

Inside the Active vs. Passive Debate: What is happening, and why?

Craig J. Lazzara, CFA

November 13, 2023

**S&P Dow Jones
Indices**

A Division of **S&P Global**

Agenda

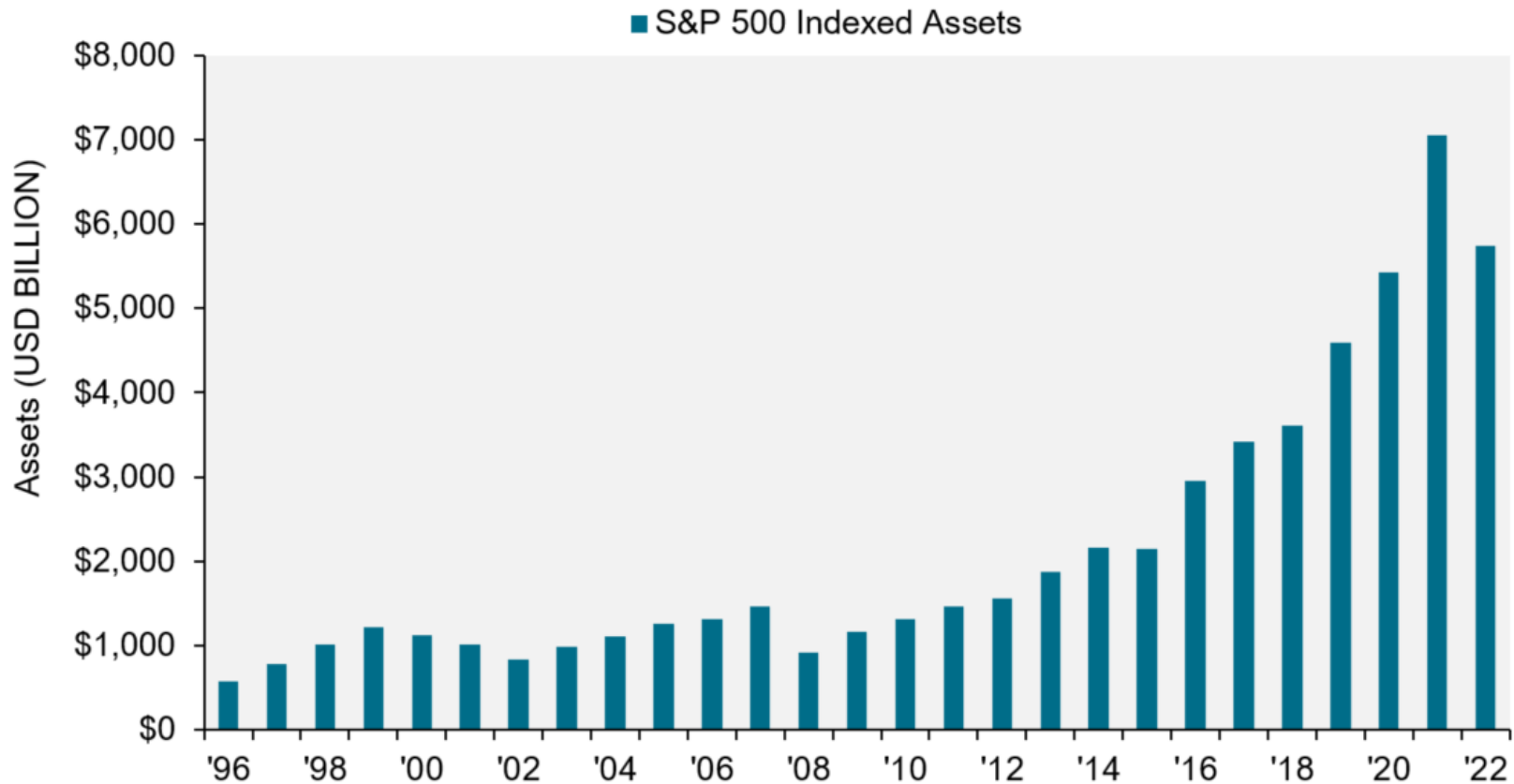
- What is Happening?: Asset Moves
- Why?: Observations Behind the Moves
- Why?: Causes Behind the Observations

What is happening?

