

# S&P Dow Jones Indices

A Division of **S&P Global**

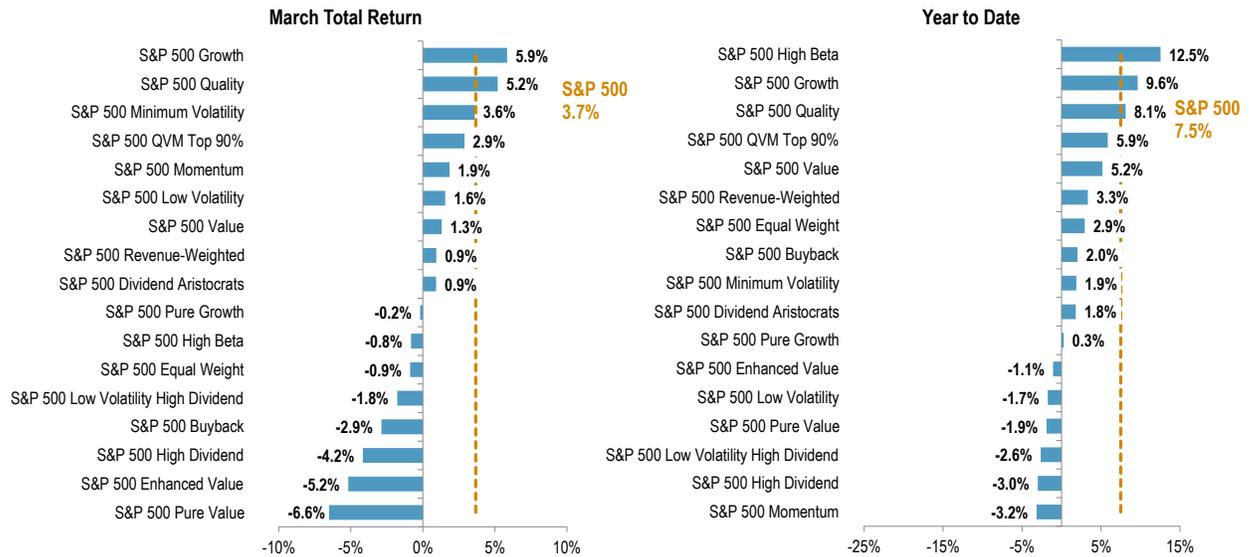
CORE PRODUCT MANAGEMENT: FACTORS

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Index Dashboard: S&P 500® Factor Indices

March 2023

## MONTHLY AND YTD PERFORMANCE SUMMARY

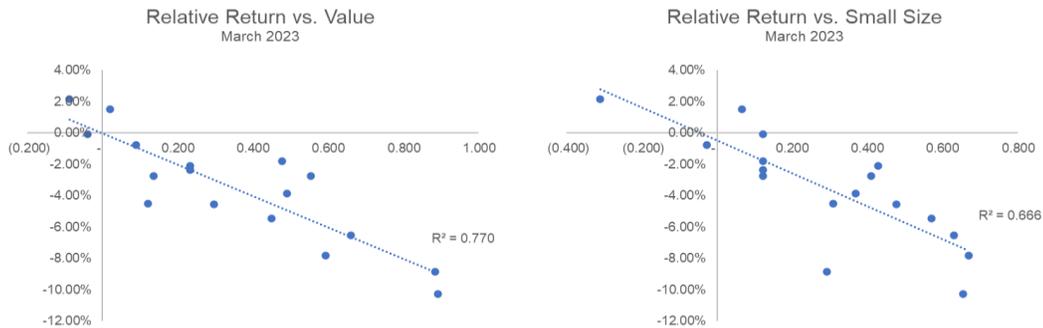


## COMMENTARY

Despite ructions in the Financials sector, the S&P 500 rose by 3.7% in March, bringing its return for the first quarter of 2023 to 7.5%. The best performer among our featured factor indices was Growth, up 5.9% for the month, while yield- and value-oriented factors clustered at the bottom of the month's league table. Growth (along with High Beta) also led the quarter's returns, with Value and dividend indices trailing.

In March, the market favored large companies and growth stocks (or, perhaps, more precisely, disfavored small companies and value stocks). Our first chart illustrates the relationship between each factor index's value tilt at the beginning of March and its subsequent relative performance. As has also been the case in February, the relationship was clearly strong and downward-sloping in March.

Our second chart shows similar results, using each factor index's small size tilt as the explanatory variable. Once again, the relationship is strong and downward-sloping. Interestingly, both value and small size were more predictive of returns in March than was a factor index's weight in the Financials sector.



Our final chart illustrates some important differences between March and the first two months of the year. The gap between Value and Growth was negligible in January and February; in March Growth outperformed by 4.5%. Similarly Equal Weight matched the S&P 500 in the first two months before falling behind by 4.6% in March. The shift between High Beta and Low Volatility was more dramatic, as High Beta's 16.7% outperformance in January and February swung to a 2.4% advantage for Low Vol in March.

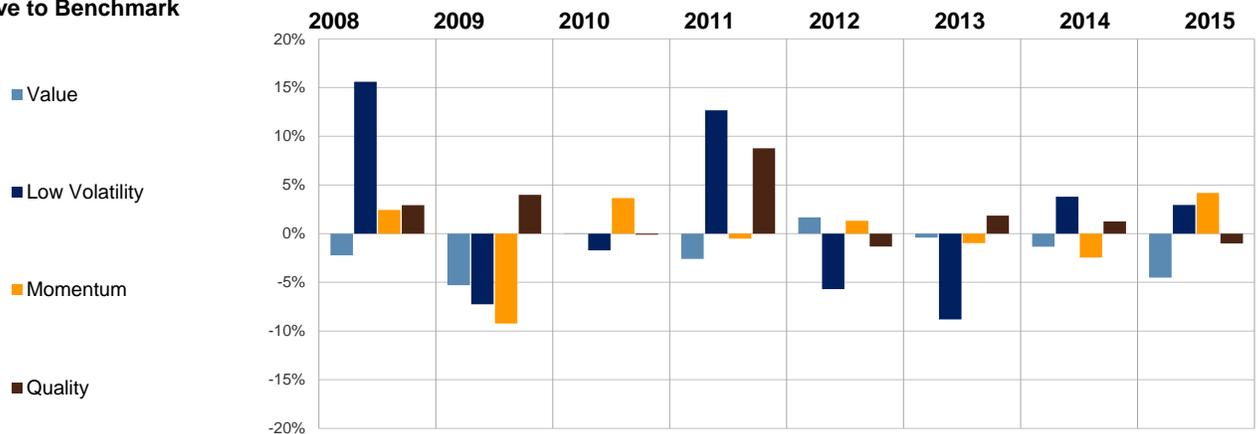


## ANNUAL PERFORMANCE

Core factor performance by calendar year, 2008-present:

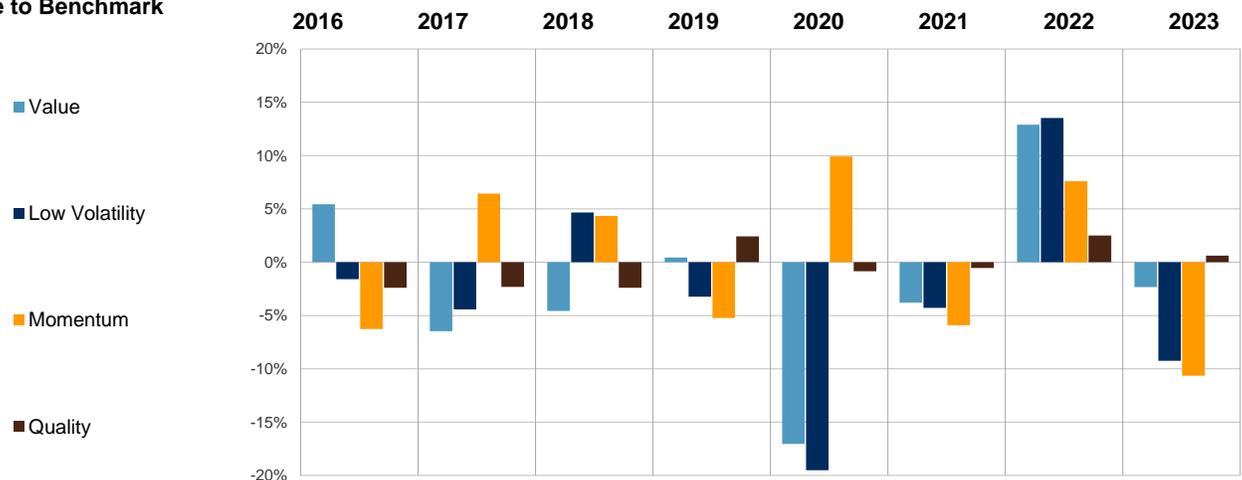
Total Return	2008	2009	2010	2011	2012	2013	2014	2015
Value	-39.22%	21.18%	15.10%	-0.48%	17.68%	31.99%	12.36%	-3.13%
Low Volatility	-21.41%	19.22%	13.36%	14.78%	10.30%	23.59%	17.49%	4.34%
Momentum	-34.56%	17.24%	18.72%	1.60%	17.33%	31.42%	11.23%	5.56%
Quality	-34.06%	30.46%	14.95%	10.89%	14.68%	34.24%	14.95%	0.38%
S&P 500	-37.00%	26.46%	15.06%	2.11%	16.00%	32.39%	13.69%	1.38%

