S&P Dow Jones Indices
A Division of S&P Global

INDEX INVESTMENT STRATEGY
Register to receive our dashboards at **on.spdji.com/DashboardSignup**
U.S. Equal Weight Sector Dashboard
December 30, 2022

QUARTERLY PERFORMANCE SUMMARY

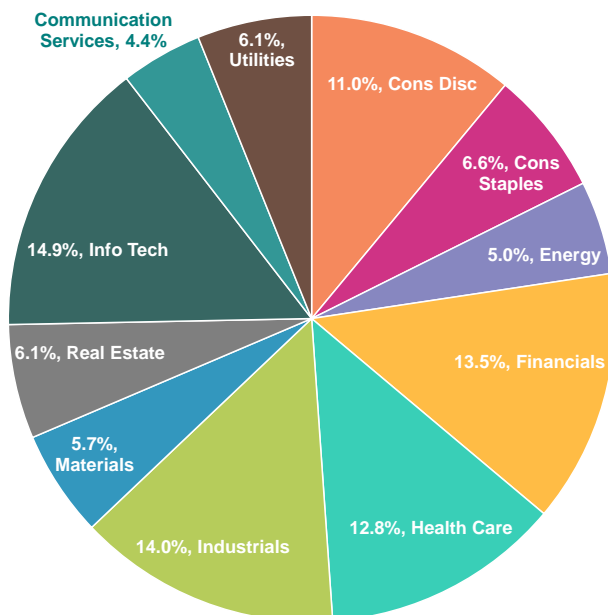### S&P 500 Equal Weight vs. Cap Weight Sectors

Legend: ■ Equal Weight Sectors ■ Cap Weighted Sectors

Sector	Equal Weight	Cap Weighted
Energy	20.7%	22.8%
Industrials	15.6%	19.2%
Health Care	15.2%	12.8%
Consumer Discretionary	12.8%	-10.2%
Materials	12.3%	15.0%
Consumer Staples	11.8%	12.7%
Financials	10.9%	13.6%
Utilities*	10.0%	8.6%
Technology	7.6%	4.7%
Communication Services	4.5%	-1.4%
Real Estate	3.3%	3.8%
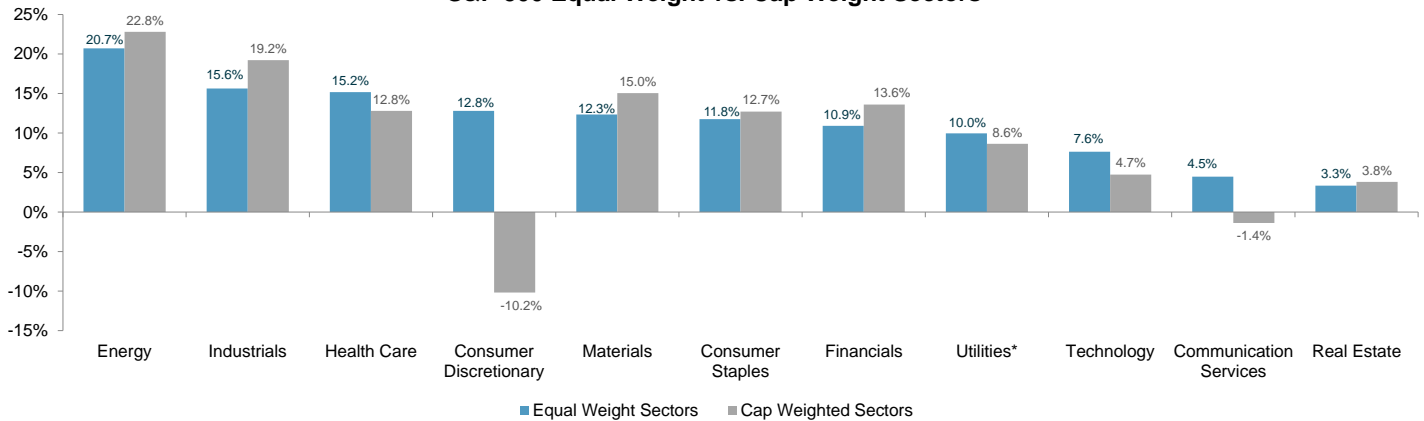
TRAILING 12M PERFORMANCE SUMMARY

