The S&P 500 is widely regarded as the best single gauge of U.S. large-cap equities. The index includes 500 leading companies spanning all sectors of the U.S. stock market. It covers approximately 80% of the U.S. equity market capitalization and over 50% of the global equity market.
Hard to Beat

Most Active U.S. Large-Cap Equity Funds Underperform the S&P 500

Since the first publication of the S&P Indices Versus Active Funds (SPIVA®) U.S. Scorecard in 2002, S&P Dow Jones Indices has been the de facto scorekeeper of the ongoing active versus passive debate, reporting on the results semiannually.

The chart below shows that over 50% of U.S. Large-Cap active managers underperformed the S&P 500 in 18 of the past 21 years.

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

By Calendar Year (Based on Absolute Returns)

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage Underperforming</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>65</td>
</tr>
<tr>
<td>2002</td>
<td>68</td>
</tr>
<tr>
<td>2003</td>
<td>75</td>
</tr>
<tr>
<td>2004</td>
<td>69</td>
</tr>
<tr>
<td>2005</td>
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<td>2011</td>
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<td>2014</td>
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<td>2018</td>
<td>71</td>
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<tr>
<td>2019</td>
<td>60</td>
</tr>
<tr>
<td>2020</td>
<td>85</td>
</tr>
<tr>
<td>2021</td>
<td>51</td>
</tr>
</tbody>
</table>

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

Past Performance Is No Guarantee of Future Results

As a companion to our SPIVA scorecards, S&P DJI produces the Persistence Scorecard, which looks at whether top active managers can retain their position relative to their peers.

The chart below investigates the track record of 163 top quartile, actively managed large-cap funds as of June 2020. The persistence of these funds was much worse than random. Two years later, not a single fund managed to remain in the top quartile consecutively.

Manager Outperformance is Fleeting

Performance Persistence of Top-Quartile Domestic Equity Funds over Three Consecutive 12-Month Periods. Past performance is no guarantee of future results. Chart is provided for illustrative purposes. For the blue bar illustration, in a full deck of 52 cards, there are typically four suits, hearts, clubs, diamonds and spades. Any suit has a 13/52 or 1/4 probability of being picked. The odds of a top-quartile fund randomly staying in the top quartile over the next two years are 25% * 25% = 6.25%, or 1/16.
Relevance of the S&P 500

The 500 represents approximately 50% of the global equity market capitalization.

Many of the largest exchange-traded funds (ETFs) and mutual funds in the world track the 500. The index supports a large and robust trading ecosystem that includes index futures and options.

With more than 65 years of live index history, the 500 has a long and proud history. Investors analyze the 500’s returns and constituents to understand how the U.S. equity market has evolved and reacted to a wide range of historical events.

Constructing the S&P 500

The 500 is designed to measure the performance of index-eligible stocks listed on the NYSE and Nasdaq. It is weighted by float-adjusted market capitalization and includes liquidity and tradability criteria in the constituent selection process.

<table>
<thead>
<tr>
<th>Constituents and Weighting Method</th>
<th>Eligibility Criteria</th>
<th>GICS® Sector Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 Companies</td>
<td>Market Cap Qualifies As &quot;Large-Cap&quot;*</td>
<td>Information Technology</td>
</tr>
<tr>
<td></td>
<td>Sufficient Liquidity</td>
<td>Health Care</td>
</tr>
<tr>
<td>Float Market Cap Weighted</td>
<td>Achieves Sector Balance</td>
<td>Financials</td>
</tr>
<tr>
<td></td>
<td>Sufficient Public Float</td>
<td>Consumer Discretionary</td>
</tr>
<tr>
<td></td>
<td>Financial Viability/Earnings</td>
<td>Communication Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumer Staples</td>
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<td>Energy</td>
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<tr>
<td></td>
<td></td>
<td>Real Estate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Materials</td>
</tr>
</tbody>
</table>

*S&P Composite 1500 market-cap guidelines are reviewed by the Index Committee on an as needed basis. For further information and the complete details on the eligibility criteria please see the U.S. Index Methodology and to learn about the governance process of S&P DJI please visit: https://www.spglobal.com/spdji/en/governance/.

S&P 500 Trading Ecosystem

The 500 is at the center of a large trading “ecosystem” spanning different product types and related indices. Trading in the 500 supports a network of different product types (LHS chart; futures, options and ETF options) and exposures (RHS chart; sectors, VIX-based strategies and factors).

The ecosystem of products directly linked to the 500 generated USD 205 trillion in index equivalent trading volume in 2022, which is broken down in the graphic below. Our research shows that users of index-based products may wish to consider the volumes associated to an index as an important factor in choosing a product, due to historically higher liquidity supporting tighter spreads in products and a closer tracking to the benchmark.

