



THOUGHT LEADERSHIP

Active & Passive Investing: Navigating Cycles and Hidden Risks

Helping Build Solid
Investment Foundations
February 2024



FOUNDRY
PARTNERS

Traders Magazine interviewed a famous investor in 2014 and asked:

“Given the proliferation of indexes, how should advisors weigh various index funds against each other?”

The Response *“I think it’s gone much too far. Most of them are not worth the powder to blow them to hell.”* - (see at end of paper for author of quote)¹

Mark Roach

Mario Tufano, CFA

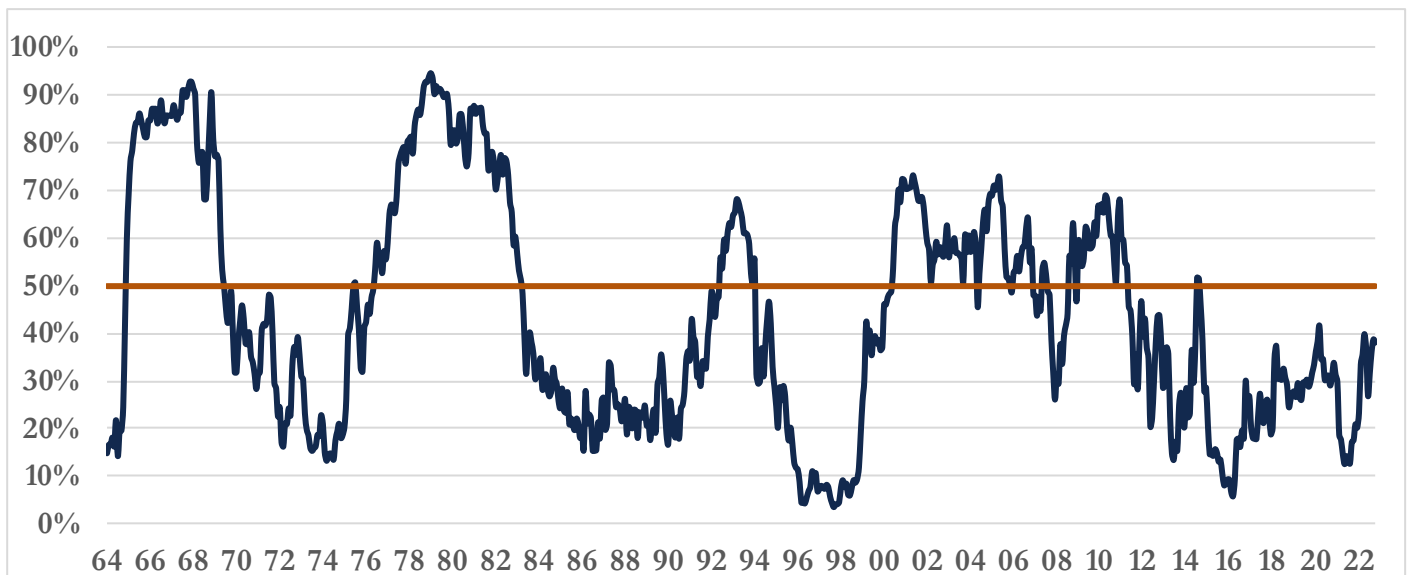
Patrick Coleman

This thought piece does not aim to assess the merits of passive or active investing, neither does it seek to opine on which one is better. Both strategies play crucial roles in an investor’s portfolio, depending on specific circumstances and desired objectives. Instead, the goal is to objectively analyze the performance of these strategies over the past six decades using the CRSP (Center for Research in Security Prices) Survivor-Bias-Free US Mutual Fund Database. The paper also delves into the current state of the ETF (exchange traded fund) industry, which has become a proxy for passive investing, and offers some nuanced behavioral observations.

Exhibit 1: Active Management’s Hit Rate (based on rolling 3-year performance) vs the SP500 is more cyclical than the last decade might imply.

The initial segment of this analysis explores whether there is a noticeable pattern in the performance comparison between active fund managers² and index funds, examining data back to 1962. Spoiler Alert: there is, as depicted in Exhibit 1 below.

The subsequent section examines the definition of passive investing, assessing whether the prevailing composition of certain widely used indices and ETFs that track those indices aligns with the initial definition. We posit that some do not and that it has led to hidden risks. We also gauge the level of active elements within the aggregate ETF complex pondering whether the landscape has morphed into a more "closet active" or "quasi-passive" industry – a metaphorical wolf in sheep’s clothing.



Source: Data from the CRSP database, Foundry Partners LLC, FactSet; as of 09/30/23

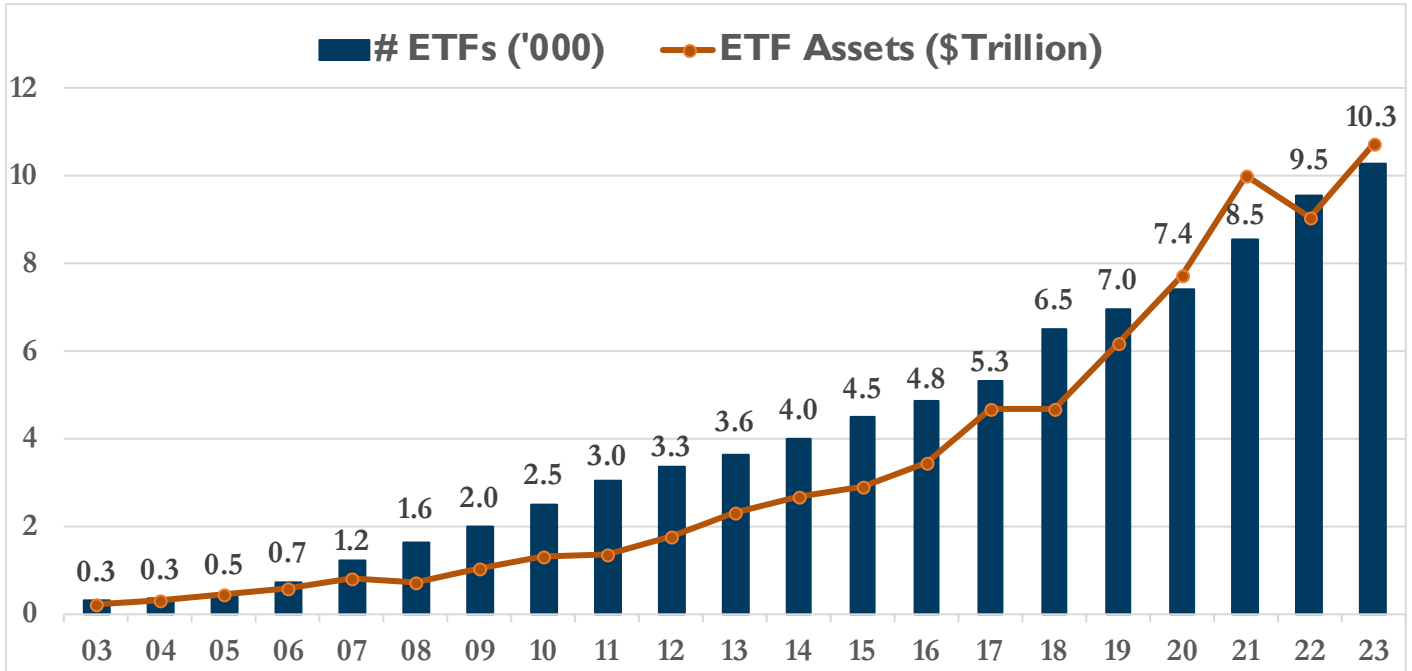
Periods above the rust colored line represent times when the majority of active managers outperform the S&P 500.

¹ [Trader's Magazine 2014](#)

² From 1962 to 1998 we use the CRSP Style Code of ED that captures most equity domestic funds. From 1999 to 2023 we use the Lipper Fund Classification codes of EIEI, ELCC, G, LCCE, LCGE, LCVE, MCCE, MCGE, MCVE, MLCE, MLGE, MLVE, SCCE, SCGE, SCVE capturing most active equity domestic funds.