S&P 500 Equal Weight vs. Cap Weight Sectors

Legend: ■ Equal Weight Sectors ■ Cap Weighted Sectors

Sector	Equal Weight	Cap Weighted
Energy	59.3%	65.7%
Utilities*	4.8%	1.6%
Consumer Staples	3.4%	-0.6%
Industrials	-8.4%	-5.5%
Health Care	-8.9%	-2.0%
Materials	-9.6%	-12.3%
Financials	-10.2%	-10.5%
Consumer Discretionary	-23.8%	-37.0%
Technology	-24.2%	-28.2%
Real Estate	-24.8%	-26.1%
Communication Services	-28.7%	-39.9%
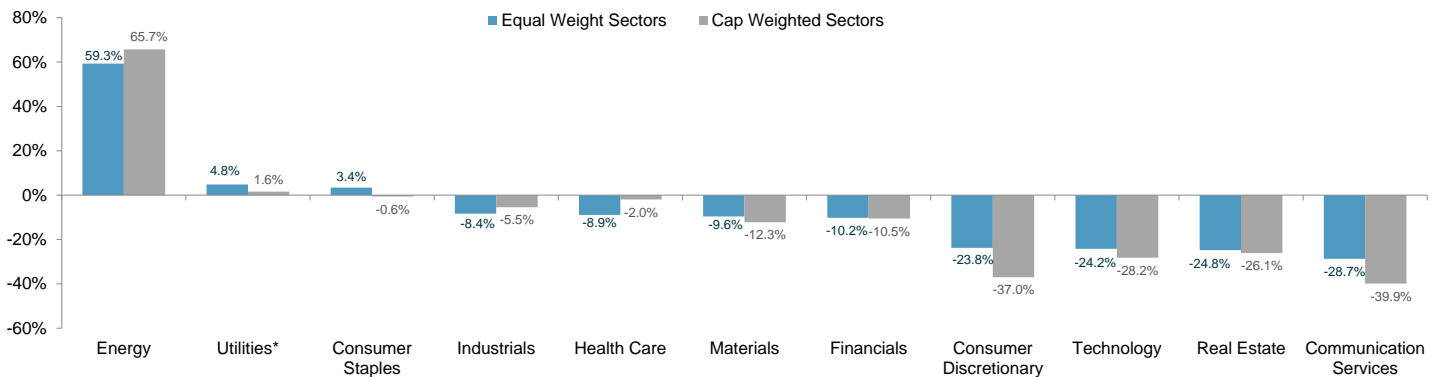
INDEX COMPOSITION AND COMMENTARY

S&P 500 Equal Weight Sector Indices

Pie chart sectors:
- 11.0%, Cons Disc
- 6.6%, Cons Staples
- 5.0%, Energy
- 13.5%, Financials
- 12.8%, Health Care
- 14.0%, Industrials
- 5.7%, Materials
- 6.1%, Real Estate
- 14.9%, Info Tech
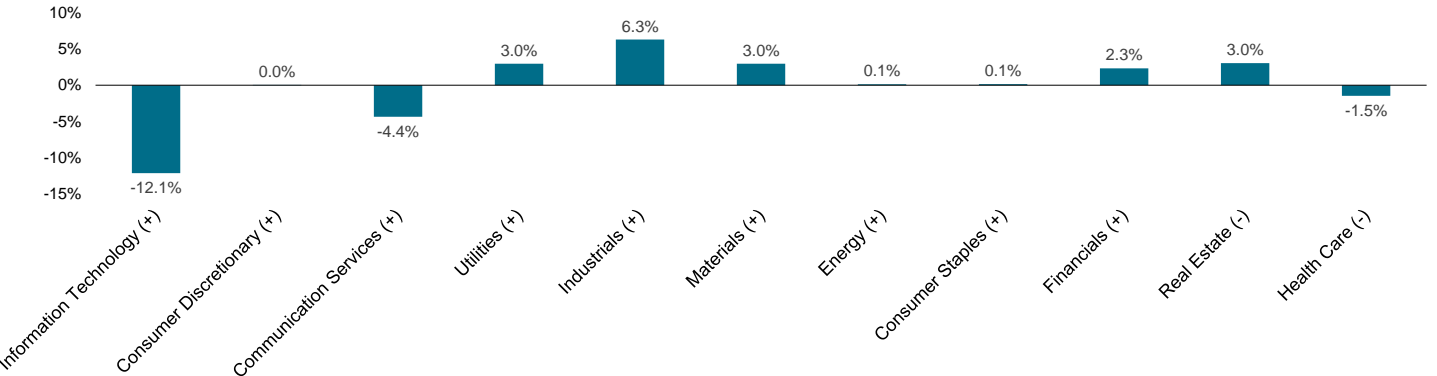- Communication Services, 4.4%
- 6.1%, Utilities

- The S&P 500® Equal Weight Index outperformed the S&P 500 by 7% in 2022.

- 8 out of 11 equal-weight sectors outperformed their cap-weighted counterparts.

- Energy was the top performer in 2022 for both equal and cap weighted.

HISTORICAL RETURN DIFFERENTIAL - EQUAL VS. CAP WEIGHTED

S&P 500 Equal Weight vs. S&P 500 Total Return Differential - Rolling 12M

6.7%
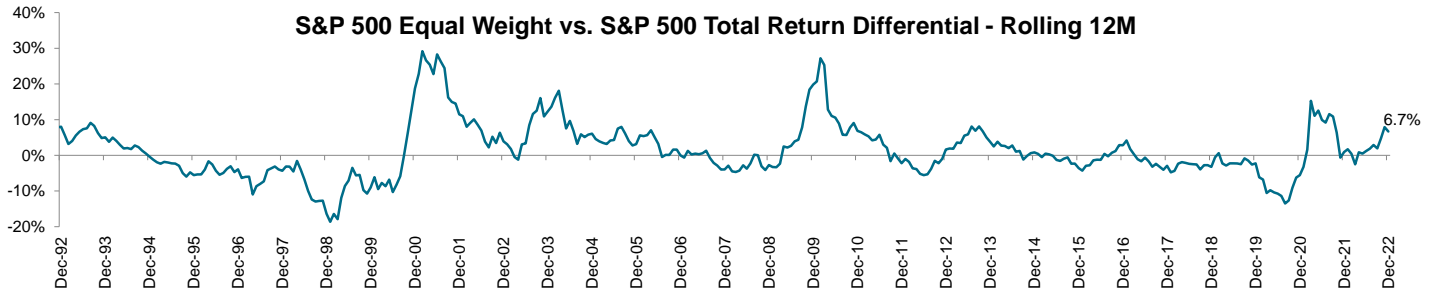
AVERAGE WEIGHT DIFFERENCE OVER PAST YEAR - S&P 500 EW VS. S&P 500®

Sector	Value
Information Technology (+)	-12.1%
Consumer Discretionary (+)	0.0%
Communication Services (+)	-4.4%
Utilities (+)	3.0%
Industrials (+)	6.3%
Materials (+)	3.0%
Energy (+)	0.1%
Consumer Staples (+)	0.1%
Financials (+)	2.3%
Real Estate (-)	3.0%
Health Care (-)	-1.5%