### Relative to Benchmark



Total Return	2016	2017	2018	2019	2020	2021	2022	2023
Value	17.40%	15.36%	-8.95%	31.93%	1.36%	24.90%	-5.22%	5.17%
Low Volatility	10.37%	17.41%	0.27%	28.26%	-1.11%	24.42%	-4.59%	-1.74%
Momentum	5.70%	28.27%	-0.04%	26.25%	28.32%	22.79%	-10.51%	-3.16%
Quality	9.56%	19.51%	-6.79%	33.91%	17.55%	28.16%	-15.62%	8.11%
S&P 500	11.96%	21.83%	-4.38%	31.49%	18.40%	28.71%	-18.11%	7.50%

### Relative to Benchmark



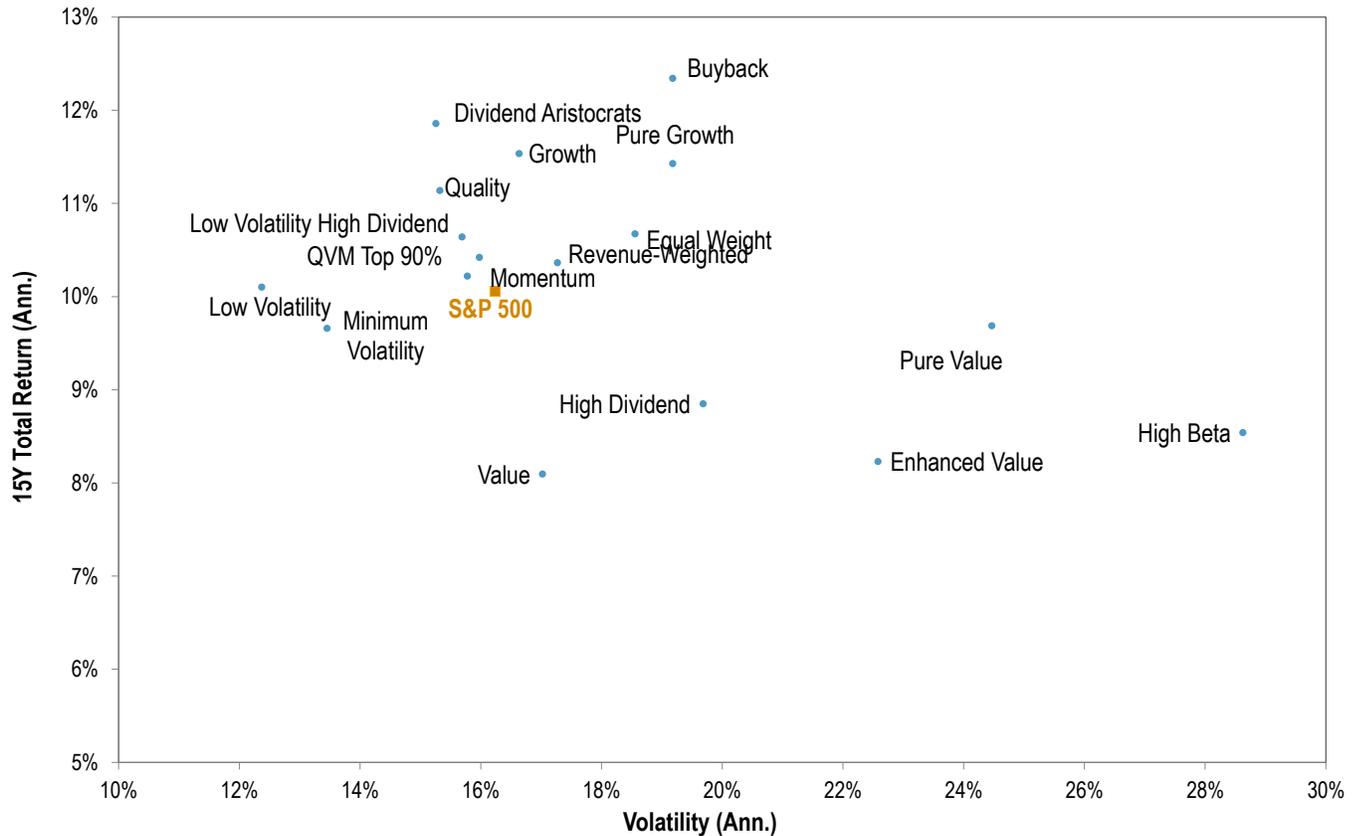
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Index Dashboard: S&P 500® Factor Indices

March 2023

## 15 YEAR RISK & RETURN - ABSOLUTE



TOTAL RETURN	1M	3M	12M	3Y	5Y	10Y	15Y
S&P 500 Buyback	-2.9%	2.0%	-4.9%	23.9%	10.1%	12.4%	12.3%
S&P 500 Dividend Aristocrats	0.9%	1.8%	-1.5%	19.4%	10.7%	11.8%	11.9%
S&P 500 Growth	5.9%	9.6%	-15.3%	16.8%	11.9%	13.6%	11.5%
S&P 500 Pure Growth	-0.2%	0.3%	-16.3%	15.7%	7.7%	11.6%	11.4%
S&P 500 Quality	5.2%	8.1%	-3.1%	18.6%	11.7%	11.9%	11.1%
S&P 500 Equal Weight	-0.9%	2.9%	-6.3%	22.1%	10.0%	11.4%	10.7%
S&P 500 Low Volatility High Dividend	-1.8%	-2.6%	-6.7%	17.2%	6.1%	9.0%	10.6%
S&P 500 QVM Top 90%	2.9%	5.9%	-6.8%	19.4%	11.6%	12.5%	10.4%
S&P 500 Revenue-Weighted	0.9%	3.3%	-3.5%	22.6%	11.3%	12.0%	10.4%
S&P 500 Momentum	1.9%	-3.2%	-8.5%	16.6%	10.8%	12.6%	10.2%
S&P 500 Low Volatility	1.6%	-1.7%	-4.6%	12.5%	8.4%	9.9%	10.1%
S&P 500 Pure Value	-6.6%	-1.9%	-8.6%	27.1%	6.1%	9.6%	9.7%
S&P 500 Minimum Volatility	3.6%	1.9%	-6.0%	15.1%	9.6%	11.1%	9.7%
S&P 500 High Dividend	-4.2%	-3.0%	-9.6%	21.2%	6.2%	9.5%	8.9%
S&P 500 High Beta	-0.8%	12.5%	-7.0%	35.5%	12.5%	13.2%	8.5%
S&P 500 Enhanced Value	-5.2%	-1.1%	-7.8%	22.6%	6.6%	9.9%	8.2%
S&P 500 Value	1.3%	5.2%	-0.2%	19.1%	9.5%	10.2%	8.1%
<b>S&amp;P 500</b>	<b>3.7%</b>	<b>7.5%</b>	<b>-7.7%</b>	<b>18.6%</b>	<b>11.2%</b>	<b>12.2%</b>	<b>10.1%</b>

