The Cyclicality of Active Management

CEU Program

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CAPITAL MANAGEMENT

Outline

- Investment terms and definition of risk
- What is the difference between passive (index) funds and actively managed funds?
  - Is there anything in-between?
- Why is there cyclicality of active managers' value-added?
- Which is right for your pension plan given its goals?
  - Considerations when selecting investment vehicles and managers
- Fees and expenses

Investment Terms

- **<u>Annualized Risk</u>**: The variation of a portfolio's returns around its average return over an annual basis (measured by standard deviation).
- **<u>Value-Added</u>**: The difference between the manager's annualized return and the benchmark's (S&P 500) annualized return.
- **<u>Alpha</u>:** Is a risk-adjusted measure of Value-Added
- **<u>Tracking Error or Active Risk</u>**: The annualized standard deviation of value-added, it measures the variation of a portfolio's returns relative to the benchmark. Managers with larger active bets tend to have return streams exhibiting higher tracking error.
  - **A manager with a 5% tracking error can be expected to produce positive & negative value-added in excess of 5% in 1 out of every 3 years**.

Goals of Active Managers

- Active managers focus on generating returns that are either:
  - Positive from an Absolute perspective, such as a Hedge Fund or Alternative manager with Long/Short positions
  - Positive from a Relative perspective, such as a Long-only manager beating the return to a Passive Benchmark or Market Index (such as S&P 500, Russell 2000, MSCI World Index, etc.)

In order to generate Value-Added relative to the market, Active Managers take on tracking error and potentially higher annualized risk. Do You Understand the Risk Your Active Managers are Taking?