1-Year Index Equivalent Trading Volumes in USD Billions

Sources: S&P Dow Jones Indices LLC, Futures Industry Association (FIA), Bloomberg, Options Clearing Corporation (OCC), Cboe. Data as of Dec. 31, 2022, unless otherwise stated. Past performance is no guarantee of future results. Chart is provided for illustrative purposes. For options, a delta adjustment is applied, which is a monthly volumes-weighted average delta provided by Cboe and ranged from 0.21 – 0.23 in 2022. Updated from "A Window on Index Liquidity,” S&P Dow Jones Indices (August 2019). Figures in billions of U.S. dollars of index equivalent trading volumes. *In 2019, Index Dividends was focused on product linked to our Dividend Points indices, whereas the new Dividends category also includes dividend-themed products, for example the S&P 500 dividend families including Dividend Aristocrats, High Dividend, Low Volatility High Dividend and others. Data sources have also changed since the original publication of the paper. For further details see “Mapping the S&P 500 Trading Ecosystem.”
Index Series Based on the S&P 500
The S&P 500 Provides a Baseline for Several Flagship Indices

**U.S. Core Equity**
The S&P 500 Top 50 and S&P 100 are mega-cap indices that are subsets of the S&P 500.

**Sectors & Industries**
The S&P 500 sector indices follow the Global Industry Classification Standard (GICS®) which is a four-tiered industry classification where companies are classified by their principal business activity.
The S&P 500 serves as the basis for the Select Sector™ and Select Industry indices.

**Equal Weight**
The S&P 500 Equal Weight Index gives each company in the S&P 500 the same weight at each rebalance.

**Style**
Our style series includes broad, exhaustive style indices, as well as narrower, pure style indices.
Style: S&P 500 Growth and S&P 500 Value
Pure Style: S&P 500 Pure Growth and S&P 500 Pure Value

**Factors**
The S&P 500 single- and multi-factor indices track well-known factors including size, momentum, quality, low volatility and dividends.

**Volatility**
The Cboe Volatility Index (VIX®) gives market participants real-time insight into investor sentiment and expected levels of market volatility.

**Sustainability**
The S&P 500 ESG Index is a broad-based float market-cap weighted index. It measures the performance of securities meeting sustainability criteria, while maintaining similar overall industry group weights as the S&P 500.
S&P DJI provides a range of indices for a breadth of ESG preferences.

**S&P PACT™ Indices (S&P Paris-Aligned & Climate Transition Indices)**
These innovative indices track the performance of eligible equity securities, selected and weighted to be collectively compatible with a 1.5°C global warming climate scenario, in addition to several other climate-themed objectives.
S&P PACT Indices covers a range of flagship indices such as the S&P 500 Paris-Aligned & Climate Transition Indices.

A Brief History of the S&P 500
65+ Years of Market Leadership

1923
Standard Statistics Company (now S&P Global) calculates the S&P Composite Index
Updated weekly, cap-weighted index of 233 companies, covering 26 industries

1957
S&P 500 replaces 90 stock composite
Trading begins at 44.22

1973
One of the first institutional indexed funds
Wells Fargo Stagecoach Fund (based on S&P 500)

1976
First major retail indexed fund
Based on the S&P 500

1982
First listed index future
S&P 500 futures on CME

1983
Longest-running listed index options:
Options listed on Cboe
March 11 | S&P 100
July 1 | S&P 500

1986
Intraday frequency went from 1m to once every 15s
The current frequency is one second

1993
First U.S.-listed exchange traded fund
Based on the S&P 500

1999
GICS introduced
In collaboration with MSCI

2003
World’s first equal-weight ETF
Based on the S&P 500 Equal Weight Index

2004
First volatility derivatives
VIX futures on Cboe

Source: S&P Dow Jones Indices LLC. Table is provided for illustrative purposes. Please see https://www.spglobal.com/spdji/en/index-linked-products/ for further details. Please note S&P Dow Jones Indices does not sponsor, endorse, sell, or promote any product based on an S&P Dow Jones Indices index nor does it make any representation regarding the advisability of investing in any products.

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At S&P Dow Jones Indices, we provide iconic and innovative index solutions backed by unparalleled expertise across the asset-class spectrum. By bringing transparency to the global capital markets, we empower investors everywhere to make decisions with conviction. We're the largest global resource for index-based concepts, data and research, and home to iconic financial market indicators, such as the S&P 500® and the Dow Jones Industrial Average®. More assets are invested in products based upon our indices than any other index provider in the world. With over USD 8.3 trillion in passively managed assets linked to our indices and over USD 8.4 trillion benchmarked to our indices, our solutions are widely considered essential in tracking market performance, evaluating portfolios, and developing investment strategies.

S&P Dow Jones Indices is a division of S&P Global (NYSE: SPGI). S&P Global is the world's foremost provider of credit ratings, benchmarks, analytics and workflow solutions in the global capital, commodity and automotive markets. With every one of our offerings, we help many of the world's leading organizations navigate the economic landscape so they can plan for tomorrow, today. For more information, visit www.spglobal.com/spdji.