VOLATILITY (ANN.)	12M	3Y	5Y	10Y	15Y
S&P 500 Buyback	24.2%	20.4%	22.1%	17.8%	19.2%
S&P 500 Dividend Aristocrats	19.7%	17.3%	17.4%	14.1%	15.3%
S&P 500 Growth	26.0%	22.4%	20.3%	16.1%	16.6%
S&P 500 Pure Growth	26.6%	23.9%	22.3%	17.7%	19.2%
S&P 500 Quality	23.2%	18.4%	17.8%	14.4%	15.3%
S&P 500 Equal Weight	23.1%	19.5%	20.3%	16.0%	18.6%
S&P 500 Low Volatility High Dividend	19.7%	17.3%	18.9%	14.9%	15.7%
S&P 500 QVM Top 90%	21.9%	18.5%	18.3%	14.7%	16.0%
S&P 500 Revenue-Weighted	22.1%	18.4%	18.9%	15.2%	17.3%
S&P 500 Momentum	21.9%	18.8%	17.9%	14.6%	15.8%
S&P 500 Low Volatility	14.6%	14.4%	14.8%	12.3%	12.4%
S&P 500 Pure Value	26.7%	22.4%	25.7%	20.3%	24.5%
S&P 500 Minimum Volatility	17.3%	15.9%	16.1%	12.8%	13.5%
S&P 500 High Dividend	22.5%	19.7%	22.2%	17.1%	19.7%
S&P 500 High Beta	35.0%	30.2%	30.5%	24.4%	28.6%
S&P 500 Enhanced Value	26.8%	22.7%	24.6%	19.6%	22.6%
S&P 500 Value	21.3%	17.4%	18.4%	14.8%	17.0%
<b>S&amp;P 500</b>	<b>22.7%</b>	<b>19.0%</b>	<b>18.5%</b>	<b>14.8%</b>	<b>16.2%</b>

Performance figures for more than one year are annualized.

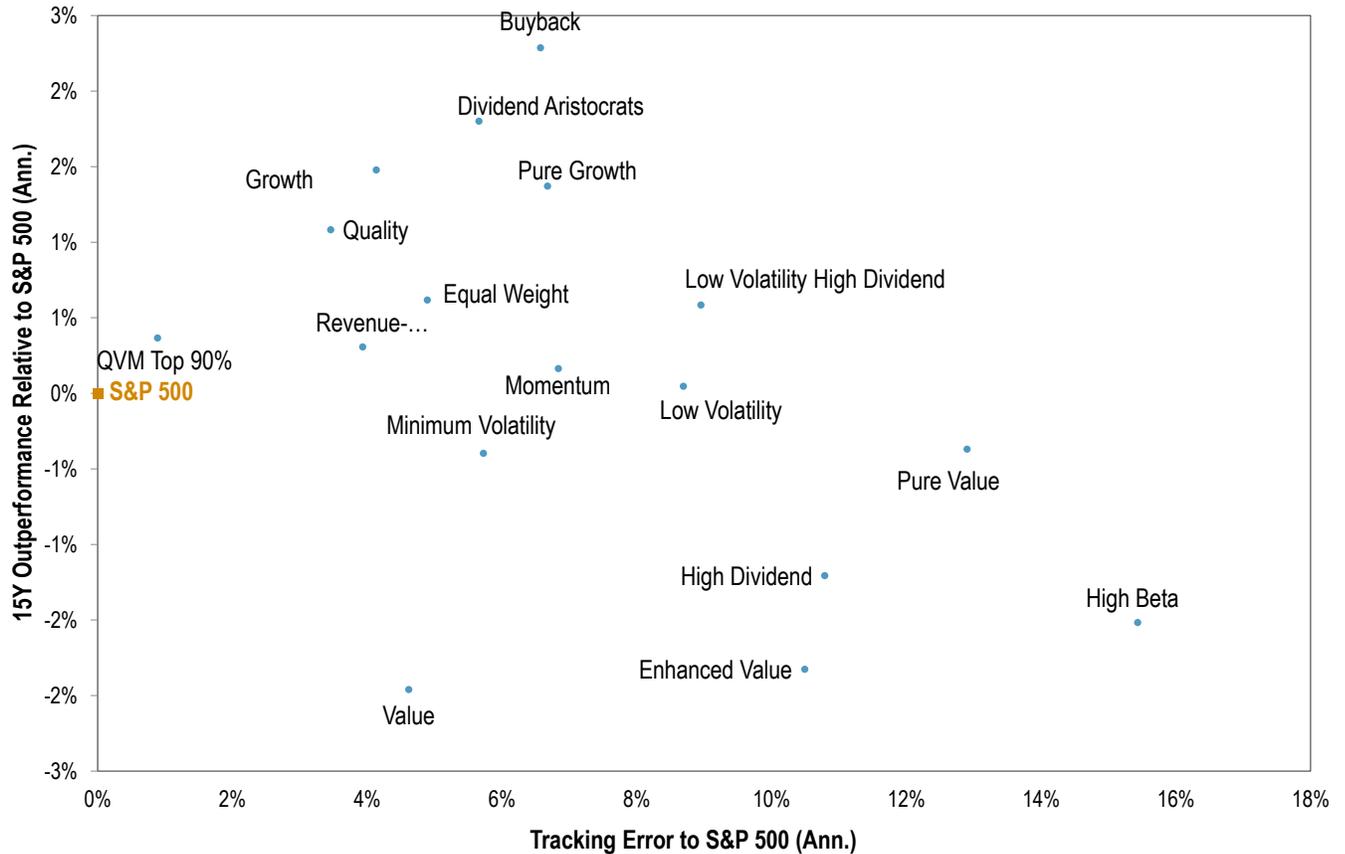
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Index Dashboard: S&P 500® Factor Indices

March 2023

## TO S&P 500



## RELATIVE RETURN AND TRACKING ERROR

PERFORMANCE v S&P 500	1M	3M	1YR	3YR	5YR	10YR	15YR	TRACKING ERROR v S&P 500 (ANN.)	1YR	3YR	5YR	10YR	15YR
S&P 500 Buyback	-6.6%	-5.5%	2.9%	5.3%	-1.1%	0.1%	2.3%	S&P 500 Buyback	9.3%	7.9%	8.2%	6.6%	6.6%
S&P 500 Dividend Aristocrats	-2.7%	-5.7%	6.2%	0.8%	-0.5%	-0.5%	1.8%	S&P 500 Dividend Aristocrats	8.1%	6.8%	6.1%	5.1%	5.7%
S&P 500 Growth	2.2%	2.1%	-7.6%	-1.8%	0.7%	1.4%	1.5%	S&P 500 Growth	7.0%	6.6%	5.6%	4.4%	4.1%
S&P 500 Pure Growth	-3.9%	-7.2%	-8.6%	-2.9%	-3.5%	-0.6%	1.4%	S&P 500 Pure Growth	8.2%	9.7%	8.1%	6.8%	6.7%
S&P 500 Quality	1.5%	0.6%	4.7%	0.0%	0.5%	-0.4%	1.1%	S&P 500 Quality	4.3%	4.3%	4.1%	3.2%	3.5%
S&P 500 Equal Weight	-4.6%	-4.6%	1.4%	3.5%	-1.2%	-0.8%	0.6%	S&P 500 Equal Weight	6.0%	5.8%	5.5%	4.3%	4.9%
S&P 500 Low Volatility High Dividend	-5.5%	-10.1%	1.0%	-1.4%	-5.1%	-3.3%	0.6%	S&P 500 Low Volatility High Dividend	12.7%	11.5%	10.5%	9.1%	9.0%
S&P 500 QVM Top 90%	-0.8%	-1.6%	0.9%	0.8%	0.4%	0.2%	0.4%	S&P 500 QVM Top 90%	2.0%	1.4%	1.1%	0.9%	0.9%
S&P 500 Revenue-Weighted	-2.7%	-4.2%	4.2%	4.0%	0.1%	-0.2%	0.3%	S&P 500 Revenue-Weighted	5.7%	6.0%	5.3%	4.1%	3.9%
S&P 500 Momentum	-1.8%	-10.7%	-0.8%	-2.1%	-0.4%	0.4%	0.2%	S&P 500 Momentum	10.3%	8.3%	7.5%	6.3%	6.8%
S&P 500 Low Volatility	-2.1%	-9.2%	3.1%	-6.1%	-2.8%	-2.3%	0.0%	S&P 500 Low Volatility	12.2%	10.4%	9.6%	8.3%	8.7%
S&P 500 Pure Value	-10.3%	-9.4%	-0.8%	8.5%	-5.1%	-2.7%	-0.4%	S&P 500 Pure Value	15.5%	13.9%	14.3%	10.9%	12.9%
S&P 500 Minimum Volatility	-0.1%	-5.6%	1.8%	-3.5%	-1.6%	-1.1%	-0.4%	S&P 500 Minimum Volatility	7.6%	6.0%	5.1%	5.0%	5.7%
S&P 500 High Dividend	-7.8%	-10.5%	-1.8%	2.6%	-5.0%	-2.8%	-1.2%	S&P 500 High Dividend	12.9%	12.7%	12.6%	10.2%	10.8%
S&P 500 High Beta	-4.5%	5.0%	0.7%	16.9%	1.3%	0.9%	-1.5%	S&P 500 High Beta	15.0%	16.9%	16.1%	13.3%	15.4%
S&P 500 Enhanced Value	-8.8%	-8.6%	-0.1%	4.0%	-4.6%	-2.4%	-1.8%	S&P 500 Enhanced Value	13.3%	12.9%	12.8%	10.1%	10.5%
S&P 500 Value	-2.4%	-2.3%	7.6%	0.5%	-1.7%	-2.1%	-2.0%	S&P 500 Value	6.9%	7.4%	6.3%	5.0%	4.6%

Performance figures for more than one year are annualized.