Risk Does Matter

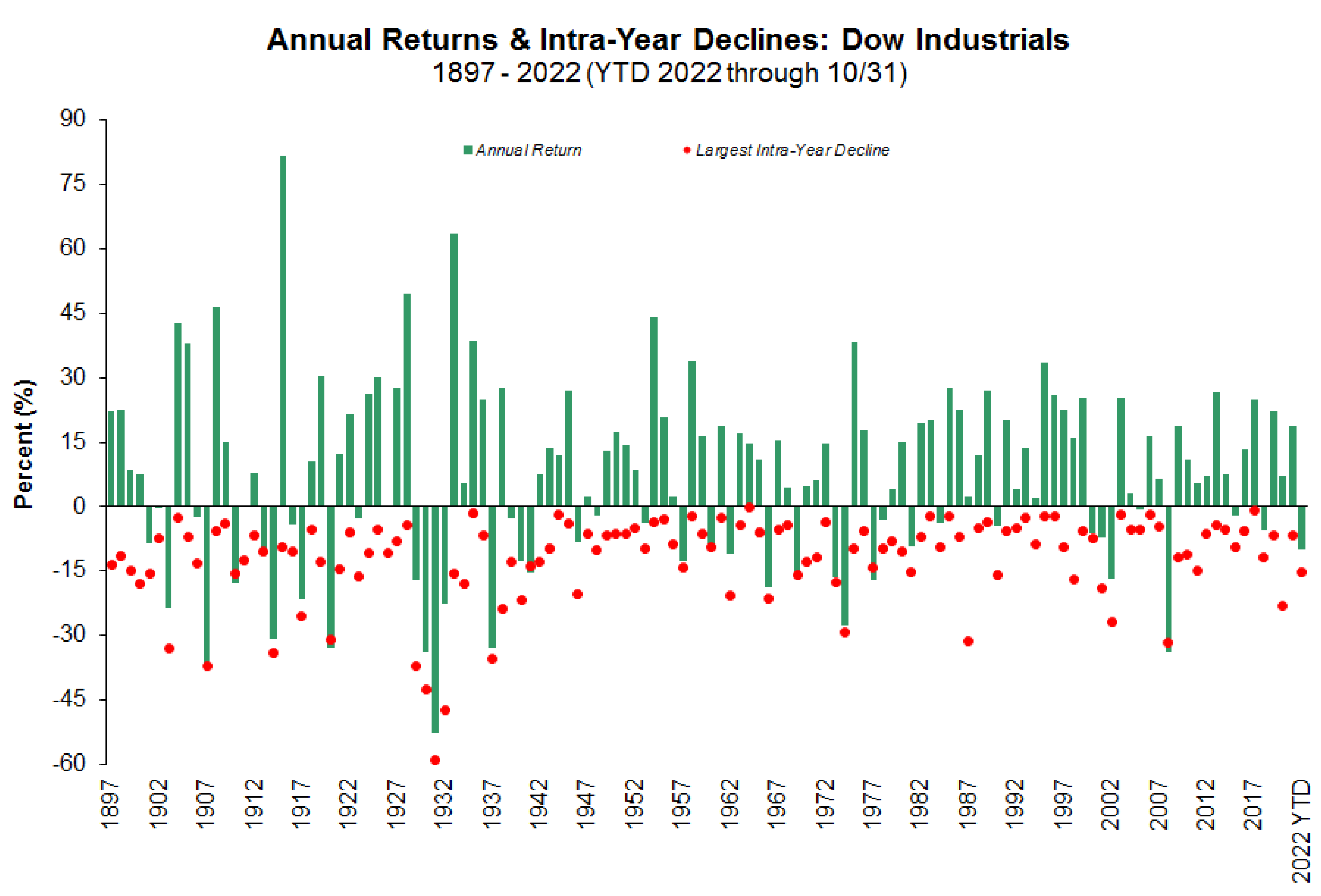
The Mathematics of Compounding

It's Tougher to Get It Back

If You Lose		Then You Need
10%		11%
20%	*Actual peak to trough decline in S&P 500 during recent bear market.*	25%
55%		122%
75%		300%
Of an investment …		To get back to where you started

The return to an investment is Asymmetric as losses have greater impact than gains – the more you lose, you more you must earn to get back your initial investment

Drawdowns



Intra-Year decline is the maximum decline up to a six-month period within a calendar year. The average decline is 12.1% during past 125 years (1897-2021), even as the average yearly return is positive (7.7%)

What is Beta?

CAPM – Capital Asset Pricing Model

$R_P - R_F = A_P + \mathbf{B_P} * (R_M - R_F)$

With:

R_P = Return to Portfolio (or Stock)

R_F = Return to T-Bill Investment

A_P = Portfolio (or Stock) Alpha