The first exchange-traded fund (ETF) was introduced on January 22nd of 1993, marking a significant development in the investment landscape. It was dubbed “Spiders” due to its acronym SPDRs (for Standard & Poor's Depository Receipts) and mirrored the performance of the S&P 500. ETFs have evolved over the years into a fundamental tool for investors³, especially in implementing passive strategies. Exhibit 2 illustrates the global growth of the ETF complex, while Exhibit 3 showcases the remarkable ascent in the United States.

Exhibit 2: Over 10,000 ETFs exist globally with assets exceeding \$10 Trillion (22% CAGR since 2003).



Source: ETFGI.COM; as of November 2023

Exhibit 3: There are also over 3,000 ETFs in the United States alone, representing \$7 Trillion in assets (24% CAGR since 2000).

				CAGR	CAGR
United States	2000	2010	2023	Since 2000	Since 2010
# of ETFs	79	920	3,076	17.3%	9.7%
ETF Assets (\$B)	56	928	7,628	23.8%	17.6%

Source: ICI, as of November 2023

The concept of passive investing was not a novel idea in 1993; its roots date back almost 30 years to the 1960s with the emergence of Eugene Fama's Efficient Market Hypothesis (EMH)⁴. Even Benjamin Graham, a revered figure among active investors, endorsed what essentially amounted to index investing⁵ in a 1974 address he gave to a gathering of pension executives:

“More and more institutions are likely to realize that they cannot expect better than market-average results from their equity portfolios unless they have the advantage of better-than-average financial and security analysis. ¶ In turn this might lead to using the S&P 500 or 425 lists as actual portfolios⁶.”

³ Benefits include low fees, tax advantages, liquidity, and the ability to achieve diversification through a single trade.

⁴The theory argues that “asset prices reflect all available information” making it difficult to “beat the market” -Wikipedia

⁵ Jason Zweig, *Wall Street Journal*, “At least as early as 1963, the great financial analyst Benjamin Graham had advocated the creation of what we know today as the index fund.”

⁶ Jason Zweig, “Would Benjamin Graham Have Hated Index Funds?”

Two years later, in 1976, Vanguard revolutionized the industry when it introduced the first ever low-cost index fund tracking the performance of the S&P 500 - sparking the passive versus active discourse that has persisted across generations.

Numerous reports have consistently highlighted the lackluster relative performance of active funds, net of fees, particularly in the last decade⁷. This raises the question: "Is the performance of active management over the past decade a genuine reflection of their skills, or is it part of a recurring market cycle that has occurred before?"

To test this hypothesis, we employed the CRSP (Center for Research in Security Prices) Survivor-Bias-Free US Mutual Fund Database dating back to 1962. This comprehensive database includes monthly return figures (net of fees⁸) for each fund existing during that period. For further details and the methodology used to clean the data, please refer to the Appendix section.

We partnered with a graduate student from Villanova University pursuing a master's of science degree in finance to ensure an unbiased approach. This collaboration involved a separate examination of the data alongside our analysis.

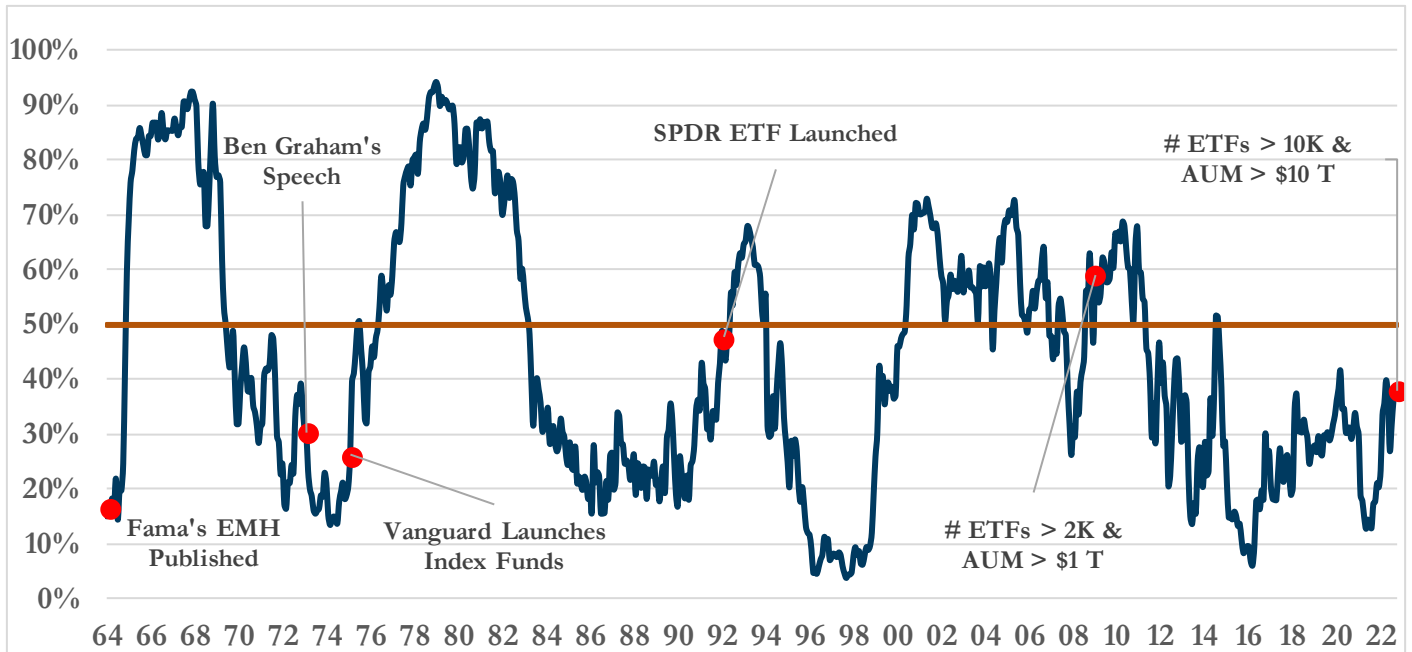
Upon conducting a comprehensive investigation from both perspectives, we arrived at the following key observations:

1. There is evident cyclicity in the performance relationship between active and index funds.
2. Active management appears to do better when the concentration of performance is not heavily dependent on a few stocks.

In Exhibit 4 below, we examined the rolling 3-year monthly return figures for each active fund (as defined in footnote 2 on page 1) versus the S&P 500⁹. This analysis aimed to identify the number of funds outperforming the market over a three-year period. A threshold of above 50% (rust line in chart below) indicates the effectiveness of active management and below 50% suggests otherwise. We call this measure "Active Hit Rate."

⁷ See Morningstar's Active vs Passive Barometer and Standard and Poor's SPIVA

Exhibit 4: The Passive vs Active debate spans decades.



Source: Data from the CRSP database, Foundry Partners LLC, FactSet; as of 09/30/23