Asset Moves

Assets Tracking the S&P 500

Approximately \$5.7 Trillion Track the S&P 500

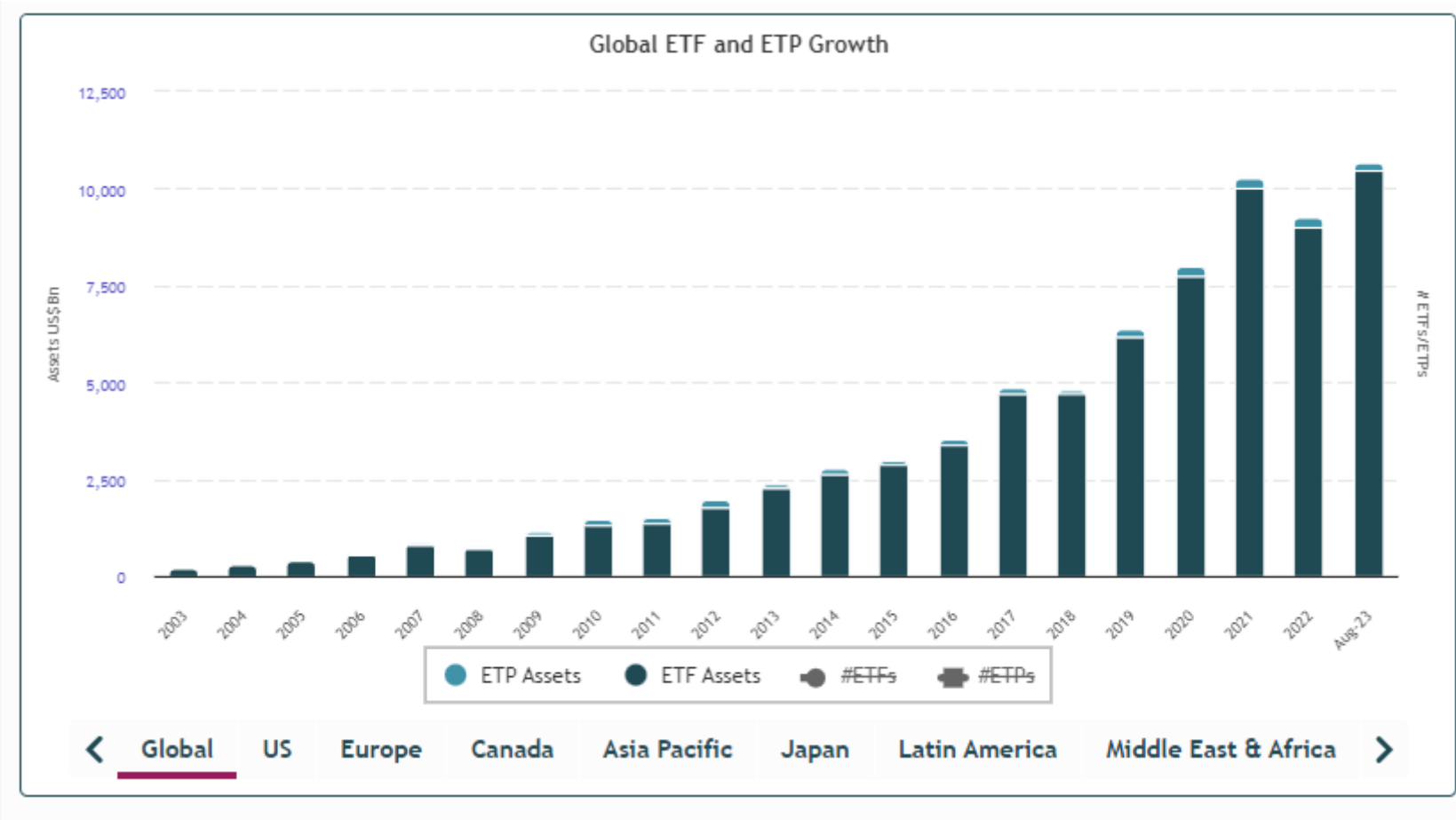


Source: S&P Dow Jones Indices. Data as of Dec. 31, 2022. Charts are provided for illustrative purposes. Past performance is no guarantee of future results.

