reasons—professionalization, cost, and skewness—that explain it. Since these reasons seem unlikely to reverse or even to abate, it's likely that the growth of indexing will continue.

The shift to index funds, in other words, has been and continues to be driven by the persistent underperformance of active managers. **To argue otherwise is to misunderstand the most important thing about it.**

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