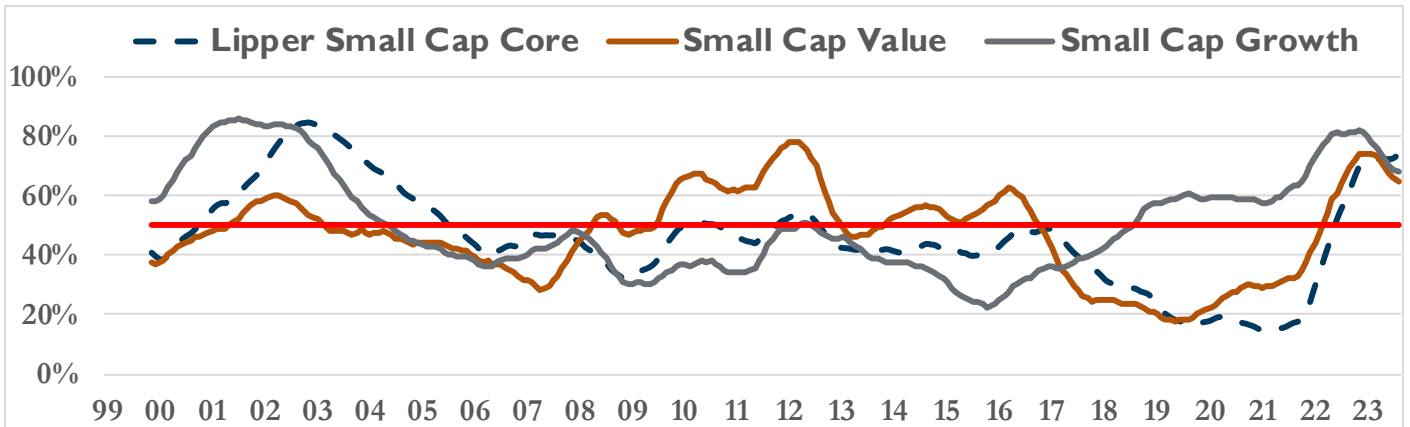
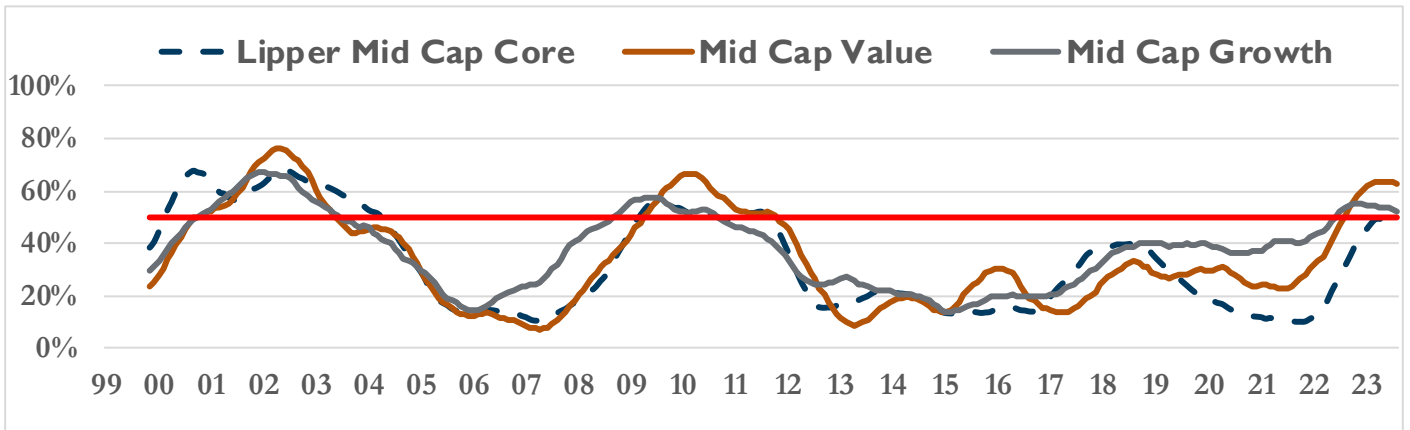
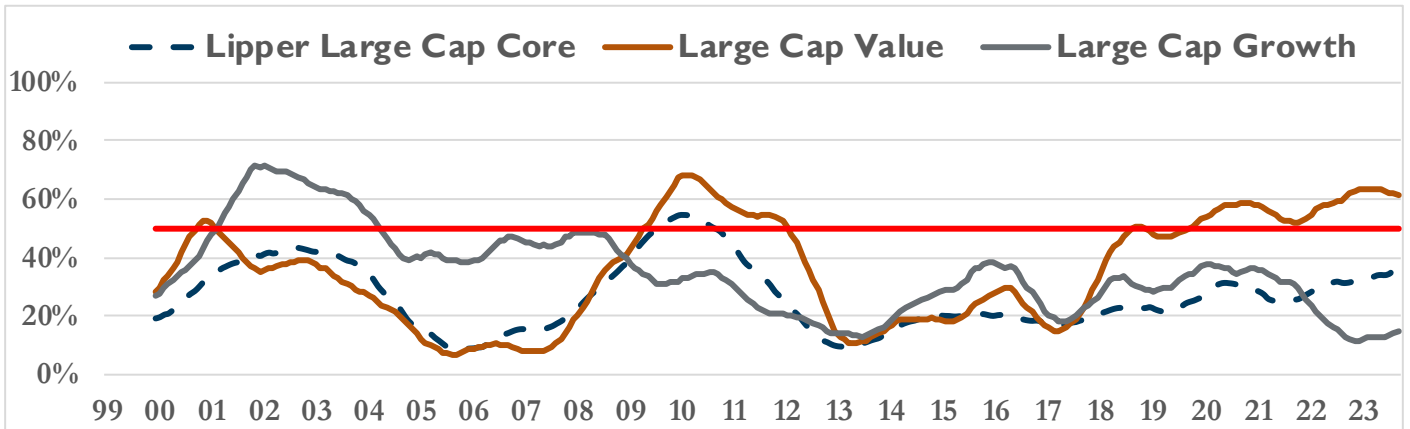
⁸ "Monthly returns values are calculated as a change in NAV including reinvested dividends from one period to the next. NAVs are net of all management expenses and 12b-fees. Front and rear load fees are excluded from the calculation of NAV and therefore do not impact the calculation of returns." -from CRSP Survivor-Bias-Free US Mutual Fund Guide

⁹ We utilize the S&P 500 due to its extensive performance track record and its status as the most widely used index for market measurement, representing a substantial portion of ETF assets.

The limitation of this straight forward analysis lies in its inability to evaluate the magnitude of performance (both upside participation and downside protection) and the strategic selection of top-performing managers. Taking these factors into account could significantly enhance the results. It's important to recognize that favorable times for the average manager might translate to exceptional times for an outstanding manager.

In Exhibits 5, 6 & 7, we removed any style or size bias by comparing large cap, mid cap, and small cap funds with their respective style benchmarks¹⁰. The analysis, limited to data from 1999 onwards due to the constraints of the Lipper Classification variable, reveals a similar cyclical relationship. Furthermore, it suggests that optimal results are influenced by the time period and style selected (growth, value or core).

Exhibits 5, 6, & 7: The Active Hit Rate (based on rolling 3Y performance) for Large Cap, Mid Cap, & Small Cap versus their respective Russell Benchmarks since 1999.



Source: Data from the CRSP database, Foundry Partners LLC, FactSet; as of 09/30/23