**S&P Dow Jones
Indices**

A Division of S&P Global

Global ETF AUM Exceeds USD 10.7 Trillion

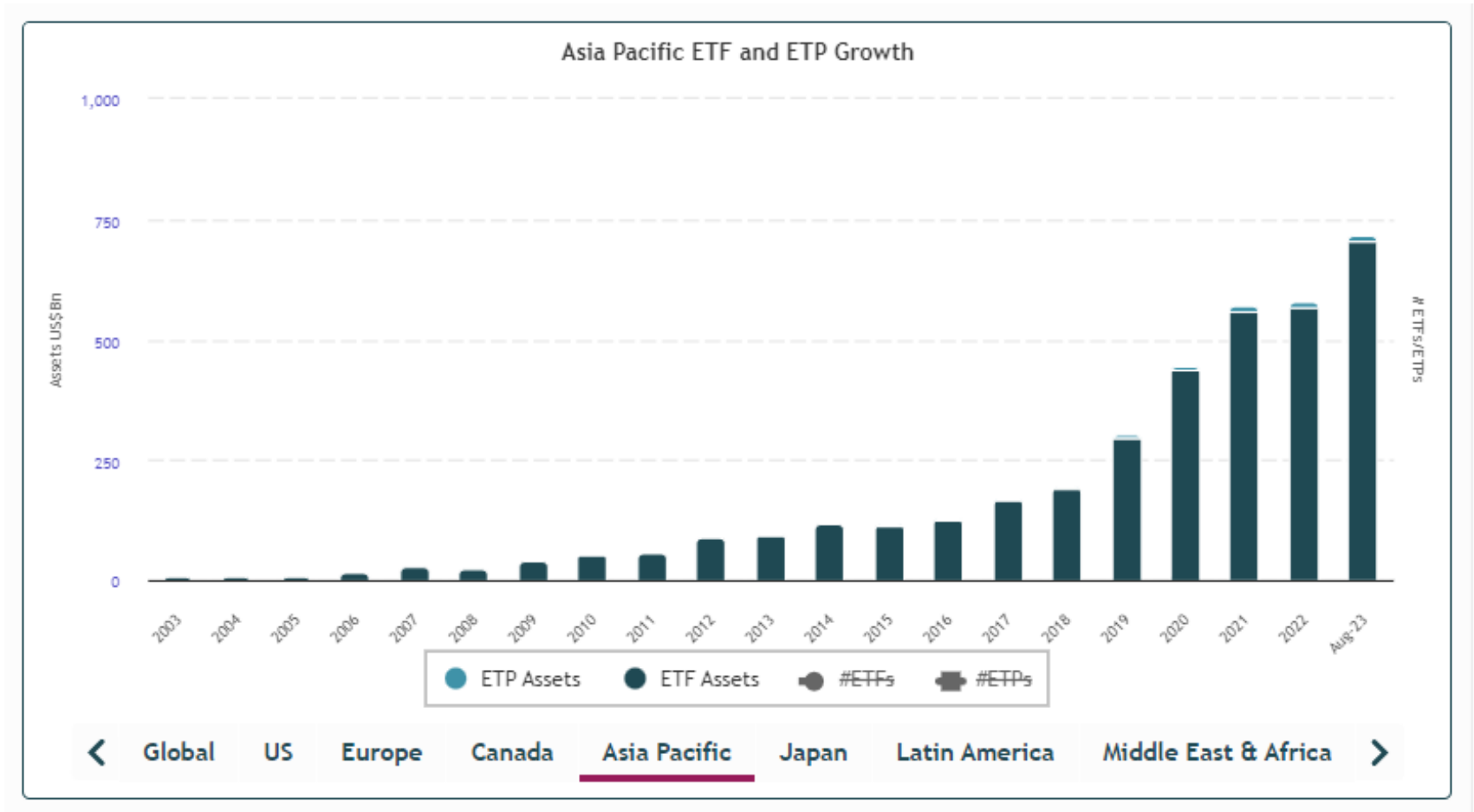


Source: ETFGI.com. Data as of August 2023. Charts are provided for illustrative purposes. Past performance is no guarantee of future results.