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Index Dashboard: S&P 500® Factor Indices

March 2023

## DEGREE OF PORTFOLIO OVERLAP AND RELATIVE RETURN CORRELATIONS

### PORTFOLIO OVERLAP

	S&P 500 Momentum	S&P 500 Growth	S&P 500 Quality	S&P 500 Pure Growth	S&P 500 Low Volatility	S&P 500 Minimum Volatility	S&P 500 QVM Top 90%	S&P 500 Dividend Aristocrats	S&P 500 Low Volatility High Dividend	S&P 500 High Dividend	S&P 500 Revenue-Weighted	S&P 500 Value	S&P 500 Equal Weight	S&P 500 Pure Value	S&P 500 Buyback	S&P 500 Enhanced Value	S&P 500 High Beta	S&P 500
S&P 500 Momentum	100%	24%	27%	29%	21%	19%	18%	13%	5%	5%	23%	7%	19%	4%	20%	18%	2%	16%
S&P 500 Growth	24%	100%	39%	26%	17%	26%	62%	15%	3%	3%	41%	29%	33%	0%	9%	5%	17%	67%
S&P 500 Quality	27%	39%	100%	16%	11%	23%	38%	17%	5%	4%	24%	23%	19%	3%	12%	10%	14%	34%
S&P 500 Pure Growth	29%	26%	16%	100%	10%	11%	18%	9%	3%	3%	15%	0%	15%	0%	22%	8%	15%	16%
S&P 500 Low Volatility	21%	17%	11%	10%	100%	30%	22%	28%	18%	17%	20%	21%	20%	9%	14%	7%	0%	20%
S&P 500 Minimum Volatility	19%	26%	23%	11%	30%	100%	30%	15%	9%	8%	24%	27%	17%	7%	7%	7%	11%	30%
S&P 500 QVM Top 90%	18%	62%	38%	18%	22%	30%	100%	17%	8%	9%	59%	59%	50%	10%	13%	14%	15%	85%
S&P 500 Dividend Aristocrats	13%	15%	17%	9%	28%	15%	17%	100%	15%	15%	17%	15%	13%	5%	10%	6%	3%	16%
S&P 500 Low Volatility High Dividend	5%	3%	5%	3%	18%	9%	8%	15%	100%	56%	9%	12%	10%	13%	5%	13%	0%	7%
S&P 500 High Dividend	5%	3%	4%	3%	17%	8%	9%	15%	56%	100%	13%	15%	16%	27%	11%	19%	6%	9%
S&P 500 Revenue-Weighted	23%	41%	24%	15%	20%	24%	59%	17%	9%	13%	100%	53%	49%	25%	21%	31%	16%	62%
S&P 500 Value	7%	29%	23%	0%	21%	27%	59%	15%	12%	15%	53%	100%	52%	17%	14%	19%	18%	62%
S&P 500 Equal Weight	19%	33%	19%	15%	20%	17%	50%	13%	10%	16%	49%	52%	100%	16%	20%	18%	20%	51%
S&P 500 Pure Value	4%	0%	3%	0%	9%	7%	10%	5%	13%	27%	25%	17%	16%	100%	25%	44%	18%	9%
S&P 500 Buyback	20%	9%	12%	22%	14%	7%	13%	10%	5%	11%	21%	14%	20%	25%	100%	25%	19%	12%
S&P 500 Enhanced Value	18%	5%	10%	8%	7%	7%	14%	6%	13%	19%	31%	19%	18%	44%	25%	100%	13%	12%
S&P 500 High Beta	2%	17%	14%	15%	0%	11%	15%	3%	0%	6%	16%	18%	20%	18%	19%	13%	100%	20%

"Portfolio Overlap" is percentage of index weights held in common between any two indices.

### RELATIVE RETURN CORRELATIONS

	S&P 500 Momentum	S&P 500 Growth	S&P 500 Quality	S&P 500 Pure Growth	S&P 500 Low Volatility	S&P 500 Minimum Volatility	S&P 500 QVM Top 90%	S&P 500 Dividend Aristocrats	S&P 500 Low Volatility High Dividend	S&P 500 High Dividend	S&P 500 Revenue-Weighted	S&P 500 Value	S&P 500 Equal Weight	S&P 500 Pure Value	S&P 500 Buyback	S&P 500 Enhanced Value	S&P 500 High Beta
S&P 500 Momentum	1.00	0.21	0.37	0.34	0.16	0.10	0.12	-0.30	-0.30	-0.38	-0.22	-0.29	-0.38	-0.37	-0.31	-0.35	-0.54
S&P 500 Growth	0.21	1.00	-0.10	0.47	-0.52	-0.43	-0.38	-0.81	-0.86	-0.82	-0.86	-0.98	-0.75	-0.78	-0.63	-0.76	-0.32
S&P 500 Quality	0.37	-0.10	1.00	0.03	-0.02	0.07	0.04	0.03	-0.15	-0.20	0.03	0.06	-0.15	-0.18	-0.12	-0.15	-0.29
S&P 500 Pure Growth	0.34	0.47	0.03	1.00	-0.31	-0.26	0.08	-0.44	-0.41	-0.27	-0.42	-0.46	-0.03	-0.20	0.06	-0.16	0.15
S&P 500 Low Volatility	0.16	-0.52	-0.02	-0.31	1.00	0.82	0.38	0.60	0.60	0.37	0.34	0.48	0.24	0.16	0.15	0.18	-0.36
S&P 500 Minimum Volatility	0.10	-0.43	0.07	-0.26	0.82	1.00	0.29	0.54	0.50	0.25	0.28	0.40	0.16	0.05	0.03	0.06	-0.38
S&P 500 QVM Top 90%	0.12	-0.38	0.04	0.08	0.38	0.29	1.00	0.32	0.45	0.44	0.23	0.36	0.45	0.43	0.52	0.46	0.17
S&P 500 Dividend Aristocrats	-0.30	-0.81	0.03	-0.44	0.60	0.54	0.32	1.00	0.82	0.70	0.76	0.83	0.69	0.59	0.54	0.59	0.22
S&P 500 Low Volatility High Dividend	-0.30	-0.86	-0.15	-0.41	0.60	0.50	0.45	0.82	1.00	0.92	0.79	0.88	0.79	0.78	0.69	0.78	0.36
S&P 500 High Dividend	-0.38	-0.82	-0.20	-0.27	0.37	0.25	0.44	0.70	0.92	1.00	0.79	0.86	0.88	0.92	0.81	0.91	0.60
S&P 500 Revenue-Weighted	-0.22	-0.86	0.03	-0.42	0.34	0.28	0.23	0.76	0.79	0.79	1.00	0.88	0.73	0.79	0.64	0.80	0.40
S&P 500 Value	-0.29	-0.98	0.06	-0.46	0.48	0.40	0.36	0.83	0.88	0.86	0.88	1.00	0.81	0.81	0.67	0.80	0.41
S&P 500 Equal Weight	-0.38	-0.75	-0.15	-0.03	0.24	0.16	0.45	0.69	0.79	0.88	0.73	0.81	1.00	0.90	0.91	0.89	0.75
S&P 500 Pure Value	-0.37	-0.78	-0.18	-0.20	0.16	0.05	0.43	0.59	0.78	0.92	0.79	0.81	0.90	1.00	0.87	0.96	0.73
S&P 500 Buyback	-0.31	-0.63	-0.12	0.06	0.15	0.03	0.52	0.54	0.69	0.81	0.64	0.67	0.91	0.87	1.00	0.89	0.72
S&P 500 Enhanced Value	-0.35	-0.76	-0.15	-0.16	0.18	0.06	0.46	0.59	0.78	0.91	0.80	0.80	0.89	0.96	0.89	1.00	0.71
S&P 500 High Beta	-0.54	-0.32	-0.29	0.15	-0.36	-0.38	0.17	0.22	0.36	0.60	0.40	0.41	0.75	0.73	0.72	0.71	1.00