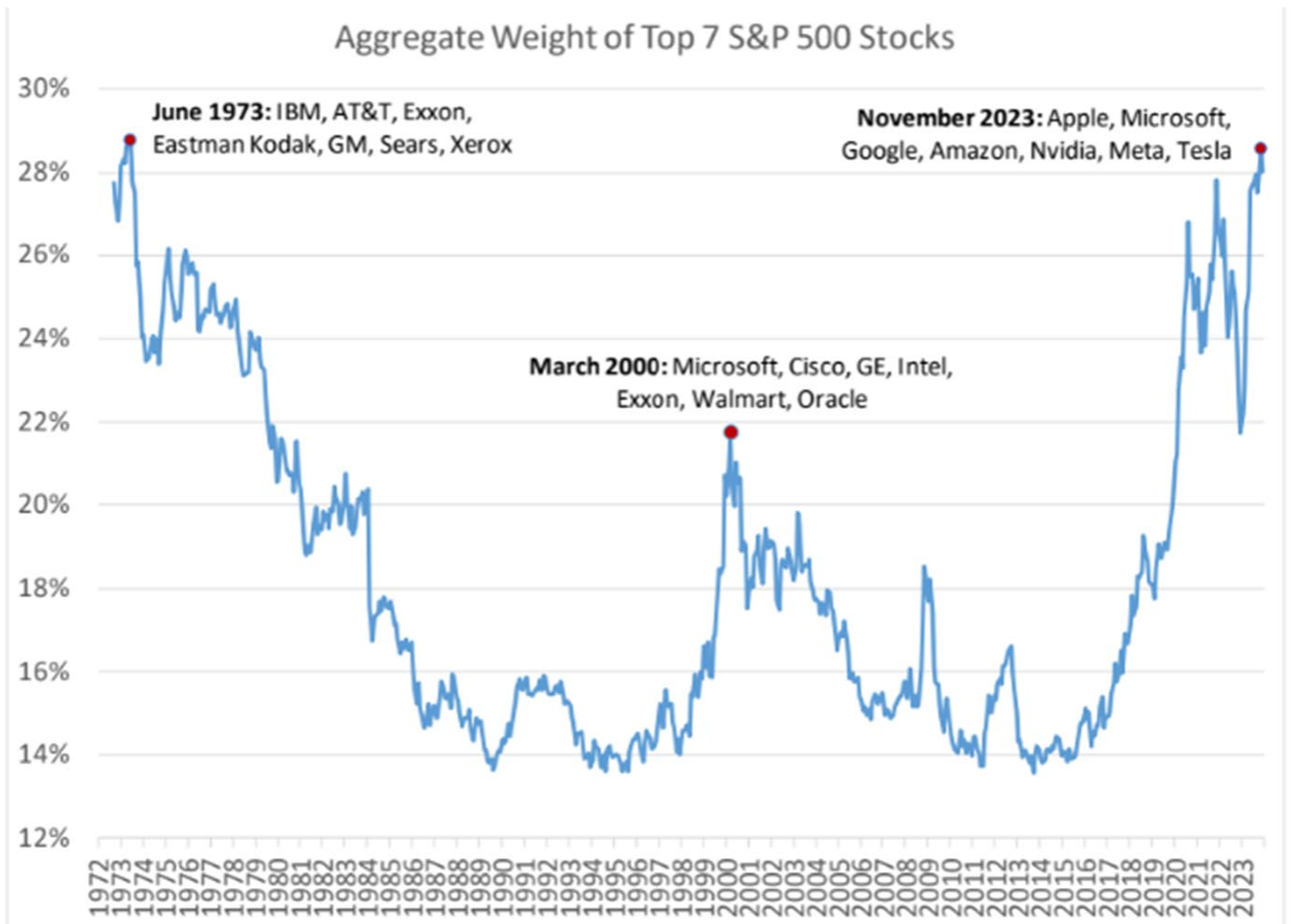
¹⁰We utilize the Lipper Classification codes in the CRSP Database to categorize funds based upon style and size and then compare their performance versus their corresponding Russell Benchmarks.

The 2010s presented significant challenges for actively managed funds, although small-cap managers experienced slightly better outcomes. The convergence of a zero-interest-rate policy, contributing to the rise of negative-earning/low-quality companies, and an exuberant atmosphere fueled by a technological revolution (marked by the dominance of FANGs and the Magnificent 7 stocks) created headwinds. We delved into some of these dynamics in our December 2022 piece titled [“Is Quality Investing Back in Vogue.”](#)

The cyclical nature observed in the performance of active, as illustrated in the preceding exhibits, appears to be influenced by a variety of factors, each period reflecting the unique macro environment at the time. We initially considered periods of value and quality underperformance as potential contributors to active underperformance. Our findings, however, revealed a weak correlation¹¹.

Nevertheless, we did observe an interesting point when examining concentration peaks within the index. In Exhibit 8 below, we showcase a chart from Furey Research that tracks the cumulative weight of the top seven stocks in the S&P 500 over time. The current concentration surpasses the levels observed during the late '90s Tech Boom and rivals the market dynamics of the Nifty 50 stocks in the early '70s. Historically, active management demonstrated significant relative outperformance following these concentration peaks (As Exhibit 9 on the next page illustrates). Not only were these periods of outperformance notable, as delineated in the ovals, but they lasted for approximately 8-10 years.

Exhibit 8: The concentration of stocks in the S&P 500 rivals the early 70s.

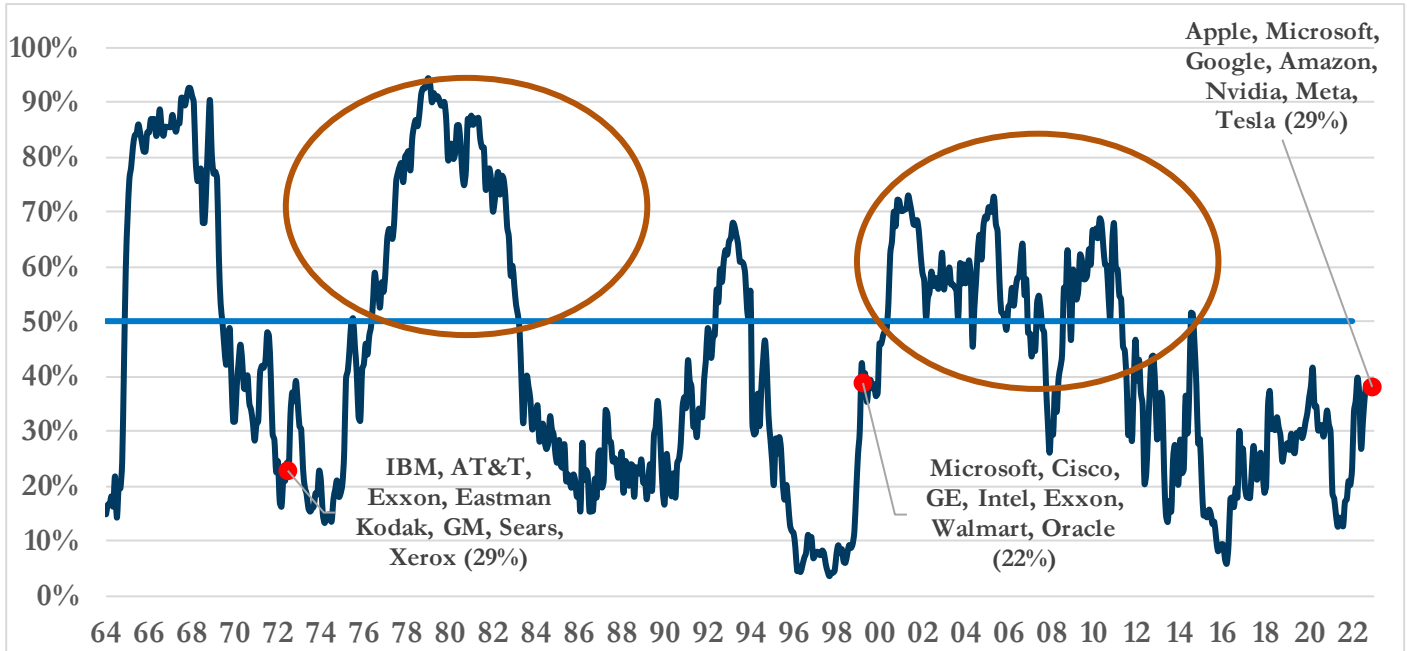


Source: FRP, FactSet; as of 12/29/23

Source: Furey Research; as of 12/31/2023

¹¹ We conducted an analysis using the French Database, where we compared the relative returns of stocks with High to Low Earnings-to-Price (Value vs Growth) and High to Low Operating Profit (Quality vs Junk) over a rolling 3-year period against the Active Hit Rate.