S&P Dow Jones Indices

A Division of S&P Global

Asia/Pacific ETF AUM Exceeds USD 700 Billion



Source: ETFGI.com. Data as of August 2023. Charts are provided for illustrative purposes. Past performance is no guarantee of future results.

**S&P Dow Jones
Indices**

A Division of S&P Global

Why?

Observations Behind the Moves

SPIVA Results for 2023 – Japan

Active Underperformance Continues

Percentage of Japanese Equity Funds Underperforming Index

Fund Category	Comparison Index	1H 2023	3 Years	5 Years	10 Years
Large Cap Funds	S&P/TOPIX 150	90%	82%	93%	84%
Mid-/Small- Cap Funds	S&P Japan MidSmallCap	48%	61%	54%	47%
Global Equity Funds	S&P Global 1200	72%	91%	92%	97%

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2023. Past performance is no guarantee of future results. Table is provided for illustrative purposes

SPIVA Results for 2023 – USA

Active Underperformance Continues

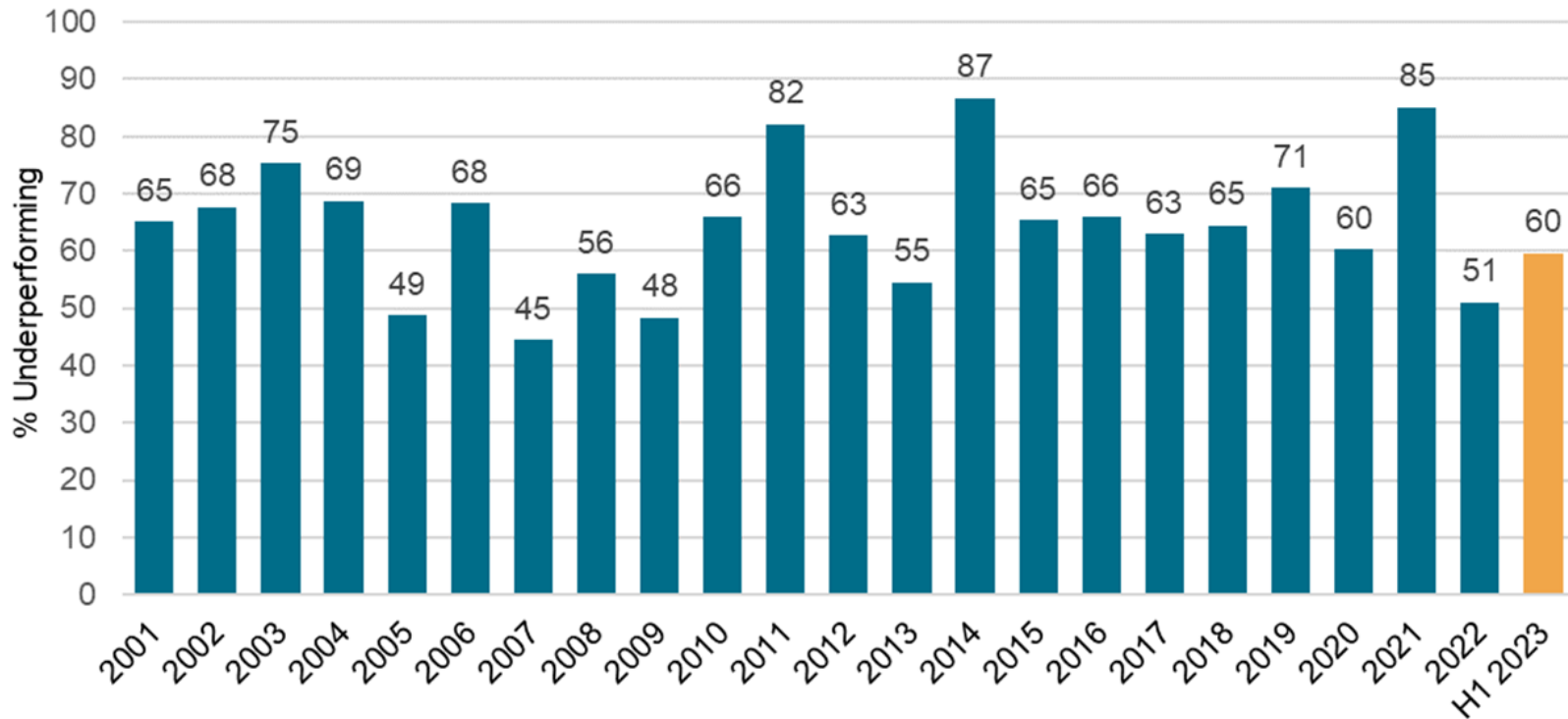
Percentage of U.S. Equity Funds Underperforming Index