Correlation of weekly excess total returns (versus S&P 500), last three years

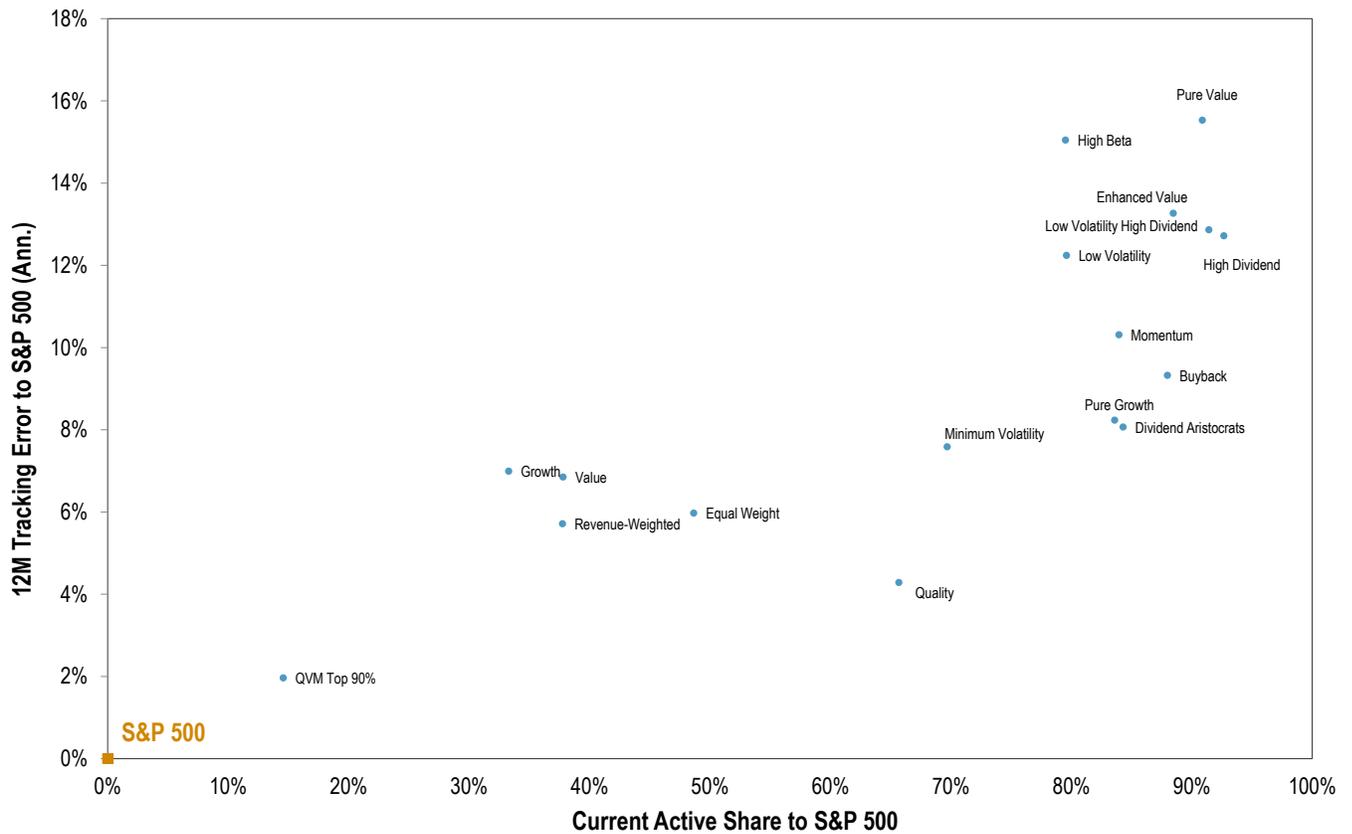
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## TRACKING ERROR & ACTIVE SHARE- RELATIVE TO S&P 500



## FACTOR EXPOSURE SUMMARY (See following pages for factor details)

INDEX	PAGE No.	LOW VOLATILITY	MOMENTUM	VALUE	HIGH BETA	DIVIDEND	QUALITY	SMALL SIZE
S&P 500 Low Volatility	7	71.4%	41.2%	28.0%	-68.5%	37.7%	0.6%	44.4%
S&P 500 Minimum Volatility	7	28.0%	8.9%	-3.7%	-31.0%	16.0%	0.6%	13.4%
S&P 500 Low Volatility High Dividend	8	37.5%	-6.8%	51.4%	-40.2%	86.4%	-42.1%	58.6%
S&P 500 High Dividend	8	6.1%	-17.3%	64.8%	-11.6%	87.2%	-43.7%	68.1%
S&P 500 Quality	9	4.0%	25.0%	-0.4%	-11.6%	9.4%	22.3%	7.1%
S&P 500 Dividend Aristocrats	9	28.9%	25.0%	21.6%	-25.6%	33.4%	-0.3%	41.9%
S&P 500 Momentum	10	18.1%	83.2%	45.8%	-57.6%	25.9%	17.8%	24.7%
S&P 500 Revenue-Weighted	10	3.8%	13.5%	57.9%	-13.0%	20.6%	4.8%	13.4%
S&P 500 QVM Top 90%	11	6.1%	4.3%	12.4%	-7.7%	9.4%	1.0%	0.0%
S&P 500 Growth	11	-2.7%	11.6%	-9.7%	1.0%	-7.0%	7.2%	-30.0%
S&P 500 Value	12	2.2%	-8.6%	28.0%	-2.2%	17.9%	-14.9%	13.4%
S&P 500 Pure Growth	12	-31.6%	60.0%	51.4%	-11.6%	21.2%	-5.1%	37.0%
S&P 500 Pure Value	13	-29.8%	-14.5%	89.9%	9.4%	48.4%	-24.7%	66.4%
S&P 500 Buyback	13	-14.9%	25.0%	69.2%	-4.5%	19.9%	0.2%	63.7%
S&P 500 High Beta	14	-74.1%	-14.5%	8.8%	74.4%	-26.3%	-36.6%	27.4%
S&P 500 Enhanced Value	14	-6.6%	11.2%	89.5%	-11.6%	61.4%	-14.9%	34.5%
S&P 500 Equal Weight	15	-3.4%	5.9%	33.6%	-2.2%	19.9%	-14.9%	47.9%

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of March 31, 2023. Returns in U.S. dollars.

# S&P Dow Jones Indices

A Division of **S&P Global**

Index Dashboard: S&P 500® Factor Indices

March 2023

## S&P 500 Low Volatility

### Description

The S&P 500 Low Volatility is designed to measure the performance of the 100 stocks in the S&P 500 with the lowest volatility, measured on a 1-year trailing basis. The weighting of each stock is in inverse proportion to its volatility. As of March 31, 2023 the index comprised 100 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	1.6%	-1.7%	-1.7%	-4.6%	12.5%	8.4%	9.9%	10.1%
Relative to Benchmark	-2.1%	-9.2%	-9.2%	3.1%	-6.1%	-2.8%	-2.3%	0.0%
Index Volatility				14.6%	14.4%	14.8%	12.3%	12.4%
Tracking Error				12.2%	10.4%	9.6%	8.3%	8.7%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.6