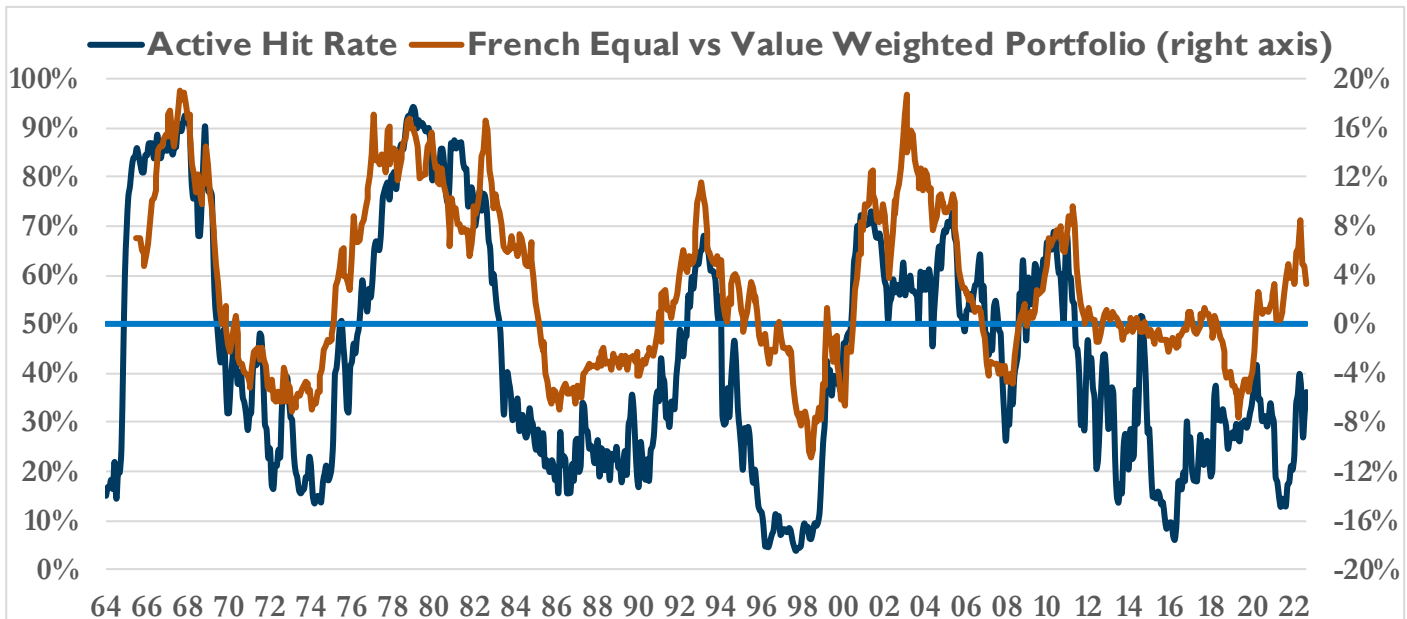
Exhibit 9: After periods of high concentration Active Hit Rate improves in the following decade.



Source: Furey Research, Data from the CRSP database, Foundry Partners LLC, FactSet; as of 09/30/23

This correlation becomes apparent when examining the rolling three-year performance difference between an equal-weighted portfolio and market-capitalization weighted portfolio. The renowned economist Kenneth French tracks various factor portfolios, providing returns for both equal weighted and value (market cap) weighted portfolios over time. We then charted this spread between the two portfolios against the Active Hit Rate as seen in Exhibit 10 below. Observations above the light blue line in Exhibit 10 below indicate a majority of managers are outperforming the S&P 500 and that an equal-weighted portfolio is outperforming a market-capitalization weighted portfolio, over a three year period (i.e. there is more breadth of performance in the market).

Exhibit 10: Active managers perform more favorably when the concentration of performance is not heavily dependent on a few stocks.



Source: Furey Research, Data from the CRSP database, Foundry Partners LLC, FactSet; as of 09/30/23

Amidst the predominant use of the S&P 500 and other indices as passive investment vehicles, a pertinent question arises: do they still adhere to the original concept of passive investing and the broader market definition envisioned during its inception? William Sharpe, in his 1991 work "The Arithmetic of Active Management," defined passive investing as an approach where an investor *"always holds every security from the market, with each represented in the same manner as in the market."* In contrast, active investing was defined as *"one who is not passive"* and *"differs from that of the passive managers at some or all times"¹².* The crucial term here is **"the market"**, with Sharpe emphasizing that the market must initially be defined using examples like "the stocks in the S&P 500 or a set of 'small' stocks."

Over time, this definition has evolved to the point where any investment tracking an index and whose holdings are traded infrequently is considered passive, regardless of the underlying stocks within that index.

We posit that this shift in understanding has given rise to a passive perception fallacy. It is increasingly clear that some indices, through their rebalancing criteria, subtly guide investors towards certain market positions. In the same vein, ETFs that replicate these indices may inadvertently embody elements traditionally associated with active management, especially when influenced by the market conditions of the time. Our intention is not to label these as "active ETFs," but to acknowledge that there can be moments when passive funds exhibit risk profiles similar to those found in active management, driven by stock concentration or the prevailing market forces.

The S&P 500 is one of the most widely used indexes for market measurement and it also represents a substantial portion of ETF assets. See Exhibit 11 below.

Exhibit 11: The top 3 ETFs by asset size in the U.S. all track the S&P 500, collectively constituting 23% of the top 100 ETFs tracked by ETFDB.com.

Index	AUM (\$billion)	% of Top 100
SPDR S&P 500 ETF Trust	\$494	9%
iShares Core S&P 500 ETF	\$388	7%
Vanguard S&P 500 ETF	\$369	7%
Vanguard Total Stock Market ETF	\$345	6%
Invesco QQQ Trust Series I	\$229	4%
Top 5	\$1,825	33%
Bottom 95	\$3,156	67%

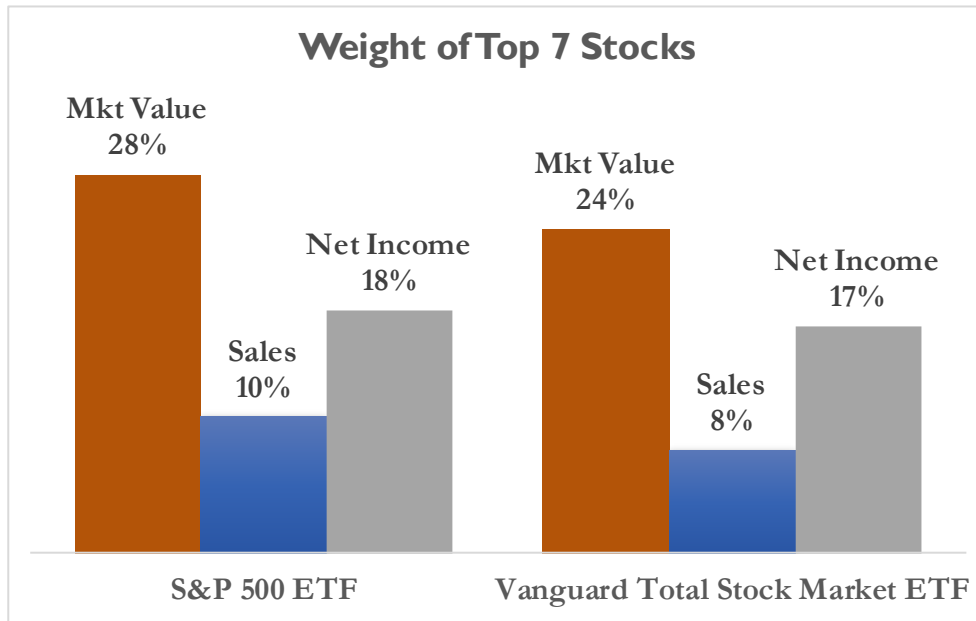
Source: ETFDB.com; As of 12/27/23

¹² "A passive investor always holds every security from the market, with each represented in the same manner as in the market. Thus if security X represents 3 per cent of the value of the securities in the market, a passive investor's portfolio will have 3 per cent of its value invested in X. Equivalently, a passive manager will hold the same percentage of the total outstanding amount of each security in the market."

An active investor is one who is not passive. His or her portfolio will differ from that of the passive managers at some or all times. Because active managers usually act on perceptions of mispricing, and because such misperceptions change relatively frequently, such managers tend to trade fairly frequently -- hence the term "active."

Exhibit 12: Is this exposure an active bet or an appropriate representation of “the market”?

The Top 7 names in the S&P 500 currently represent 28% of the index by market capitalization. Although the seven stocks in focus are undeniably remarkable companies, the concentration poses concerns, especially when considering that they represent 10% of sales and 18% of net income within the S&P 500. We see a similar dynamic within the Vanguard Total Stock Market ETF which tracks the CRSP US Total Market Index (see Exhibit 12 →). Do these concentration levels represent a hidden risk?



Source: Foundry Partners LLC, FactSet; as of 12/31/23

Similar considerations arise when examining popular small-cap indices and small cap ETFs that track the small cap market, particularly given the proliferation of negative-earning and low-quality companies due to a decade of easy money. The following exhibits underscore several points of interest:

1. The ETF tracking the S&P SmallCap 600 Index is exposed to considerable liquidity risk given its size (\$77 Billion) and number of holdings (606). As illustrated in Exhibit 13 below, 84% of its holdings require more than 20 days to sell, assuming they constituted 20% of the past six-month average trading volume.