B_P = Portfolio (or Stock) Beta

R_M = Return to Market Index (S&P 500)

Both Active and Passive investments provide Beta exposure while Active Managers also try to generate Alpha while taking on similar or different Beta risk relative to a Passive index strategy

What is Beta (in words)?

- Beta measures a stock or portfolio's return variability relative to the market index
  - High Beta stocks are more volatile than the market (i.e., beta greater than 1.0)
  - Low Beta stocks are less volatile than the market (i.e., beta less than 1.0)
  - Bigger differences between the Portfolio Beta and 1.0 (the Market Beta) lead to higher Tracking Error relative to the market index
- Beta exposure can be captured through either Active or Passive Management

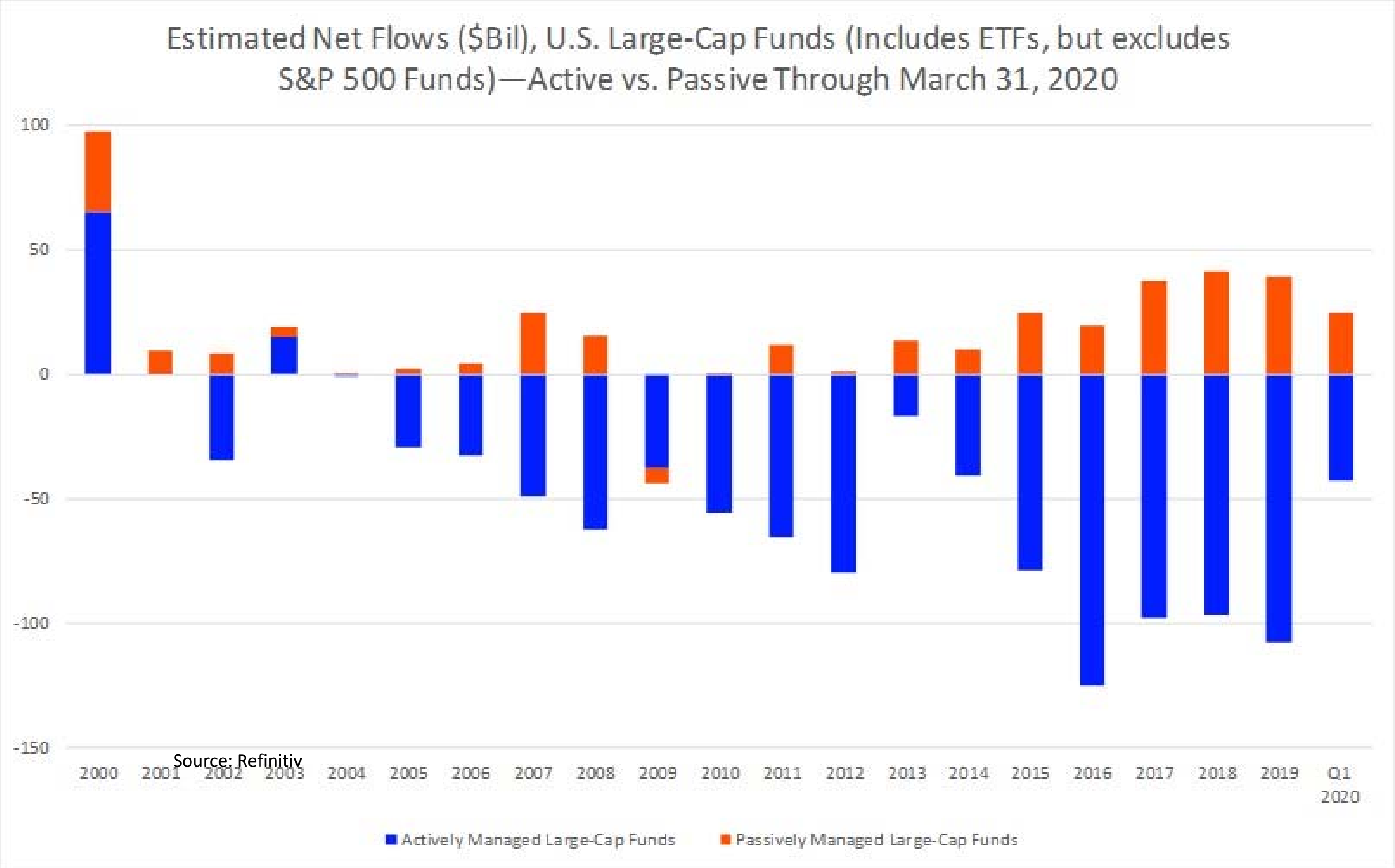
If an active manager doubles the market return with a portfolio beta of 2.0, their risk-adjusted Alpha is zero