ANNUAL TOTAL RETURN DIFFERENCE - S&P 500 EW VS. S&P 500

Sector	Value
Information Technology (+)	4.7%
Consumer Discretionary (+)	13.3%
Communication Services (+)	9.5%
Utilities (+)	3.0%
Industrials (+)	-2.9%
Materials (+)	2.6%
Energy (+)	-6.4%
Consumer Staples (+)	4.0%
Financials (+)	0.2%
Real Estate (-)	1.3%
Health Care (-)	-7.1%
S&P 500 Equal Weight (+)	6.7%
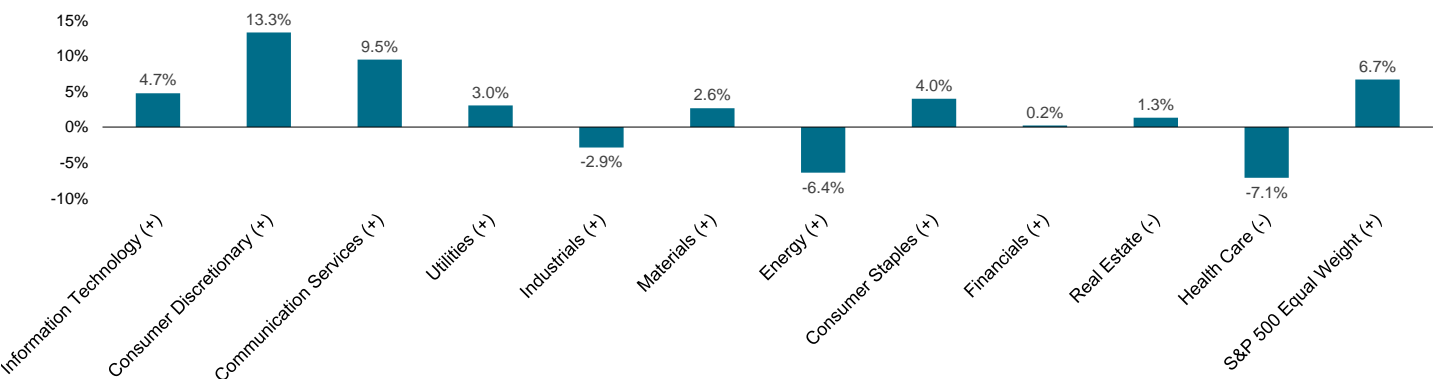
EQUAL VS. CAP WEIGHTED YEARLY ATTRIBUTION

12 Month Attribution - S&P 500 EW vs. S&P 500

Legend: ☐ Cross Sector Weighting   ■ Intra Sector Weighting

(+) Positive Effect from Equal Weighting

(-) Negative Effect from Equal Weighting
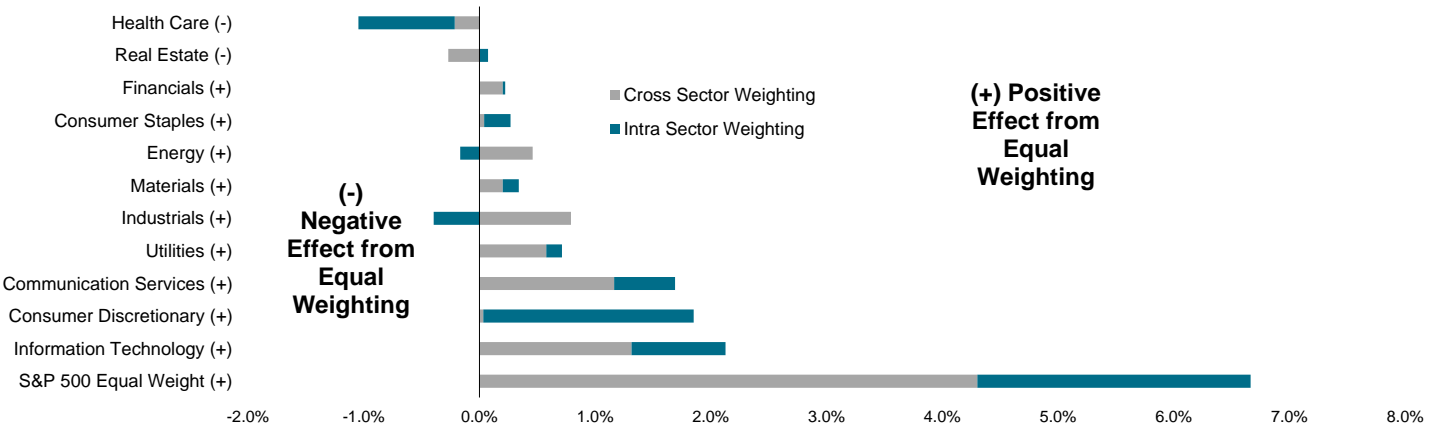
COMMENTARY

• Equal Weight's trailing twelve-month relative outperformance declined slightly to 7%.

• Key performance contributors for Equal Weight were the underweight to Information Technology and overweight to smaller-caps within Consumer Discretionary.