Fund Category	Comparison Index	1H 2023	5 Years	10 Years	20 Years
Large Cap Funds	S&P 500	60%	87%	86%	94%
All Mid Cap Funds	S&P MidCap 400	48%	59%	76%	95%
Small Cap Funds	S&P SmallCap 600	28%	56%	86%	94%

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2023. Past performance is no guarantee of future results. Table is provided for illustrative purposes

Variation in Active Managers' Success

Percentage of Large-Cap U.S. Equity Funds Underperforming the S&P 500



Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 2000 through Dec. 31, 2022. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

**S&P Dow Jones
Indices**

A Division of S&P Global

For Financial Professionals Only

Persistence of Above-Average Performance – Five Year Intervals

US Equity Funds in Two Consecutive Five-Year Periods

Fund Category	% Repeating in Top Half
Large Cap	36.6%
Mid Cap	28.2%
Small Cap	32.6%

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2022. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Two Observations and an Assertion

- Most active managers underperform most of the time.
 - Consistent across capitalization ranges and geographies
 - Results worsen as time horizon lengthens
- Past success does not predict future success.
- These observations are not coincidental.

Why?

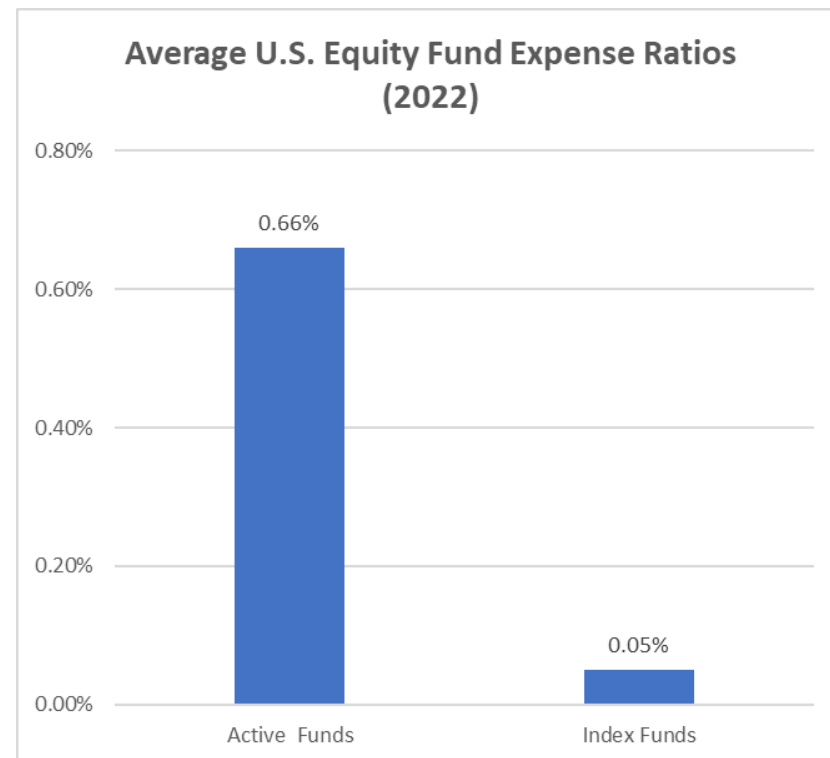
Causes Behind the Observations

Why Is Active Management So Difficult?