Active Vs. Passive Management

- Passive Management provides total risk equal to the market index while Value-added is zero or slightly negative (to pay fees)
- Active Management provides total risk that could be equal to, higher or lower than the market; tracking error is always positive.
  - While Beta and Tracking Error are always positive, Value-added can be positive ☺ or negative ☹

There is no free lunch … in order to add value above the market, an active manager must accept tracking error

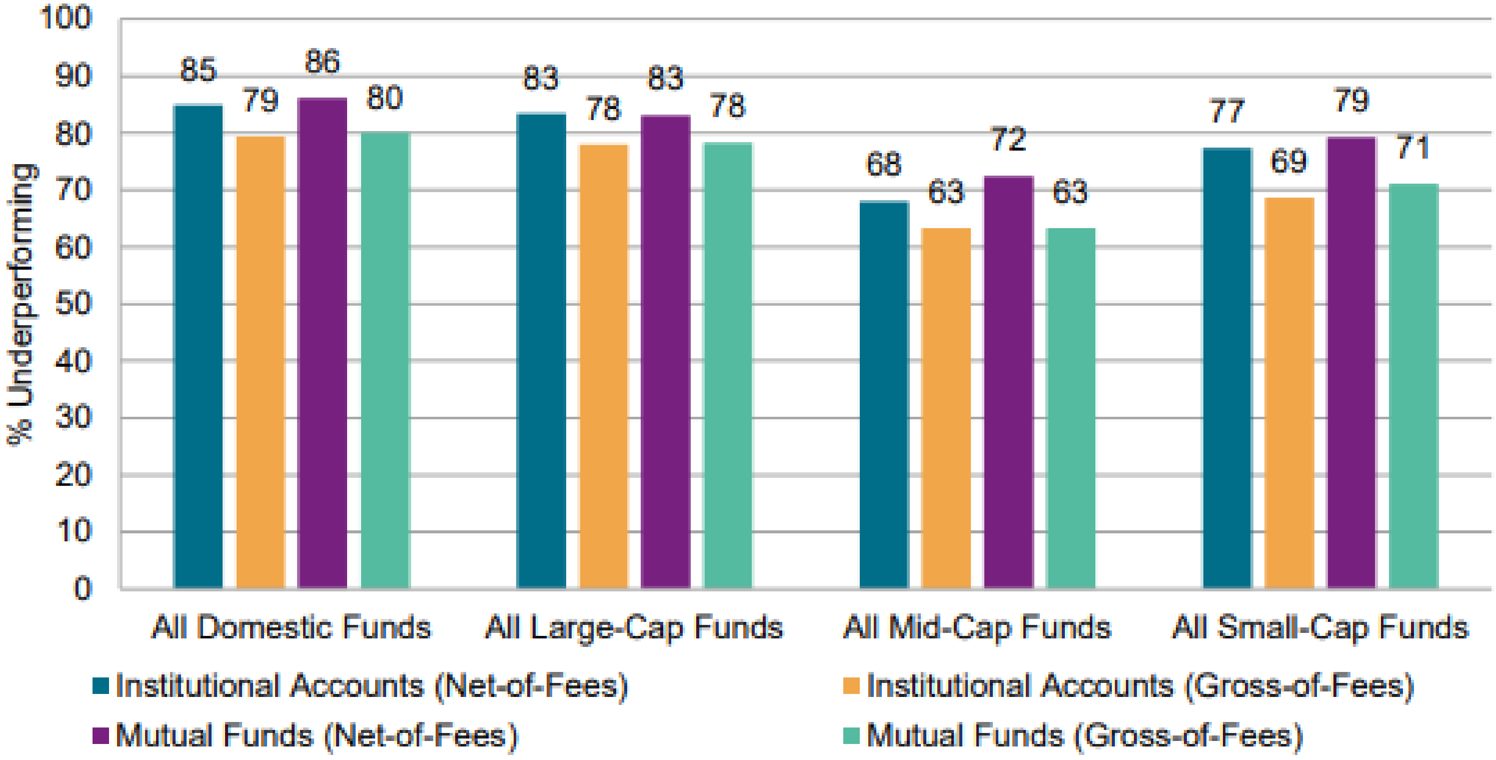
Active Vs. Passive Flows



Since 2010, net flows into passive strategies have been positive while net flows into active strategies have been negative

Underperformance Of Active Funds for Latest 10 Years

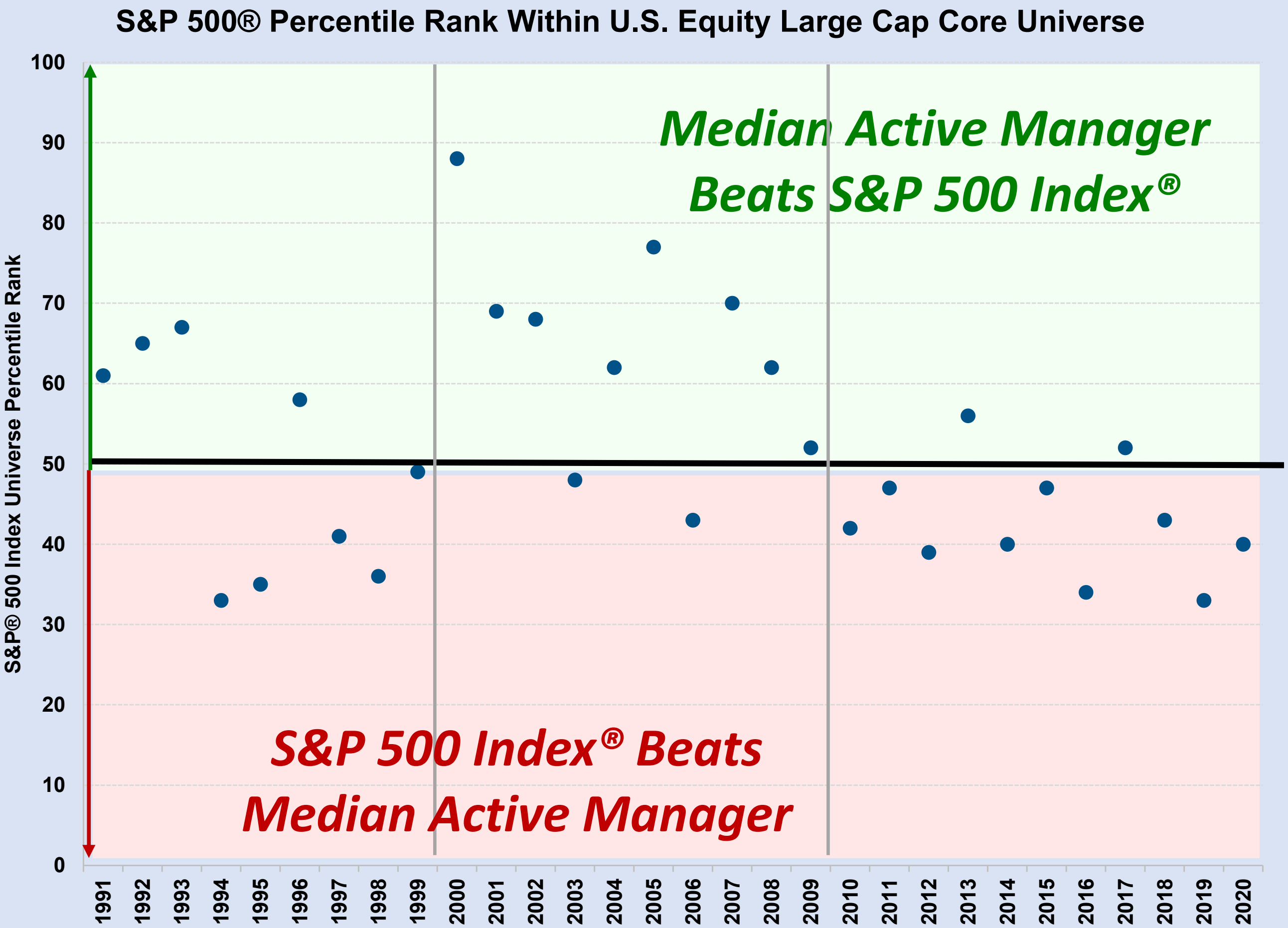
Exhibit 1: Similar Percentages of Institutional Accounts and Mutual Funds Underperformed Their Benchmarks over 10 Years