Source: S&P Dow Jones Indices LLC and/or its affiliates and FactSet. Data as of December 30, 2022.

KEY TO FACTOR SCORINGS FOR INDICES

Factor Definitions

Each constituent of the S&P 500 index is provided with a factor "score" for each of Beta, Volatility, Momentum, Dividend, Size, Value and Quality.
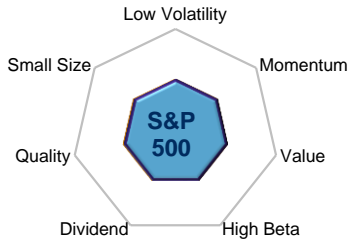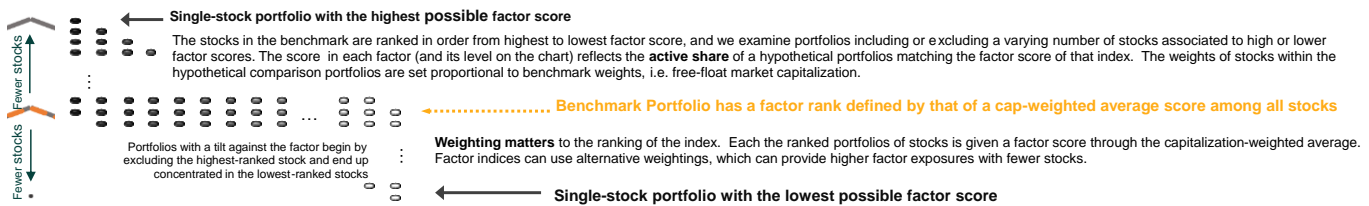

Factor	Measurement at single-stock level
Volatility	Trailing 12-month daily return volatility
Momentum	Twelve-month price change as of one month ago ("13 minus 1 momentum"), divided by the daily volatility during the twelve-month period that ended one month ago. For more details, see the S&P Momentum methodology
Value	The average of (normalized) earnings to price ratio, book to price ratio and sales to price ratio. For more details, see the S&P Value methodology.
Beta	Trailing 1 year beta of stock daily returns to the benchmark's return.
Dividend	Trailing 12-month dividend
Quality	The average of the (normalized) return on equity, the negative of the accruals ratio and the negative of the financial leverage ratio. For more details, see the S&P Quality methodology.
Size	Free-float market capitalization

Index Factor Ranking and Factor Diagram Scaling

Index Scores

Each index is provided a score in each factor from -100% to +100% based on how much of the total capitalization of the benchmark must be excluded in order to provide a portfolio of stocks with similar exposure to that factor. This is done by examining a ranked series of hypothetical cap-weighted portfolios, including or excluding an increasing number of the stocks with the highest or lowest scores. An illustration of the process may be found at this link.

Factor Diagram Axis

Single-stock portfolio with the highest possible factor score

The stocks in the benchmark are ranked in order from highest to lowest factor score, and we examine portfolios including or excluding a varying number of stocks associated to high or lower factor scores. The score in each factor (and its level on the chart) reflects the **active share** of a hypothetical portfolios matching the factor score of that index. The weights of stocks within the hypothetical comparison portfolios are set proportional to benchmark weights, i.e. free-float market capitalization.

Benchmark Portfolio has a factor rank defined by that of a cap-weighted average score among all stocks

Portfolios with a tilt against the factor begin by excluding the highest-ranked stock and end up concentrated in the lowest-ranked stocks

Weighting matters to the ranking of the index. Each the ranked portfolios of stocks is given a factor score through the capitalization-weighted average. Factor indices can use alternative weightings, which can provide higher factor exposures with fewer stocks.

Single-stock portfolio with the lowest possible factor score

Notes On Additional Index Statistics

| Statistic	Notes
Price/Earnings (P/E)	Price per share as of observation date divided by earnings per share, calculated by adding the last twelve calendar months' quarterly reported earnings per share.
Price/Book (P/B)	Price per share as of observation date divided by latest annual reported book value per share.
Price/Sales (P/S)	Price per share as of observation date divided by sales per share, calculated by adding twelve calendar months' quarterly reported sales per share.
Return on Equity (ROE%)	Earnings per share divided by latest annual reported book value per share.
Financial Leverage Ratio	A company's total debt divided by its latest annual reported book value, calculated as book value per share multiplied by common outstanding shares. Debt, book value per share, and common outstanding shares are latest annual reported values.
RSI - 30 Day	RSI is an indicator of the speed and change of price movements and oscillates between zero and 100. RSI is considered overbought when above 70 and oversold when below 30. RS is the average gain divided by average loss over the past 30 days. Then RSI is equal to 100 minus 100 divided by 1+RS.

COMMENTARY

- The diagrams below illustrate factor exposures relative to the S&P 500 across sectors.