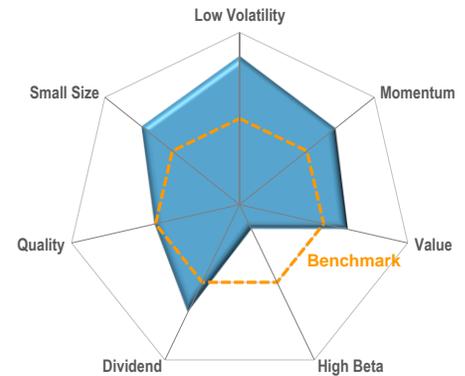
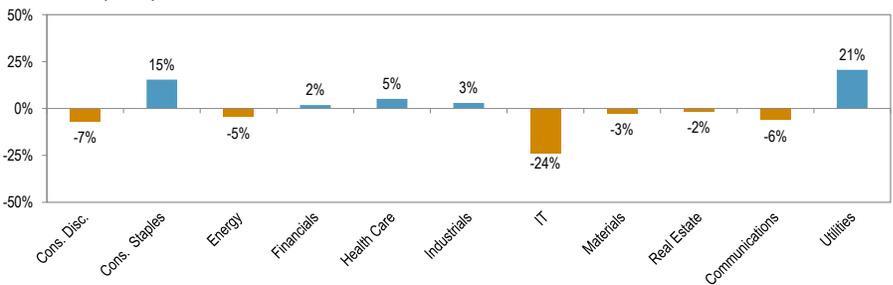
Portfolio Statistics	Index	Bmark
Active Share (Stock)	80%	0%
Active Share (Sector)	46%	0%
Concentration (HH Index)	101.2	143.2
Correlation (stock)	0.52	0.44
Ann. Turnover (last 10 yr)	0.64	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	24%	35%
12M - 1M price return	5%	-4%
Book/Price	0.33	0.24
Earnings/Price	0.04	0.04
Sales/Price	0.54	0.41
Stock Beta	0.61	1.02
Yield (12M trailing)	2.5%	1.7%
R.O.E.	21%	32%
Market Cap (U.S. \$ bn)	80.0	515.6

### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Difference
Utilities	24%	3%	21%
Cons. Staples	22%	7%	15%
IT	2%	26%	24%
Cons. Disc.	4%	10%	7%

### Sector Tilts (Detail)



Factor Exposure Chart

## S&P 500 Minimum Volatility

### Description

The S&P 500 Minimum Volatility uses an optimization process to find the portfolio of S&P 500 stocks, and weights, that would have demonstrated the lowest volatility on a historical basis, subject to constraints maintaining limiting sector and factor exposures. As of March 31, 2023 the index comprised 87 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	3.6%	1.9%	1.9%	-6.0%	15.1%	9.6%	11.1%	9.7%
Relative to Benchmark	-0.1%	-5.6%	-5.6%	1.8%	-3.5%	-1.6%	-1.1%	-0.4%
Index Volatility				17.3%	15.9%	16.1%	12.8%	13.5%
Tracking Error				7.6%	6.0%	5.1%	5.0%	5.7%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.79

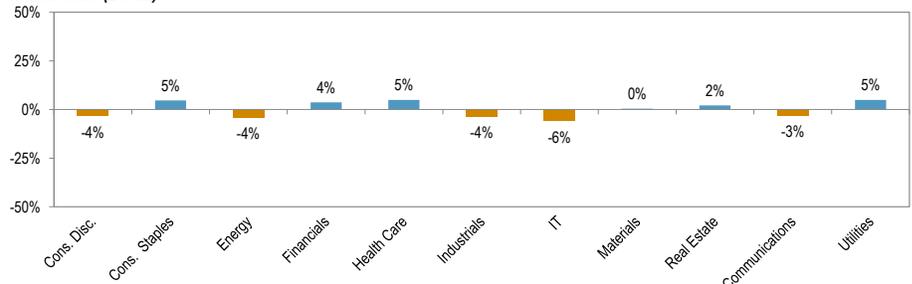
Portfolio Statistics	Index	Bmark
Active Share (Stock)	70%	0%
Active Share (Sector)	21%	0%
Concentration (HH Index)	153.9	143.2
Correlation (stock)	0.43	0.44
Ann. Turnover (last 10 yr)	0.28	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	29%	35%
12M - 1M price return	-2%	-4%
Book/Price	0.26	0.24
Earnings/Price	0.03	0.04
Sales/Price	0.36	0.41
Stock Beta	0.84	1.02
Yield (12M trailing)	2.0%	1.7%
R.O.E.	25%	32%
Market Cap (U.S. \$ bn)	241.3	515.6

### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Difference
Health Care	20%	15%	5%
Utilities	8%	3%	5%
IT	20%	26%	6%
Energy	1%	5%	4%

### Sector Tilts (Detail)



Factor Exposure Chart

# S&P Dow Jones Indices

A Division of **S&P Global**

Index Dashboard: S&P 500® Factor Indices  
March 2023

## S&P 500 Low Volatility High Dividend

### Description

The S&P 500 Low Volatility High Dividend measures the performance of the 50 least-volatile high dividend-yielding stocks in the S&P 500. Each component is weighted proportionally to its dividend yield, subject to single stock and sector constraints. As of March 31, 2023 the index comprised 50 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-1.8%	-2.6%	-2.6%	-6.7%	17.2%	6.1%	9.0%	10.6%
Relative to Benchmark	-5.5%	-10.1%	-10.1%	1.0%	-1.4%	-5.1%	-3.3%	0.6%
Index Volatility				19.7%	17.3%	18.9%	14.9%	15.7%
Tracking Error				12.7%	11.5%	10.5%	9.1%	9.0%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.68

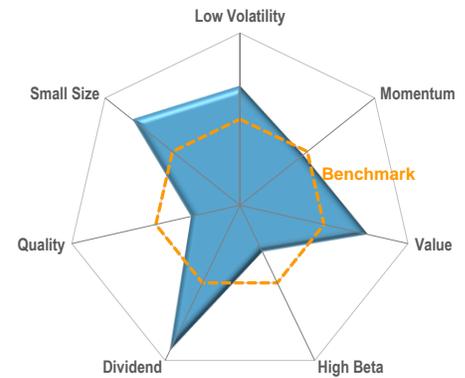
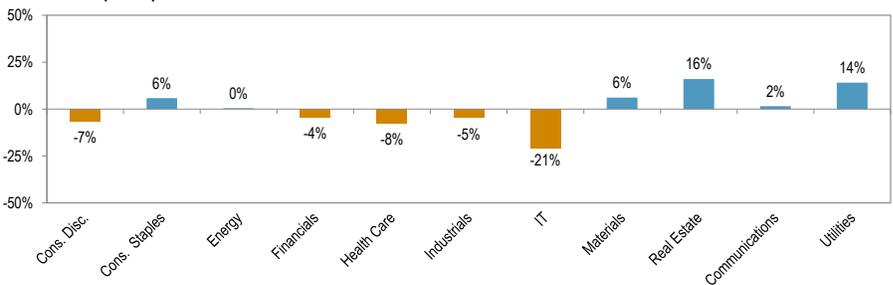
Portfolio Statistics	Index	Bmark
Active Share (Stock)	93%	0%
Active Share (Sector)	44%	0%
Concentration (HH Index)	208.2	143.2
Correlation (stock)	0.44	0.44
Ann. Turnover (last 10 yr)	0.66	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	29%	35%
12M - 1M price return	-5%	-4%
Book/Price	0.45	0.24
Earnings/Price	0.05	0.04
Sales/Price	0.61	0.41
Stock Beta	0.80	1.02
Yield (12M trailing)	4.8%	1.7%
R.O.E.	21%	32%
Market Cap (U.S. \$ bn)	53.6	515.6

### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Real Estate	19%	3%	16%
Utilities	17%	3%	14%
IT	6%	26%	21%
Health Care	8%	15%	8%

### Sector Tilts (Detail)



Factor Exposure Chart

## S&P 500 High Dividend

### Description

The S&P 500 High Dividend is constructed from the 80 constituents of the S&P 500 with the highest indicated dividend yield. The index is equal weighted. As of March 31, 2023 the index comprised 80 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-4.2%	-3.0%	-3.0%	-9.6%	21.2%	6.2%	9.5%	8.9%
Relative to Benchmark	-7.8%	-10.5%	-10.5%	-1.8%	2.6%	-5.0%	-2.8%	-1.2%
Index Volatility				22.5%	19.7%	22.2%	17.1%	19.7%
Tracking Error				12.9%	12.7%	12.6%	10.2%	10.8%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.8