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

Value-added among active equity managers, even in the institutional space, has often been hard to find over the most recent 10 years

Active Performance Cyclicality
A Tale of Three Distinct Decades



The Median Active Manager has beaten the S&P 500® Index in 53% of the last 30 years but trailed in 9 of 11 most recent years

Source: eVestment Alliance

Active Performance Cyclicality

- Nearly all outperforming active equity funds experienced drawdowns relative to peers & benchmarks over 1-, 3-, and 5-year periods
- 8 of 10 outperformers had at least one five-year period in bottom peer quartile.
- Half of outperformers underperformed by at least 20%; Recovery from largest drawdowns often took more than 3 years.
- Unfortunately -- survey (State Street 2016) shows 89% of allocation decision makers would seek replacement managers after just 2 years of underperformance.

Patience is key with Active Management; It is hard!

Tidmore & Hon, Journal of Investing (2021)

What Drives Active Manager Value-Added?

- Market Breadth – the percentage of stocks out-performing the market

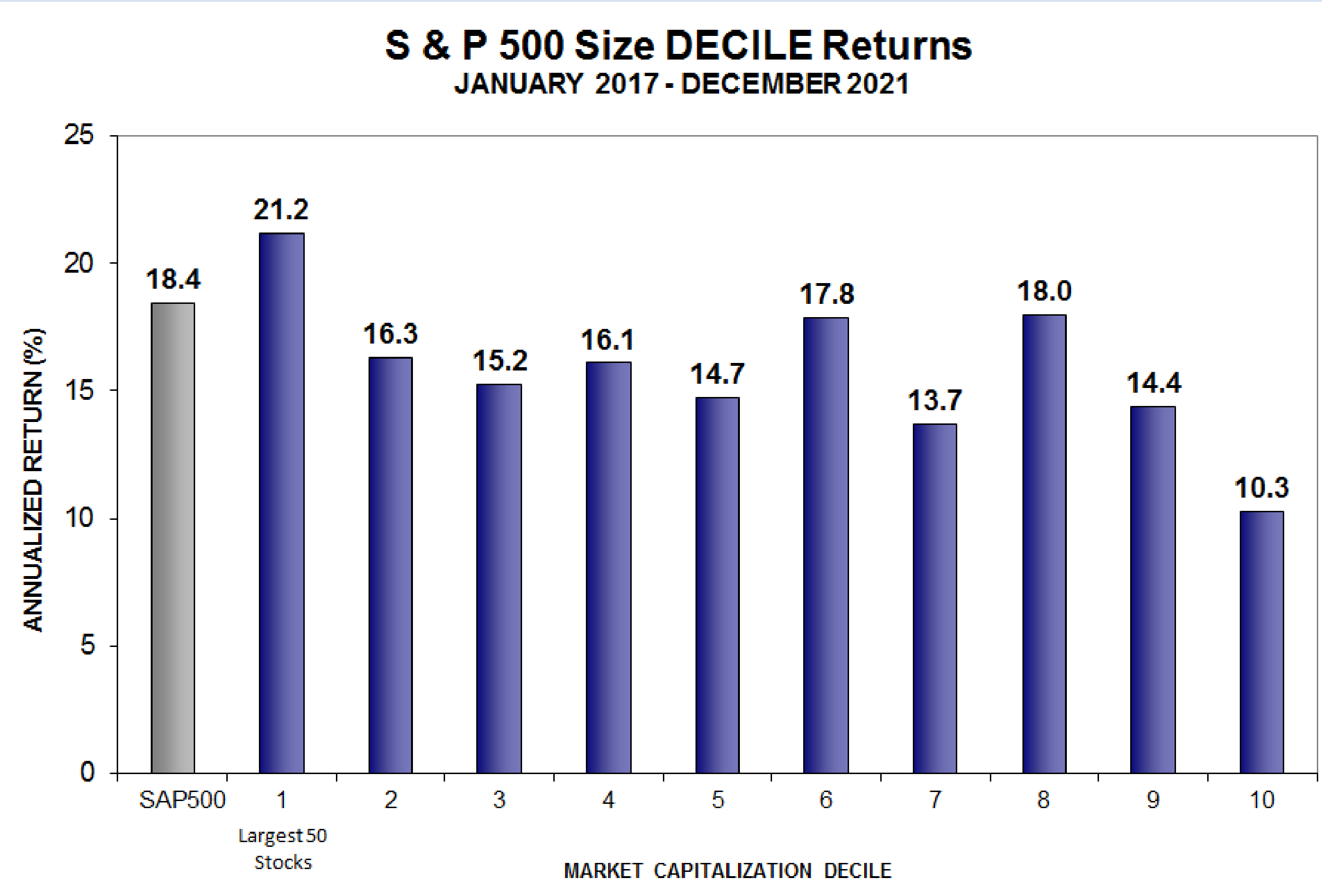
- Market Dispersion – the spread in returns between the best- & worst-performing stocks