- For example, S&P 500 Equal Weighted Consumer Discretionary has a tilt away from Low Volatility, compared to S&P Equal Weighted Consumer Staples, which has a tilt towards Low Volatility.
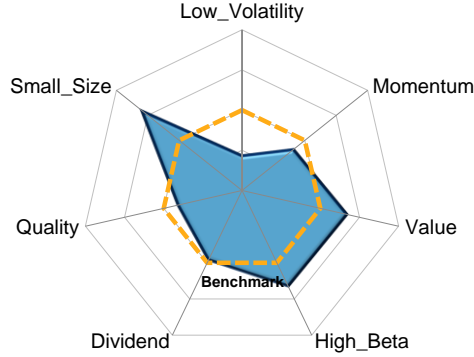
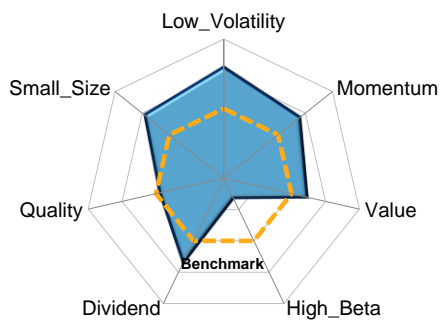**FACTOR TILTS**

S&P 500 EQUAL WEIGHTED
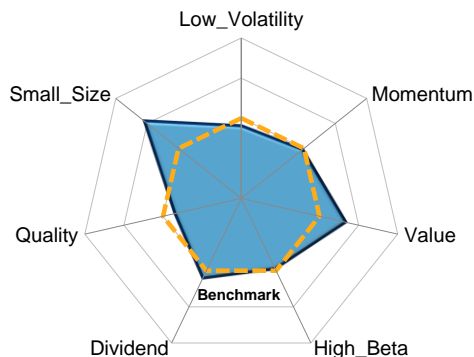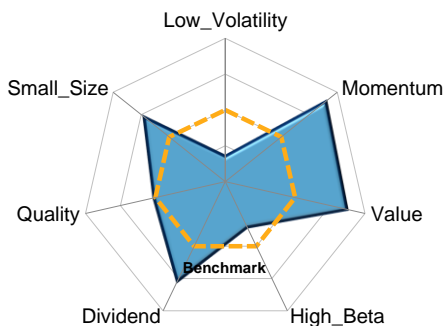

S&P 500 EQUAL WEIGHTED Communication Services
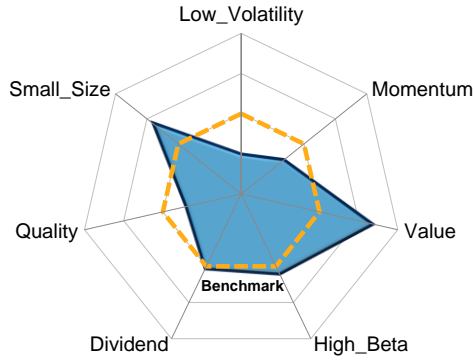
S&P 500 EQUAL WEIGHTED Consumer Discretionary
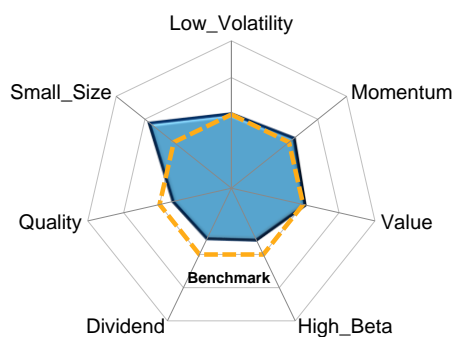

S&P 500 EQUAL WEIGHTED Consumer Staples

S&P 500 EQUAL WEIGHTED Energy

S&P 500 EQUAL WEIGHTED Financials
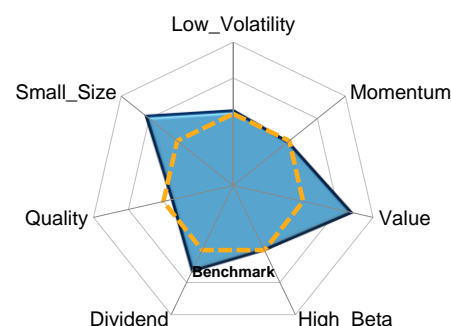
S&P 500 EQUAL WEIGHTED Health Care

S&P 500 EQUAL WEIGHTED Industrials
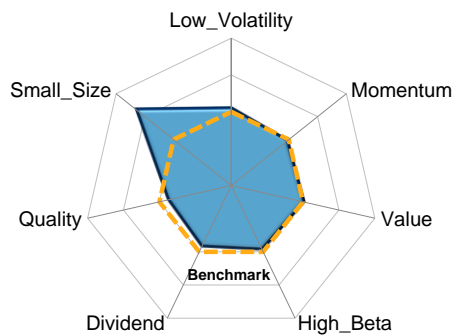
S&P 500 EQUAL WEIGHTED Information Technology

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of December 30, 2022.