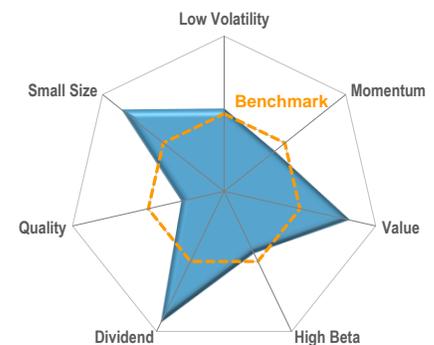
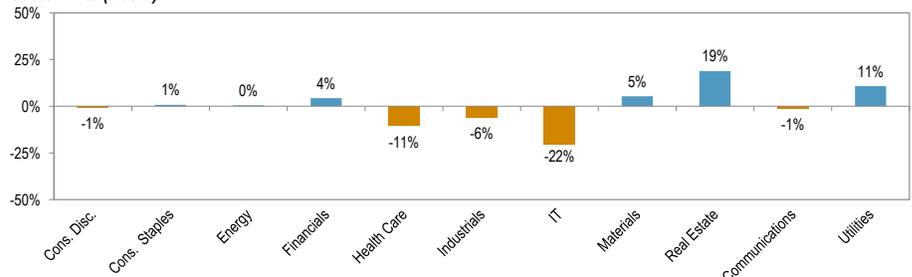
Portfolio Statistics	Index	Bmark
Active Share (Stock)	91%	0%
Active Share (Sector)	40%	0%
Concentration (HH Index)	126.7	143.2
Correlation (stock)	0.41	0.44
Ann. Turnover (last 10 yr)	0.44	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	33%	35%
12M - 1M price return	-10%	-4%
Book/Price	0.52	0.24
Earnings/Price	0.06	0.04
Sales/Price	0.82	0.41
Stock Beta	0.94	1.02
Yield (12M trailing)	4.9%	1.7%
R.O.E.	18%	32%
Market Cap (U.S. \$ bn)	39.4	515.6

### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Real Estate	21%	3%	19%
Utilities	14%	3%	11%
IT	4%	26%	22%
Health Care	5%	15%	11%

### Sector Tilts (Detail)



Factor Exposure Chart

# S&P Dow Jones Indices

A Division of **S&P Global**

Index Dashboard: S&P 500® Factor Indices

March 2023

## S&P 500 Quality

### Description

The S&P 500 Quality is designed to track the 100 stocks in the S&P 500 with the highest quality score, which is calculated based on return on equity, accruals ratio and financial leverage ratio. The weighting is proportional to both the quality score, and the market capitalization, of each component, subject to single stock and sector constraints. As of March 31, 2023 the index comprised 100 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	5.2%	8.1%	8.1%	-3.1%	18.6%	11.7%	11.9%	11.1%
Relative to Benchmark	1.5%	0.6%	0.6%	4.7%	0.0%	0.5%	-0.4%	1.1%
Index Volatility				23.2%	18.4%	17.8%	14.4%	15.3%
Tracking Error				4.3%	4.3%	4.1%	3.2%	3.5%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.96

### Portfolio Statistics

	Index	Bmark
Active Share (Stock)	66%	0%
Active Share (Sector)	17%	0%
Concentration (HH Index)	267.7	143.2
Correlation (stock)	0.48	0.44
Ann. Turnover (last 10 yr)	0.63	0.04

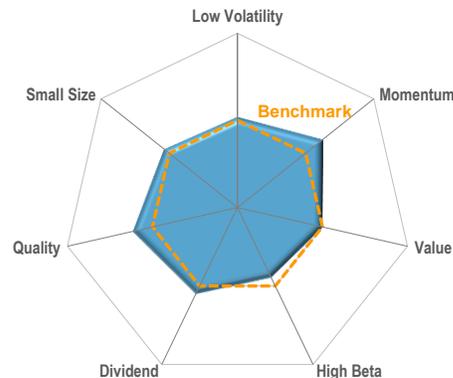
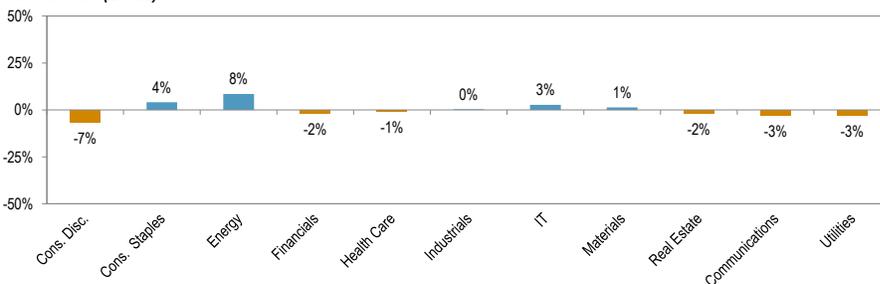
### Index-Weighted Avg.

	Index	Bmark
Stock Volatility	33%	35%
12M - 1M price return	3%	-4%
Book/Price	0.17	0.24
Earnings/Price	0.05	0.04
Sales/Price	0.38	0.41
Stock Beta	0.95	1.02
Yield (12M trailing)	1.8%	1.7%
R.O.E.	48%	32%
Market Cap (U.S. \$ bn)	450.5	515.6

### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Energy	14%	5%	8%
Cons. Staples	11%	7%	4%
Cons. Disc.	4%	10%	7%
Communications	4%	7%	3%

### Sector Tilts (Detail)



Factor Exposure Chart

## S&P 500 Dividend Aristocrats

### Description

The S&P 500 Dividend Aristocrats measures the performance S&P 500 companies that have increased dividends every year for the last 25 consecutive years. The Index is equally weighted at each rebalance. As of March 31, 2023 the index comprised 66 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	0.9%	1.8%	1.8%	-1.5%	19.4%	10.7%	11.8%	11.9%
Relative to Benchmark	-2.7%	-5.7%	-5.7%	6.2%	0.8%	-0.5%	-0.5%	1.8%
Index Volatility				19.7%	17.3%	17.4%	14.1%	15.3%
Tracking Error				8.1%	6.8%	6.1%	5.1%	5.7%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.79

### Portfolio Statistics

	Index	Bmark
Active Share (Stock)	84%	0%
Active Share (Sector)	45%	0%
Concentration (HH Index)	152.6	143.2
Correlation (stock)	0.48	0.44
Ann. Turnover (last 10 yr)	0.19	0.04

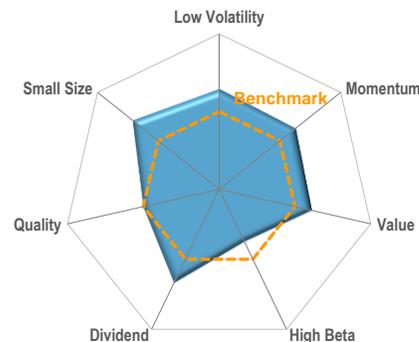
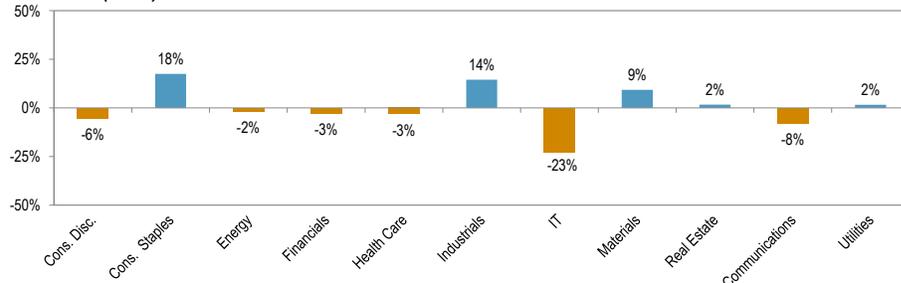
### Index-Weighted Avg.

	Index	Bmark
Stock Volatility	29%	35%
12M - 1M price return	2%	-4%
Book/Price	0.26	0.24
Earnings/Price	0.04	0.04
Sales/Price	0.59	0.41
Stock Beta	0.87	1.02
Yield (12M trailing)	2.4%	1.7%
R.O.E.	29%	32%
Market Cap (U.S. \$ bn)	86.1	515.6

### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Cons. Staples	24%	7%	18%
Industrials	23%	8%	14%
IT	3%	26%	23%
Communications	-1%	7%	8%

### Sector Tilts (Detail)



Factor Exposure Chart

# S&P Dow Jones Indices

A Division of **S&P Global**

## Index Dashboard: S&P 500® Factor Indices

March 2023

### S&P 500 Momentum

#### Description

The S&P 500 Momentum comprises the top 100 stocks in the S&P 500 based on 12M prior risk-adjusted performance (excluding the most recent month at the rebalance). The weighting is inversely proportional to the trailing volatility of each component, subject to single stock and sector constraints. As of March 31, 2023 the index comprised 100 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	1.9%	-3.2%	-3.2%	-8.5%	16.6%	10.8%	12.6%	10.2%
Relative to Benchmark	-1.8%	-10.7%	-10.7%	-0.8%	-2.1%	-0.4%	0.4%	0.2%
Index Volatility				21.9%	18.8%	17.9%	14.6%	15.8%
Tracking Error				10.3%	8.3%	7.5%	6.3%	6.8%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.79