Active managers tend to generate higher value-added when a greater percentage of stocks out-perform the market, wider return differentials between stocks are evident, and market indices are less concentrated

Why Concentration Matters

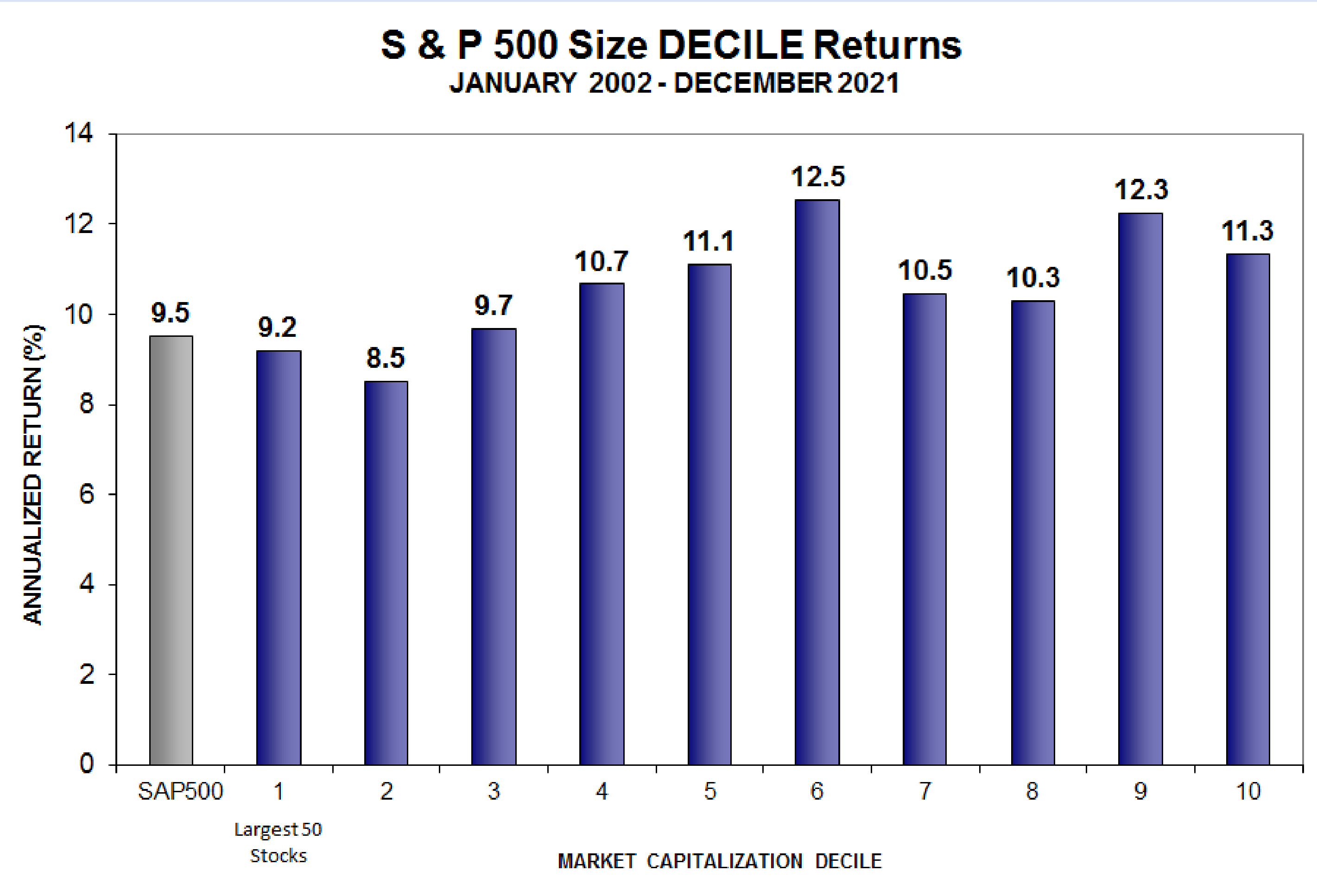
- Market Concentration – how much index weight is focused on relatively few stocks
- Large amount of weight placed on relatively few stocks allows these companies to drive the market index return (for better or worse).
- In 2021, five companies (AAPL, GOOG/L, MSFT, NVDA and TSLA) among the largest ten index members accounted for nearly one-third of the S&P 500’s annual return.