FACTOR TILTS

S&P 500 EQUAL WEIGHTED Materials

S&P 500 EQUAL WEIGHTED Real Estate
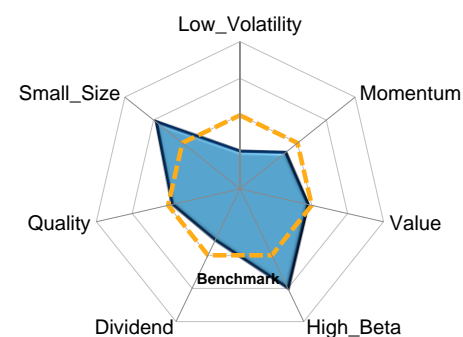
S&P 500 EQUAL WEIGHTED Utilities Plus
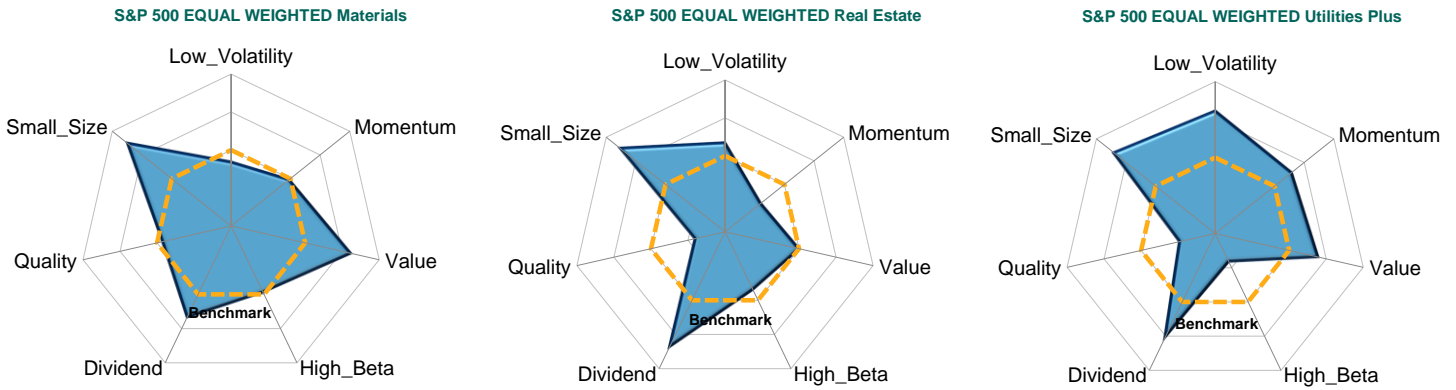
COMMENTARY

- Dispersion decreased and correlations increased across most equal weighted sectors.

EQUAL WEIGHT SECTOR DISPERSION AND CORRELATION

S&P 500 Equal Weight Sector Average Correlation and Dispersion (Trailing 12-Month Volatility)
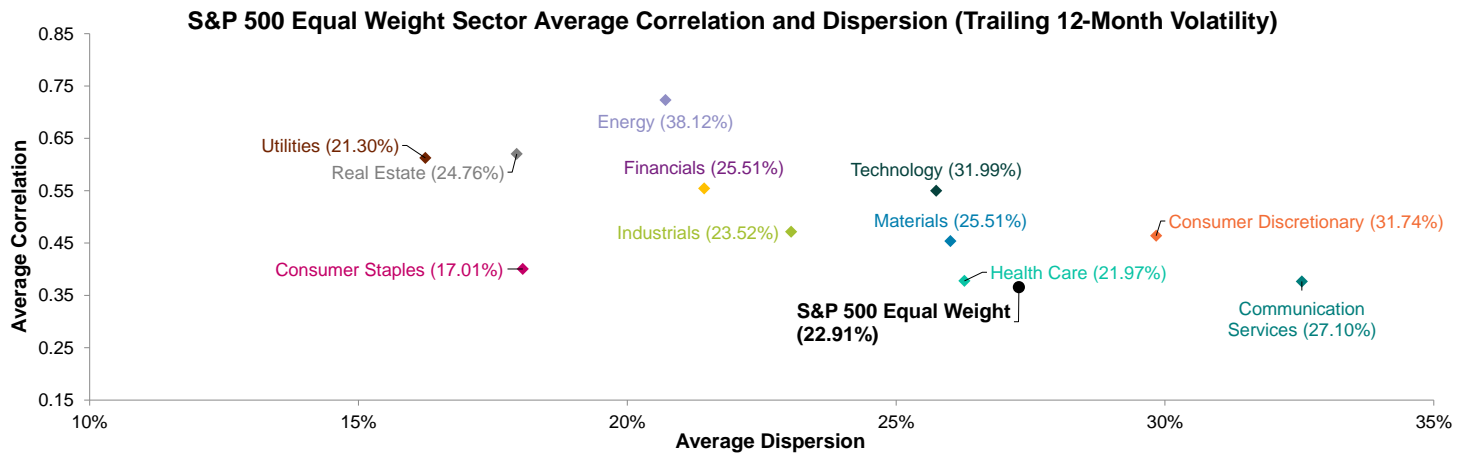
EQUAL WEIGHT VS. CAP WEIGHT CORRELATION

S&P 500 Equal Weight vs. S&P 500 Correlation - Rolling 12M average
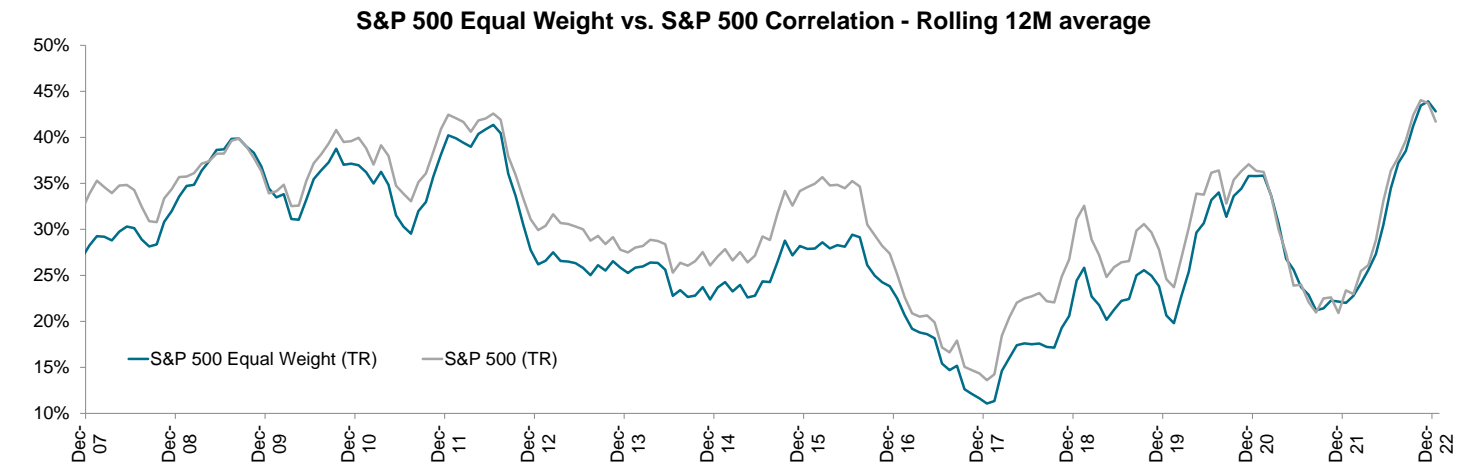
NOTES