- Cost
- Professionalization
- Return skewness

Cost

- Index funds own a pro-rata slice of the entire market.
- Therefore the aggregate index portfolio is identical to the *aggregate* active portfolio.
- “...after costs, the return on the average actively managed dollar will be less than the return on the average passively managed dollar”
– William F. Sharpe, “The Arithmetic of Active Management,” *Financial Analysts Journal*, 1991



Source: Investment Company Institute, “Trends in the Expenses and Fees of Funds, 2022,” March 2023.

No Natural Source of Outperformance

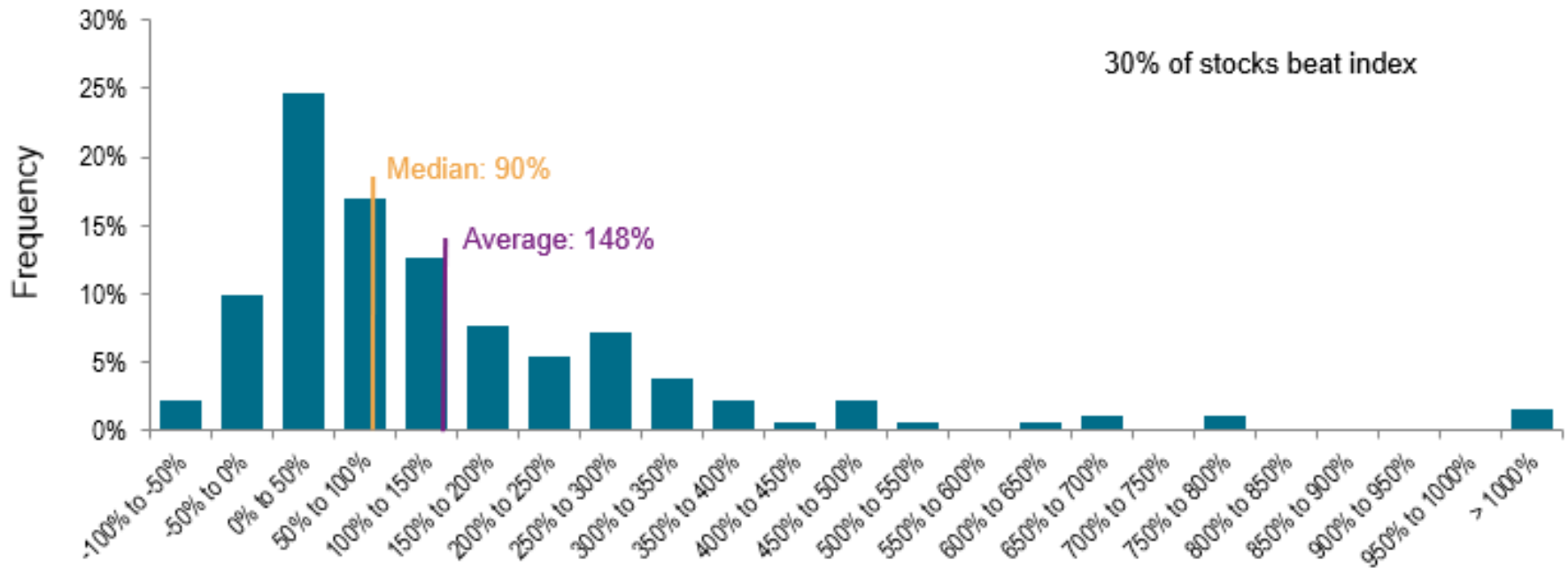
- Investor A can be above average only if Investor B is below average.
 - The total outperformance of the winners must equal the total underperformance of the losers (before costs).
 - The source of the winners' positive alpha is the losers' negative alpha.
- Critical question is whether professionals, rather than undiversified amateurs, dominate a market.
- When funds shift from active to passive, **the least skillful active managers lose the most assets.**

Skewness

- Stock returns are not normally distributed.
- A stock can only decline 100%.
 - It can rise by much more than that.
 - Natural right skewness built into distribution of stock returns
 - Convenient measure: average > median
- How often are returns skewed?
 - S&P 500: 28/32 yrs.
 - S&P 400: 26/31 yrs.
 - S&P 600: 26/28 yrs.
 - S&P/TSX Composite: 20/25 yrs.
 - S&P/TOPIX 150: 26/27 yrs.
 - S&P ASX 200: 13/22 yrs.
 - S&P Pan Asia: 26/26 yrs.
 - S&P Europe 350: 15/22 yrs.