S&P 500 Capitalization Group Performance - 5 Years



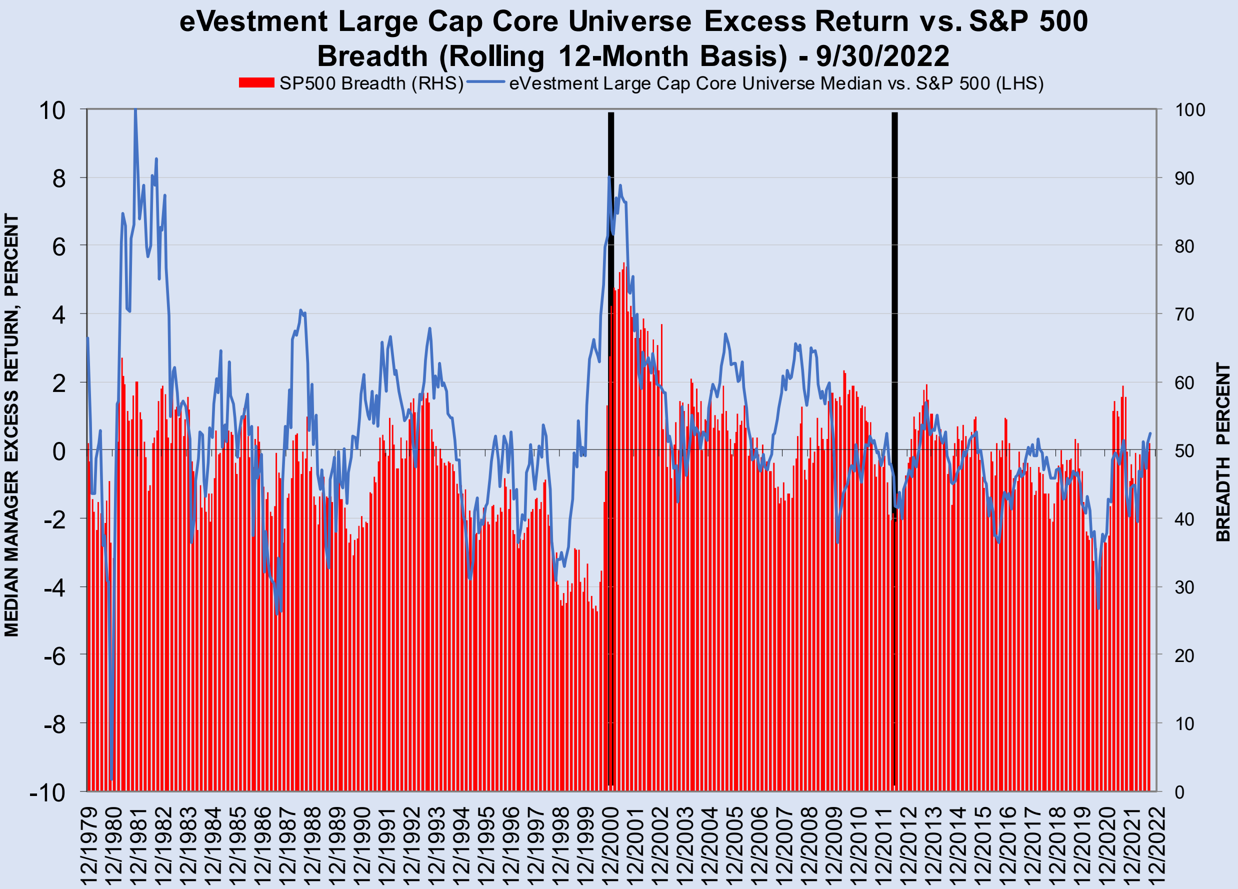
Over last 5 years, largest 50 stocks only group to BEAT the market index while 450 stocks underperform.

S&P 500 Capitalization Group Performance - 20 Years



Over last 20 years, largest 100 stocks are the only two groups to LAG the market index while 400 stocks outperform.

The Median Active Manager's Value-Added Impacted by the percent of Outperforming Stocks



When the Blue line is above Zero, the Median Large-Cap manager is beating the market

When the red bar is above 50%, more stocks are beating the market

Active, Passive & In-Between

- Active vs. passive investment management:
  - Most active managers trail benchmarks over time—do they sufficiently address downside risk? Performance is often inconsistent
  - Passive managers struggle to match the benchmark, due to fees, transaction costs
- Is there a "middle ground"?
  - Enhanced Indexing
  - Smart Beta Strategies or Rules-Based Strategies

There is a middle ground between active and passive strategies for those investors who do not want to "punt" with purely passive investments

Enhanced Indexing

- An enhanced index portfolio aims to "track" an index, but also attempts to modestly outperform it with similar or less risk
- Active managers either ignore or accept higher tracking error while enhanced index managers look to maintain low tracking error relative to the market index
- Enhanced indexing can increase the odds of success, and can reduce the odds of a large surprise
  - Due to its lower tracking error relative to the passive market index, Enhanced Index strategies generate more consistent value-added relative to Active Strategies (which tend to go in and out of favor)

Enhanced indexing seeks to outperform the passive index while maintaining sector and risk exposures like the index

“Smart Beta”