- The charts above decomposed volatility into its two main components: dispersion and correlation. The dispersion and correlation data points are each sector's average monthly value over the trailing 12 months. Trailing annualized volatility is included in parentheses. Index dispersions shown based on calendar month stock-level index-weighted dispersion. Index correlation based on single stock daily total returns during each calendar month. See "Implications of Sector Dispersion" for more information.

- See "At the Intersection of Diversification, Volatility and Correlation" for details on the relationship between correlation and dispersion.

- See "Dispersion: Measuring Market Opportunity" for the definition of index dispersion and more information on the uses of dispersion.

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of December 30, 2022. Index performance based on total return (USD). Charts and graphs are provided for illustrative purposes. Past performance is no guarantee of future results.

SELECTED KEY METRICS - EQUAL WEIGHT SECTOR INDICES

METRICS	DIV YIELD	P/E	P/B	P/S	BETA	CONSTITUENT VOLATILITY	RSI - 30 DAY	VALUE SCORE	GROWTH SCORE
Consumer Discretionary	1.7%	22.0	3.5	1.1	1.17	43.1%	45.7	0.06	-0.08
Consumer Staples	2.7%	22.9	3.8	1.3	0.50	25.9%	54.7	0.04	0.13
Energy	3.4%	8.5	2.9	1.1	0.75	44.0%	44.1	0.20	0.59
Financials	2.7%	13.4	1.5	1.8	0.95	33.1%	45.9	0.18	0.04
Health Care	1.2%	28.9	3.8	1.5	0.82	34.2%	54.2	0.00	0.12
Industrials	1.6%	24.7	4.4	1.6	0.92	33.0%	46.3	-0.03	0.00
Information Technology	1.2%	23.4	4.3	2.9	1.28	41.7%	44.3	-0.12	0.07
Materials	2.7%	12.1	2.6	1.3	0.93	36.5%	45.3	0.15	0.15
Real Estate	3.8%	24.9	2.4	5.0	0.84	30.6%	46.7	-0.04	-0.17
Utilities Plus	3.3%	20.2	2.1	1.9	0.56	25.6%	56.0	0.12	0.08
Comm Services	1.9%	14.6	1.7	1.1	1.02	42.0%	45.1	0.31	-0.20