Exhibit 13: Holding Analysis of some popular Small Cap ETFs.

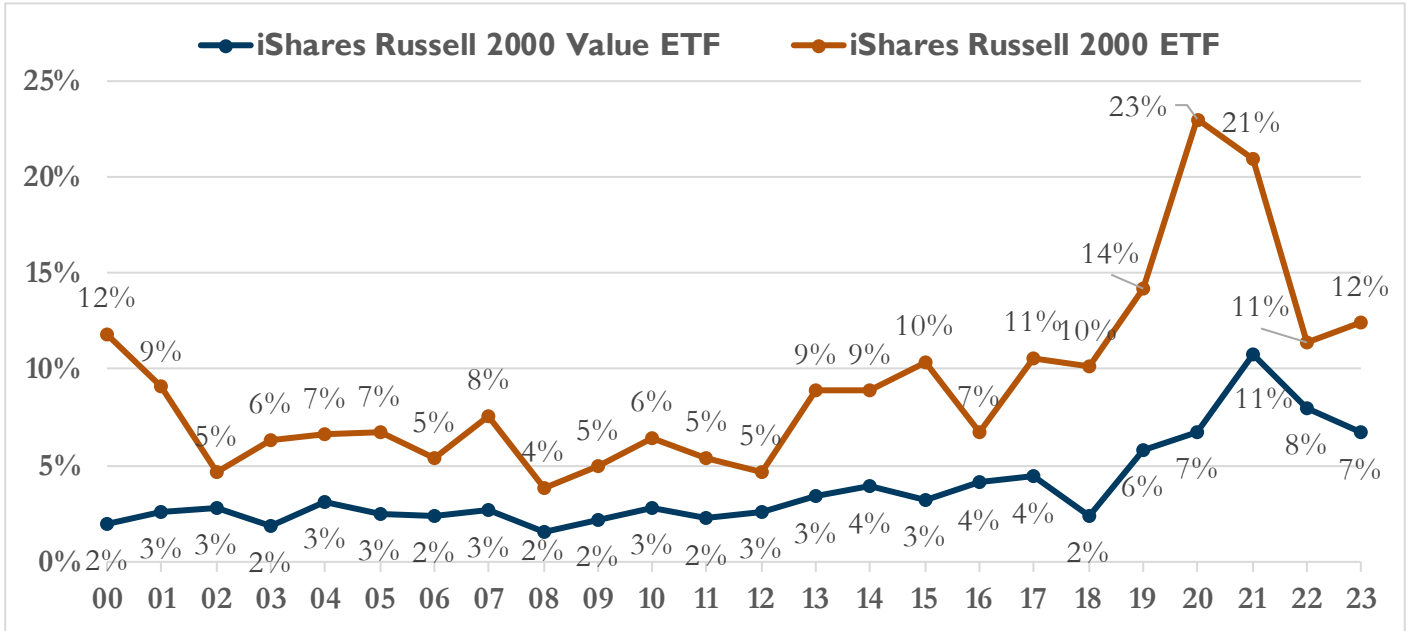
Name	AUM (\$ billion)	# of Holdings	PS > 10x	Mkt Cap >\$6B	Days to Fill >20*
Vanguard Small Cap Value ETF	\$53	853	3%	51%	6%
iShares Russell 2000 Value ETF	\$12	1,405	7%	6%	2%
iShares S&P 600 Value ETF	\$7	450	3%	0%	0%
Vanguard Small Cap ETF	\$136	1,357	10%	54%	23%
iShares Russell 2000 ETF	\$61	1,998	13%	11%	26%
iShares S&P 600 Core ETF	\$77	606	6%	7%	84%

Source: FactSet & Foundry Partners LLC; Data as of 12/31/23; Holdings as of 11/30/23

*Days to Fill is a metric used to calculate the time it would require to exit or enter a position, considering a scenario where 20% of the average six-month trailing trading volume is involved.

2. ETFs monitoring the Russell 2000 and 2000 Value Indices have observed a rise in lower-quality companies over the past decade. One method to assess this is by monitoring the percentage of stocks in the index that are trading above a 10x price to sales ratio (see Exhibit 14 below). While not a direct correlation, it serves as a gauge for speculative companies.

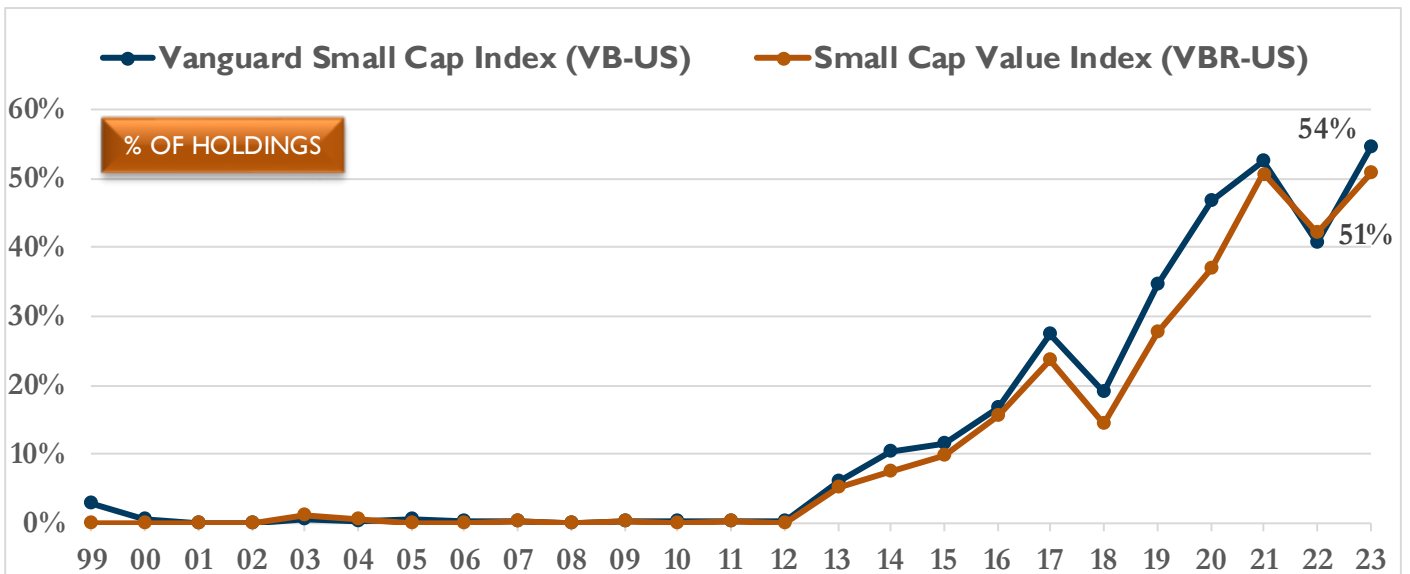
Exhibit 14



Source: FactSet & Foundry Partners LLC; as of 12/31/23

3. The Vanguard Small Cap ETFs have seen a rise in stock holdings with a market capitalization in excess of \$6 billion (see Exhibit 15 below). These levels are now five to eight times greater than those of the Russell 2000 and S&P 600 affiliated indexes (see Exhibit 13 on the previous page for the differences). Another potential hidden risk if you are unaware and seeking more traditional small-capitalization representation.