- Market beta provided by market capitalization-weighted indices like the S&P 500 or Russell 1000 is not the only source of equity risk premia available when purchasing a stock portfolio
- There are additional “factors” or fundamental characteristics that provide investors with attractive return-risk trade-offs that can complement and, in some cases, compete with the traditional market capitalization-weighted benchmark indices
  - “Smart Beta” or Rules-Based strategies break up the traditional market index into segments based on these fundamental characteristics
- Well-known “factors” or fundamental characteristics include Value, Momentum, Size, Quality & Low-Volatility

Smart Beta: Factor-based investing provides passive/rules-based exposure to alternative risk premia or return factors in the equity market

Investment Mandates – Risks & Fees

Equity Manager Mandate	Total Volatility	Active Risk	Fees
Active	At or above Market	2% - 8%	25 - 100 bps
Passive Index	Equal to Market	0.1% - 0.5%	1 - 10 bps
Enhanced Index	Below or Equal to Market	1% - 2%	10 - 30 bps
Smart-Beta	Below or Above Market	3% - 7%	15 - 50 bps

Enhanced Index strategies are often viewed as the sweet-spot between trying to still beat the market but taking less active risk with less fees

Investment Management Spectrum

	Active Equity Separate Account	Active Mutual Fund	Enhanced Index Separate Account	Passive Mutual Fund	Passive Separate Account	Passive ETFs
Active Risk	High	High	Medium	Minimal	Minimal	Minimal
Opportunity for Alpha	High	High	Medium	None	None	None
Fees	High	High	Low	Lower	Lower	Lower
Transparency	High	Low	High	Low	High	Low
Customization(e.g., Portfolio Exclusions)	Yes	No	Yes	No	Potentially	No
Shareholder Benefits **(e.g., Proxy Voting, Securities Litigation)**	Yes	No	Yes	No	Potentially	No

What is Right (Active vs. Passive) for Your Pension Plan?

Should your plan invest with Active strategies versus Enhanced Index, Smart-Beta (Rules-based) or Passive index strategies? It depends on the following considerations:

- Your pension plan's funded status and investment policy statement's target rate of return and acceptable risk levels
- Your desire to reduce total investment management fees relative to a strictly active manager platform (active manager fees are higher relative to enhanced index, smart-beta rules-based or passive index managers)
- The ability of active managers to add value on a consistent basis relative to their benchmarks relative to their active risk
- The pension trustees' level of patience as Active manager's outperformance or underperformance typically occurs in cycles

Pension plans can combine large-cap equity active strategies with enhanced index, rules-based or passive index strategies to reduce fees and active risk

Other Considerations in Selecting Investment Vehicles and Managers

- Passive index and smart-beta mutual funds/ETF's do not provide customized proxy voting whereas a separately managed account (whether it be an active or enhanced index strategy) can vote proxies in accordance with sponsors' policies or other issues that are important to public pension plans.
- Investment guidelines stipulating a maximum (for example 5%) holding on any security in a portfolio would currently be violated with an S&P 500 index fund positions in Apple and Microsoft
- If securities lending is important, separately managed accounts are preferrable to mutual funds/ETF's
- Passive index funds do not protect against downside risk – you bear 100% of the market decline whereas some Active, Smart Beta strategies (like lower volatility), and Enhanced Index strategies can provide some downside protection

You choose active, rules-based/smart-beta, enhanced index or passive managers and then select the appropriate vehicle (MF, ETF, SMA)

Key Takeaways

- The past three decades have been, respectively: okay for active managers, great for active managers and extremely poor for active managers
  - These cycles are related to equity market breadth & concentration
- Active management requires patience. Past strong-performers often endure long periods of under-performance prior to rebounding
- There are more choices when hiring managers than just Active or Passive – Enhanced Indexing and Smart Beta
- There are many dimensions trustees need to consider when choosing among investment mandates & vehicles

Important Disclosures

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INDEX INFORMATION
The S&P 500 Index is a representative measure of 500 leading companies from leading industries; the index is a benchmark for the large-cap segment of U.S. equity market. Company weights in the index are proportional to firms' available market capitalization (price times available shares outstanding). A Committee at Standard and Poor's maintains the index with a focus on liquidity and investability. The Dow Industrials is a price-weighted index of 30 blue-chip US stocks maintained by a committee chosen to represent leading companies within important segments of the US equity market.

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Annualized Returns are calculated as the compound geometric average monthly returns. The geometric average is the monthly average return that assumes the same rate of return every period to arrive at the equivalent compound growth rate reflected in the actual return data. The results are annualized by raising the sum of one plus the compound geometric average monthly return to the twelfth power and then subtracting one. Standard Deviation measures the dispersion of uncertainty in a random variable (in this case, investment returns). The higher the volatility of investment returns, the higher the standard deviation will be in any given case. For this reason, standard deviation is often used as a measure of investment risk. Values are calculated by applying the traditional sample deviation formula to monthly return data, and then annualized by multiplying the result by the square root of twelve.