TOTAL WEIGHT OF LARGEST 5 COMPANIES WITHIN CAP WEIGHTED SECTORS AND EQUAL WEIGHT RELATIVE PERFORMANCE

Total Weight of Largest 5 Companies in each S&P 500 Sector
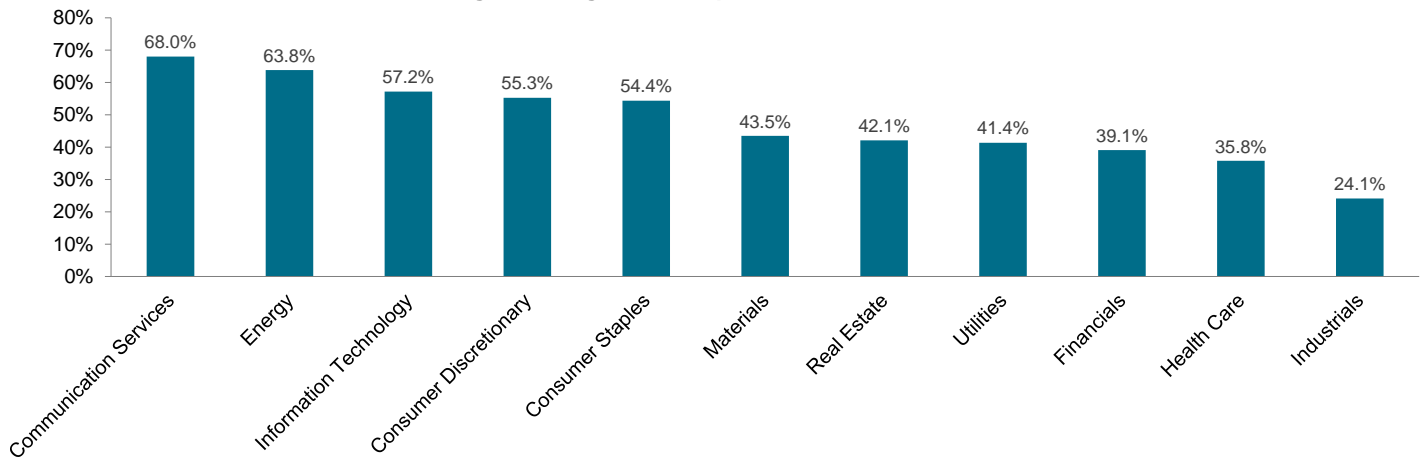
S&P 500 Weight in Top 5 Names and Equal vs. Cap-Weight Performance Differential
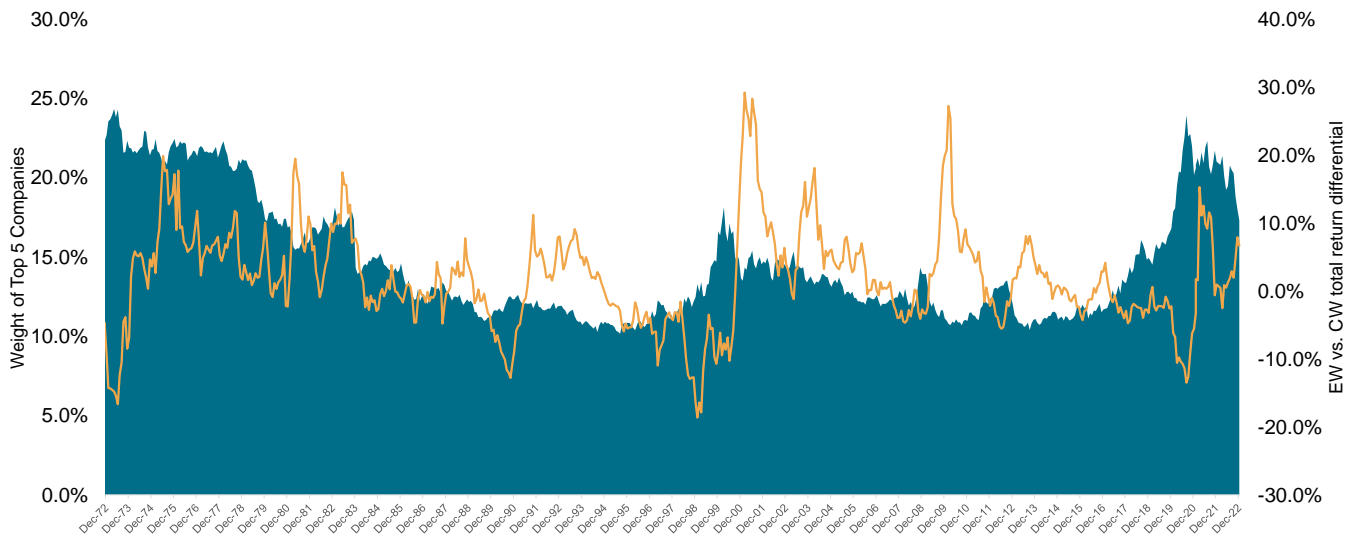
COMMENTARY

- Utilities had the highest relative strength among the equal weighted sector indices.

General Disclaimer

Performance Disclosure

The S&P 500 Equal Weight Index was launched on Jan 8th, 2003. All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance, and is based on the index methodology in effect on the index launch date. However, when creating back-tested history for periods of market anomalies or other periods that do not r eflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. In addition, forks have not been factored into the back-test data with respect to the S&P Cryptocurrency Indices. For the S&P Cryptocurrency Top 5 & 10 Equal Weight Indices, the custody element of the methodology was not considered; the back-test history is based on the index constituents that meet the custody element as of the Launch Date. Complete index methodo logy details are available at www.spglobal.com/spdji. Back -tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results.

Please refer to the methodology for the Index for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations. Back-tested performance is for use with institutions only; not for use with retail investors.

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the index is set to a fixed value for calculation purposes. The Launch Date designates the date when the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Typically, when S&P DJI creates back-tested index data, S&P DJI uses actual historical constituent-level data (e.g., historical price, market capitalization, and corporate action data) in its calculations. As ESG investing is still in early stages of development, certain datapoints used to calculate S&P DJI's ESG indices may not be available for the entire desired period of back-tested history. The same data availability issue could be true for other indices as well. In cases when actual data is not available for all relevant historical periods, S&P DJI may employ a process of using "Backward Data Assumption" (or pulling back) of ESG data for the calculation of back -tested historical performance. "Backward Data Assumption" is a process that applies the earliest actual live data point available for an index constituent company to all prior historical instances in the index performance. For example, Backward Data Assumption inherently assumes that companies currently not involved in a specific business activity (also known as "product involvement") were never involved historically and similarly also assumes that companies currently involved in a specific business activity were involved historically too. The Backward Data Assumption allows the hypothetical back-test to be extended over more historical years than would be feasible using only actual data. For more information on "Backward Data Assumption" please refer to the FAQ. The methodology and factsheets of any index that employs backward assumption in the back-tested history will explicitly state so. The methodology will include an Appendix with a table setting forth the specific data points and relevant time period for which backward projected data was used.

Index returns shown do not represent the results of actual trading of investable assets/securities. S&P Dow Jones Indices maintains the index and calculates the index levels and performance shown or discussed but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US $100,000 investment for a 12-month period (or US $10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US $1,650), the net return would be 8.35% (or US $8,350) for the year. Over a three-year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would r esult in a cumulative gross return of 33.10%, a total fee of US $5,375, and a cumulative net return of 27.2% (or US $27,200).

Notes On Additional Index Statistics

STATISTIC	NOTES
Price/Earnings (P/E)	Price per share as of observation date divided by earnings per share, calculated by adding the last twelve calendar months' quarterly reported earnings per share.
Price/Book (P/B)	Price per share as of observation date divided by latest annual reported book value per share.
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