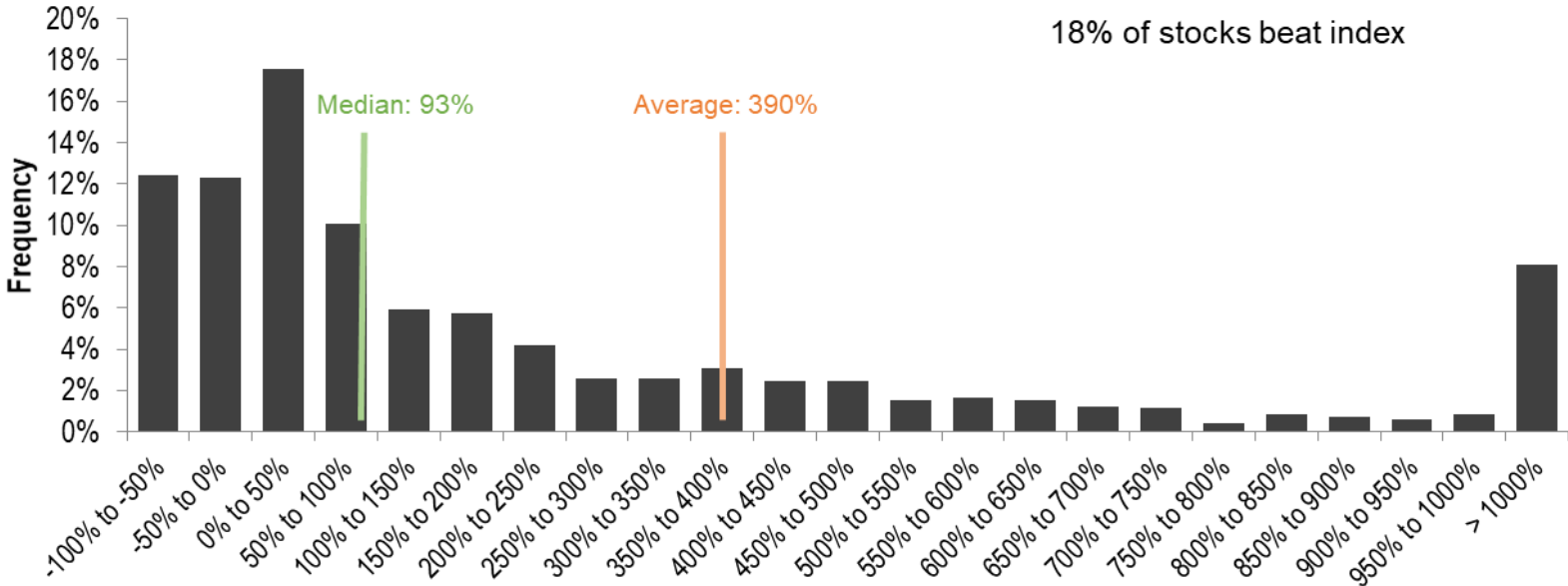
Source: S&P Dow Jones Indices LLC, FactSet. Data as of Dec. 31, 2022. Past performance is no guarantee of future results.

Historical Skewness for S&P/TOPIX 150 (2013-2022)



Source: S&P Dow Jones Indices LLC, FactSet. Data from Dec. 31, 2012 through Dec. 31, 2022. Performance based on total return in JPY. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Historical Skewness for S&P 500 (2003-2022)



Source: S&P Dow Jones Indices LLC, FactSet. Data from Dec. 31, 2002 through Dec. 31, 2022. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Skewness Handicaps Active Managers

- 50% of index constituents beat the median performer
- But fewer than 50% beat the average performer
- Stock selection is harder than you think

A Hypothetical (Skewed) Market

Stock	Return
A	10%
B	10%
C	10%
D	10%
E	20%
Average	12%
Median	10%

Source: Heaton, J.B., N.G. Polson, and J.H. Witte, "Why Indexing Works," October 2015, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2673262 and S&P Dow Jones Indices. Chart is for illustrative purposes only.