Exhibit 15



Source: FactSet & Foundry Partners LLC; Data as of 12/31/23; Holdings as of 11/30/23

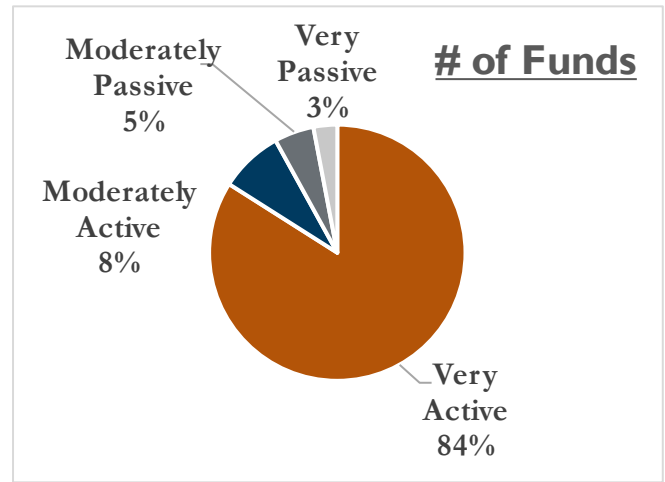
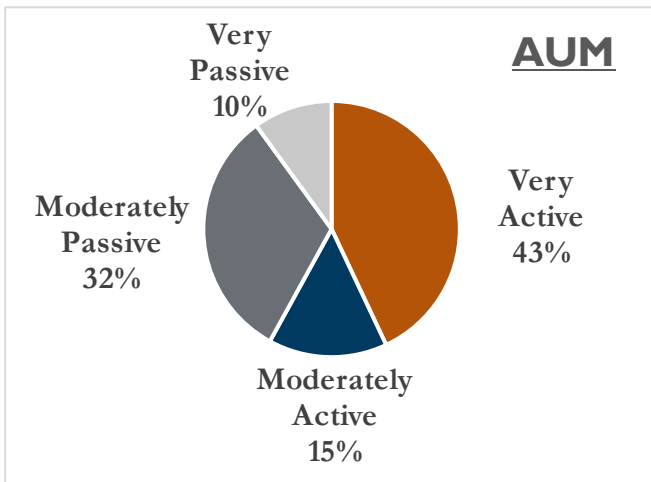
Beyond index funds, as we explore the broader ETF landscape, we find that the majority of ETFs are engaging in some type of active positioning. In a 2021 white paper, David Easley, David Michayluk, Maureen O’Hara and Talis J. Putnins explore the metamorphosis of ETFs from “*simple index products to their modern incarnation as complex investment vehicles*”¹⁵ and concludes that “*most ETFs are fairly active, this activity level is increasing over time, and more active ETFs are gaining market share at the expense of less active ETFs.*”¹⁶

In their paper, the researchers introduce an Active Index Score¹⁷, which measures an ETF's deviation from a passive strategy (either through holdings selected or the benchmark it is tracking). The ETFs are then categorized based on this score into four groups (as seen in the right column):

- **"Very Passive"**
(Activeness Index < 25%)
- **"Moderately Passive"**
(25% < Activeness Index < 50%)
- **"Moderately Active"**
(50% < Activeness Index < 75%)
- **"Very Active"**
(Activeness Index > 75%)¹⁸

The breakout in Exhibit 16 below was updated to the last quarter of 2017. It illustrates that during that period, over 58% of outstanding ETF assets were actively positioned and nearly 92% of the total number of ETFs were making an active bet.

Exhibit 16 (left and right): A wolf in sheep’s clothing?



Source: Easley, Michayluk, O’Hara, & Putnins; “The Active World of Passive Investing”, August 2021

¹⁵ Easley, Michayluk, O’Hara, & Putnins; “The Active World of Passive Investing”, August 2021, pg 1434

¹⁶ Easley, Michayluk, O’Hara, & Putnins; “The Active World of Passive Investing”, August 2021, pg 1435

¹⁸ Easley, Michayluk, O’Hara, & Putnins; “The Active World of Passive Investing”, August 2021, pg 1449

¹⁷ “Our notion of ETF activeness is the extent to which the ETF deviates from this completely passive strategy. ETFs can do so in two ways: (i) choosing a benchmark that embraces or departs from the market (active in function) and/or (ii) choosing holdings that depart from the chosen benchmark (active in form).”

“For an all-equity fund that has no leveraged or short positions, the Activeness Index lies between 0 and 1 (0% and 100%) and indicates the fraction or percentage of the fund’s portfolio that differs from the passive market benchmark.” Easley, Michayluk, O’Hara, & Putnins; “The Active World of Passive Investing”, August 2021, pg1447

Ben Graham, considered the father of value investing, acknowledged the need for a passive vehicle as early as 1974, amidst a period of lackluster performance for active management. Four decades later, the father of passive investing, expressed concerns about the widespread adoption of index funds in a 2014 interview with *Trader's Magazine*:

“I think it’s gone much too far. Most of them are not worth the powder to blow them to hell. [] There are 1,450 out of 1,500 that I just wouldn’t touch because they’re not diversified enough. Or they have some huge speculative twist to them.”

- John Bogle

In subsequent years, before he passed away, Bogle became increasingly vocal against the ETF complex. In a 2015 editorial for *Financial Times*, he told investors to “beware” of ETFs, warning that they are little more than a marketing innovation¹⁹.

In our view, exposure to passive management, whether through index funds or ETFs, should remain a key allocation for investors given the myriad of benefits. However, investing in an index fund or an ETF that tracks one as a means of achieving passivity may expose investors to risks that are not immediately apparent. Investors should be aware of the dynamics highlighted above in some of the indices chosen and meticulously evaluate the degree of active management linked to the ETFs being considered for their portfolios. In addition, there are times when skilled active managers may be better equipped to navigate turbulent market conditions.

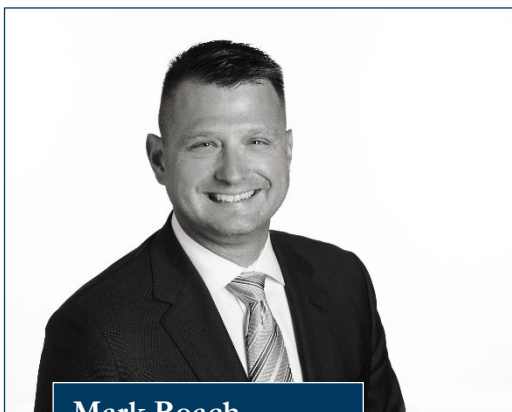


Source: [Fable of Aseop](#)

Regardless of whether one pursues a passive or active strategy, conducting comprehensive due diligence and grasping the genuine nature of an investment vehicle's underlying holdings is vital. The risk of encountering a wolf (or spider) in sheep's clothing is always present.

¹⁹ [The Financial Times Limited](#)

About The Authors:



Mark Roach

Partner

Managing Director

Portfolio Manager – Value Strategies

Mark Roach is the Lead Portfolio Manager on the Fundamental Small Cap Value team for Foundry Partners. Mark started in the industry in 1995 and has been with Foundry Partners since the company's transaction with Dreman Value Management (DVM) in June of 2016. He was with DVM from late 2006-June 20, 2016 in a similar capacity. Prior to joining DVM, Mr. Roach was a Portfolio Manager at Vaughan Nelson Investment Management, managing a small cap product from 2002 through 2006. Mr. Roach has significant experience in working with institutions, pensions and endowments and is well known in the consulting and high net worth community. Mr. Roach served as a security analyst from 1994 to 2001 for various institutions including Fifth Third Bank, Lynch, Jones & Ryan and USAA.

Mr. Roach graduated from Baldwin Wallace College with a B.A. in Business, and earned a MBA from the University of Chicago's Booth School of Business. In addition, Mr. Roach is a former board member on the Rice University Wright Fund.



Mario Tufano, CFA

Partner

Portfolio Manager – Value Strategies

Mario Tufano is a Portfolio Manager on the Fundamental Small Cap Value team for Foundry Partners. Mario started in the industry in 2002 and has been with Foundry Partners since the company's transaction with Dreman Value Management (DVM) in June of 2016. He joined DVM in 2007 as a Senior Securities Analyst and was promoted to Associate Portfolio Manager in 2010. He is responsible for research of new investment ideas as well as current portfolio holdings for the firm's Small and Mid Cap Value products. Prior to joining the firm, he was an Associate Director and Equity Analyst at UBS Investment Bank covering the Consumer Staples and Discretionary sectors.

Mr. Tufano graduated from Pennsylvania State University with a B.S. in Finance. He is a CFA charterholder and is a member of the New York Society of Security Analysts (NYSSA).

Patrick Coleman

Master's Student

Villanova School of Business

Patrick Coleman is a Master's in Finance student at the Villanova School of Business graduating in 2024.

Mr. Coleman graduated from Haverford College with a B.A. in economics where he played baseball and wrote his senior thesis on whether MLB organizations exhibited bias in their allotment of signing bonuses to the highest ranked players.

Appendix:

Exhibit 1:

INTRODUCTION TO THE CRSP SURVIVOR-BIAS-FREE US MUTUAL FUND DATABASE

The CRSP Mutual Fund Database is designed to facilitate research on the historical performance of open-ended mutual funds by using survivor-bias-free data.

The CRSP Survivor-Bias-Free US Mutual Fund Database includes a history of each mutual fund's name, investment style, fee structure, holdings, and asset allocation. Also included are monthly total returns, monthly total net assets, monthly/daily net asset values, and dividends. Additionally, schedules of rear and front load fees, asset class codes, and management company contact information are provided. All data items are for publicly traded open-end mutual funds and begin at varying times between 1962 and 2008 depending on availability. The database is updated quarterly and distributed with a monthly lag. It is delivered in ASCII and SAS formats and as a CRSPAccess database for use with our Windows interface, Sift.

FILE OVERVIEW

DATA ACCURACY FOR THE CRSP SURVIVOR-BIAS-FREE MUTUAL FUND DATABASE

The CRSP Mutual Fund files are designed for research and educational use. CRSP expends considerable resources in the ongoing effort to check and improve data quality both historically, and in each current update. Data corrections to historical information are made as errors are identified and are detailed in the release notes that accompany each data cut.

Utilizing Lipper and other data as sources for the mutual fund database, CRSP is able to do extensive data cross-checking. Quality Assurance and Quality Control procedures have been used throughout the process of updating the CRSP mutual fund database with data from new sources. This included but was not limited to developing and carrying out testing plans based on process requirements and design and assuring that all steps of the process are documented and executed accordingly. Results were independently verified by a dedicated group of database researchers which included random sample selection when appropriate.

KNOWN BIASES IN MUTUAL FUND DATA

The returns histories are sometimes duplicated in the database. For example, if a fund started in 1962 and split into four share classes in 1993, each new share class of the fund is permitted to inherit the entire return/performance history. This can create a bias when averaging returns across mutual funds.

A selection bias favoring the historical data files of the best past performing private funds that became public does exist. The SEC has recently begun permitting some funds (and eventually probably all funds) with prior returns histories as private funds to add these returns onto the beginning of their public histories. The effect of this is that only the successful private fund histories are included in the database.

FILE DEVELOPMENT AND DATA SOURCES

The CRSP Mutual Fund Database was created in 3 stages.

The original CRSP Mutual Fund Database contained open-end mutual fund data beginning December 1961 through December 1995. The database was developed by Mark M. Carhart for his 1995 dissertation submitted to the Graduate School of Business entitled, "Survivor Bias and Persistence in Mutual Fund Performance," to fill a need for lacking data coverage. Funding of the original project was provided by Eugene F. Fama and the Center for Research in Security Prices.

The Center for Research in Security Prices continued Mr. Carhart's work after his graduation. Historical data in the database were collected from printed sources, including the Fund Scope Monthly Investment Company Magazine, the Investment Dealers Digest Mutual Fund Guide, Investor's Mutual Fund Guide, the United and Babson Mutual Fund Selector, and the

Appendix Continued:

Wiesenberger Investment Companies Annual Volumes.

The data were compiled into an annual list of active mutual fund names and attributes, along with organizational history such as name changes, mergers, and liquidations. Monthly returns were calculated back to January 1962. Funds that were not in the Wiesenberger Investment Companies Annual Volumes or other printed materials were added, although instances of this were rare. As the last step in this second stage, the data were checked against original and secondary sources for any unusual entries and typographical errors.

Beginning with the December 2007 iteration of the database, current and historical data back to August of 1998 are provided electronically by Lipper and Thomson Reuters. New fund style data items have been added to the original database.

Source: CRSP.org

Exhibit 2:

Appendix: Data Processing and Performance Analysis Methodology

Scope:

Our project aimed to evaluate mutual fund performance over a 3-year rolling period, comparing it against the S&P 500 index from 1964 to 2023. Additionally, we conducted an analysis from 1999 to 2023, categorizing funds based on Lipper classifications and assessing their performance against corresponding Russell indices by calculating hit rates.

Methodology Overview:

This appendix details the methodology for processing and analyzing mutual fund data sourced from the CRSP Survivor-Bias-Free US Mutual Funds Database. The focus is on comparing fund performance with benchmarks and documenting the results effectively.

1. Data Preparation and Cleaning

The mutual fund data is read, cleaned, and preprocessed to ensure quality and consistency. This involves reading the data from a file, converting date columns to a monthly period, ensuring numeric data types for returns ('mret'), and handling missing values.

2. Performance Analysis

The performance of mutual funds is analyzed by calculating rolling returns. Specifically, a 3-year annualized return for each fund is computed based on its monthly return data. The dataset is then merged with market index data to facilitate a comparative analysis.

Appendix Continued:

3. Benchmark Comparison and Reporting

*ED' CRSP Objective Analysis:

The dataset is first focused on the 'ED' (Equity Domestic) classification from the CRSP objective code. Funds classified under 'ED' are analyzed to determine their performance against the S&P 500 3-year return benchmark. The hit rate, indicating the proportion of 'ED' funds outperforming the S&P 500, is calculated and documented.

Lipper Classes Analysis:

The analysis is then extended to Lipper classes using a similar approach. Funds are grouped by class and compared against their respective Russell benchmarks, based on size (Large Cap, Mid Cap, and Small Cap) and style (Core, Growth, and Value). Hit rates are calculated to assess the proportion of funds in each class outperforming their benchmarks.

Reporting:

Detailed reports are generated for both the 'ED' class and other Lipper classes. These reports, containing hit rates and other performance metrics, are written into an Excel file, providing a structured and comprehensive view of mutual fund performance relative to benchmarks over time.

This methodology ensures a thorough and systematic analysis of mutual fund performance, offering valuable insights into how different fund classes perform against their respective benchmarks.

About Foundry Partners:

Foundry Partners, LLC, is a boutique asset management company that specializes in active management. Established in September of 2012, the company officially began managing assets in February 2013. The firm originated after its founders, former Fifth Third Asset Management Employees, acquired the growth and value products/assets from Fifth Third Asset Management, Inc. As part of Foundry's long term plan to grow both organically and strategic acquisition, Foundry Partners added to its Cleveland office with the acquisition of the Small Cap Value team (and assets) from Dreman Value Management.

The firm was formed out of a desire to create a unique and independent atmosphere. With an average of over 25 years of investment experience per manager, our autonomous investment teams are able to offer a diverse product set while bringing the stability and confidence needed to navigate a variety of market environments.

Disclosures:

Foundry Partners, LLC (Foundry Partners) is an investment adviser registered under the Investment Advisers Act of 1940. Registration as an investment adviser does not imply any level of skill or training. The information presented in the material is general in nature and is not designed to address your investment objectives, financial situation or particular needs. Prior to making any investment decision, you should assess, or seek advice from a professional regarding whether any particular transaction is relevant or appropriate to your individual circumstances. Although taken from reliable sources, Foundry Partners cannot guarantee the accuracy of the information received from third parties.

The opinions expressed herein are those of Foundry Partners and may not actually come to pass. This information is current as of the date of this presentation and is subject to change at any time, based on market and other conditions. Index performance used throughout this presentation is intended to illustrate historical market trends and performance. Indexes are unmanaged and do not incur investment management fees. An investor is unable to invest in an index. The performance shown may not reflect a Foundry Partners portfolio. Past performance is not indicative of future results.

Charts, diagrams and graphs, by themselves, cannot be used to make investment decisions. This information does not constitute a solicitation nor an offer to buy or sell any securities.

Contact Information:

Jason Thon:

Marketing and Products Manager
jthon@foundrypartnersllc.com
612.376.2872

Chris Luke:

Director of Marketing
cluke@foundrypartnersllc.com
612.376.2862



Skylight Office Tower
1660 W Second Street, Suite 910
Cleveland, OH 44113

612.376.2800

foundrypartnersllc.com

01241_0224