Possible Portfolio Combinations

Number of Stocks	Number of Portfolios	Average Return	Probability of Outperformance	Winners' "Alpha"	Losers' "Alpha"
1	5	12%	20%	8.0%	-2.0%
2	10	12%	40%	3.0%	-2.0%
3	10	12%	60%	1.3%	-2.0%
4	5	12%	80%	0.5%	-2.0%

- The market's return does not depend on portfolio concentration.
- More diversified portfolios are more likely to outperform.

Source: S&P Dow Jones Indices. Chart is for illustrative purposes only.

Implications for Active Managers

- If benchmarked against the S&P 500
 - Buy 50 stocks you like the most?
 - Exclude the 50 stocks you like the least?
- In a skewed market, the more diversified portfolio will be more likely to outperform, though by a smaller amount.
- More diversification produces
 - Less exposure to an “alpha” generating process BUT
 - More exposure to luck

Final Thoughts

- Active managers face a severe and continuing performance challenge from index funds.
- The index advantage
 - Does not depend on assumptions of market efficiency
 - Comes from a variety of robust sources
 - Is likely to persist
- Concentrated active portfolios reduce likelihood of outperformance.

Thank you

Craig J. Lazzara, CFA

craig.lazzara@spglobal.com

Grace Stoddart

grace.stoddart@spglobal.com

General Disclaimer

© 2023 S&P Dow Jones Indices. All rights reserved. S&P, S&P 500, S&P 500 LOW VOLATILITY INDEX, S&P 100, S&P COMPOSITE 1500, S&P 400, S&P MIDCAP 400, S&P 600, S&P SMALLCAP 600, S&P GIVI, GLOBAL TITANS, DIVIDEND ARISTOCRATS, S&P TARGET DATE INDICES, S&P PRISM, S&P STRIDE, GICS, SPIVA, SPDR and INDEXOLOGY are registered trademarks of S&P Global, Inc. ("S&P Global") or its affiliates. DOW JONES, DJ, DJIA, THE DOW and DOW JONES INDUSTRIAL AVERAGE are registered trademarks of Dow Jones Trademark Holdings LLC ("Dow Jones"). These trademarks together with others have been licensed to S&P Dow Jones Indices LLC. Redistribution or reproduction in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. This document does not constitute an offer of services in jurisdictions where S&P Dow Jones Indices LLC, S&P Global, Dow Jones or their respective affiliates (collectively "S&P Dow Jones Indices") do not have the necessary licenses. Except for certain custom index calculation services, all information provided by S&P Dow Jones Indices is impersonal and not tailored to the needs of any person, entity or group of persons. S&P Dow Jones Indices receives compensation in connection with licensing its indices to third parties and providing custom calculation services. Past performance of an index is not an indication or guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index may be available through investable instruments based on that index. S&P Dow Jones Indices does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC is not an investment advisor, and S&P Dow Jones Indices makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. Prospective investors are advised to make an investment in any such fund or other vehicle only after carefully considering the risks associated with investing in such funds, as detailed in an offering memorandum or similar document that is prepared by or on behalf of the issuer of the investment fund or other investment product or vehicle. S&P Dow Jones Indices LLC is not a tax advisor. A tax advisor should be consulted to evaluate the impact of any tax-exempt securities on portfolios and the tax consequences of making any particular investment decision. Inclusion of a security within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof ("Content") may be modified, reverse-engineered, reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P Dow Jones Indices. The Content shall not be used for any unlawful or unauthorized purposes. S&P Dow Jones Indices and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Global keeps certain activities of its various divisions and business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions and business units of S&P Global may have information that is not available to other business units. S&P Global has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate or otherwise address.

The Global Industry Classification Standard (GICS®) was developed by and is the exclusive property and a trademark of S&P and MSCI. Neither MSCI, S&P nor any other party involved in making or compiling any GICS classifications makes any express or implied warranties or representations with respect to such standard or classification (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P, any of their affiliates or any third party involved in making or compiling any GICS classifications have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.