#### Portfolio Statistics

	Index	Bmark
Active Share (Stock)	84%	0%
Active Share (Sector)	48%	0%
Concentration (HH Index)	302.9	143.2
Correlation (stock)	0.48	0.44
Ann. Turnover (last 10 yr)	1.14	0.04

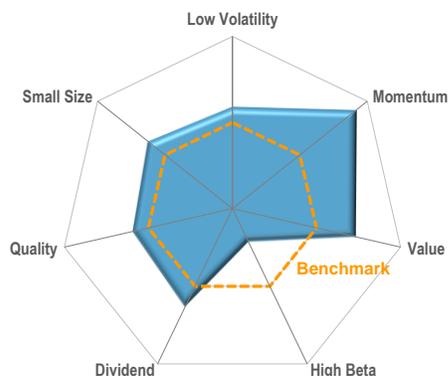
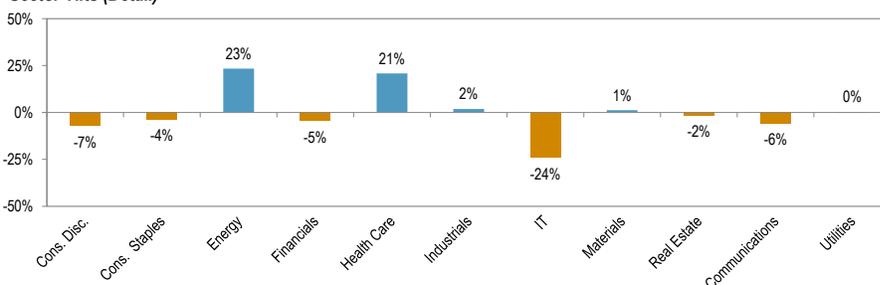
#### Index-Weighted Avg.

	Index	Bmark
Stock Volatility	30%	35%
12M - 1M price return	26%	-4%
Book/Price	0.28	0.24
Earnings/Price	0.07	0.04
Sales/Price	0.68	0.41
Stock Beta	0.68	1.02
Yield (12M trailing)	2.3%	1.7%
R.O.E.	32%	32%
Market Cap (U.S. \$ bn)	156.4	515.6

#### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Energy	29%	5%	23%
Health Care	36%	15%	21%
IT	2%	26%	24%
Cons. Disc.	3%	10%	7%

#### Sector Tilts (Detail)



Factor Exposure Chart

### S&P 500 Revenue-Weighted

#### Description

The S&P 500 Revenue-Weighted comprises all the constituents of the S&P 500, weighted in proportion to revenues. As of March 31, 2023 the index comprised 502 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	0.9%	3.3%	3.3%	-3.5%	22.6%	11.3%	12.0%	10.4%
Relative to Benchmark	-2.7%	-4.2%	-4.2%	4.2%	4.0%	0.1%	-0.2%	0.3%
Index Volatility				22.1%	18.4%	18.9%	15.2%	17.3%
Tracking Error				5.7%	6.0%	5.3%	4.1%	3.9%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.88

#### Portfolio Statistics

	Index	Bmark
Active Share (Stock)	38%	0%
Active Share (Sector)	19%	0%
Concentration (HH Index)	96.3	143.2
Correlation (stock)	0.39	0.44
Ann. Turnover (last 10 yr)	0.20	0.04

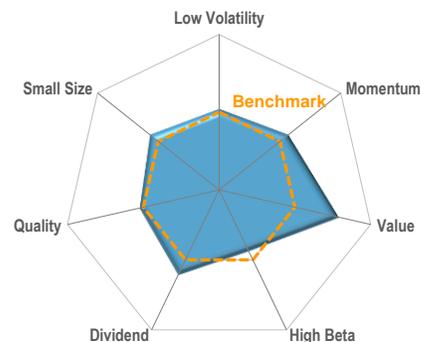
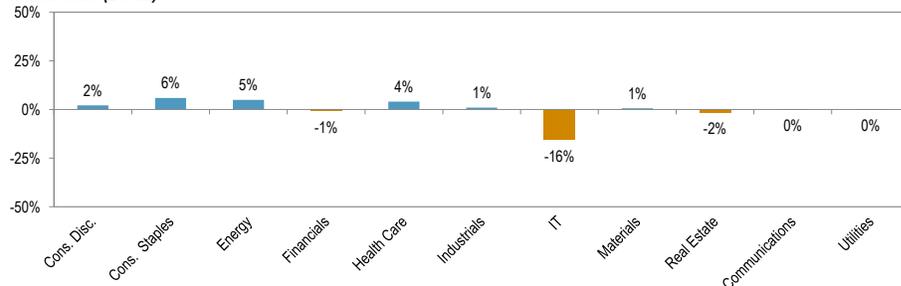
#### Index-Weighted Avg.

	Index	Bmark
Stock Volatility	34%	35%
12M - 1M price return	0%	-4%
Book/Price	0.35	0.24
Earnings/Price	0.05	0.04
Sales/Price	1.09	0.41
Stock Beta	0.92	1.02
Yield (12M trailing)	2.1%	1.7%
R.O.E.	25%	32%
Market Cap (U.S. \$ bn)	280.4	515.6

#### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Cons. Staples	13%	7%	6%
Energy	10%	5%	5%
IT	11%	26%	16%
Real Estate	1%	3%	2%

#### Sector Tilts (Detail)



Factor Exposure Chart

# S&P Dow Jones Indices

A Division of **S&P Global**

## Index Dashboard: S&P 500® Factor Indices

March 2023

### S&P 500 QVM Top 90%

#### Description

The S&P 500 Quality, Value & Momentum Top 90% Multi-factor Index is designed to measure the performance of 90% of the stocks within the S&P 500, after excluding those with the lowest quality, value, and momentum as determined by a multi-factor score. As of March 31, 2023 the index comprised 449 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	2.9%	5.9%	5.9%	-6.8%	19.4%	11.6%	12.5%	10.4%
Relative to Benchmark	-0.8%	-1.6%	-1.6%	0.9%	0.8%	0.4%	0.2%	0.4%
Index Volatility				21.9%	18.5%	18.3%	14.7%	16.0%
Tracking Error				2.0%	1.4%	1.1%	0.9%	0.9%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.97

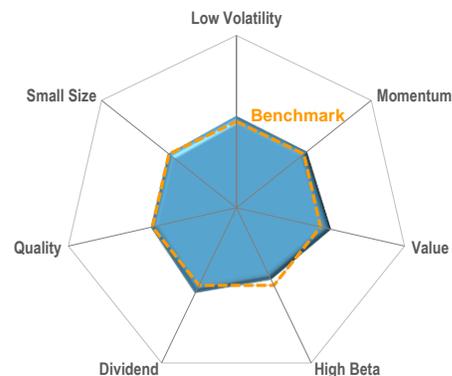
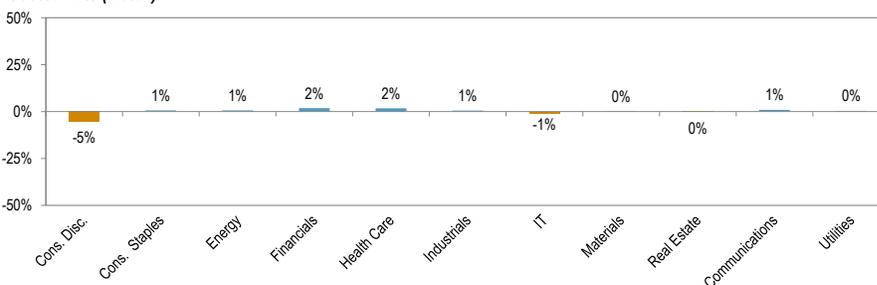
Portfolio Statistics	Index	Bmark
Active Share (Stock)	15%	0%
Active Share (Sector)	7%	0%
Concentration (HH Index)	169.8	143.2
Correlation (stock)	0.49	0.44
Ann. Turnover (last 10 yr)	0.19	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	33%	35%
12M - 1M price return	-2%	-4%
Book/Price	0.27	0.24
Earnings/Price	0.05	0.04
Sales/Price	0.44	0.41
Stock Beta	0.96	1.02
Yield (12M trailing)	1.8%	1.7%
R.O.E.	34%	32%
Market Cap (U.S. \$ bn)	515.7	515.6

#### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Financials	13%	12%	2%
Health Care	17%	15%	2%
Cons. Disc.	5%	10%	5%
IT	25%	26%	1%

#### Sector Tilts (Detail)



Factor Exposure Chart

### S&P 500 Growth

#### Description

The S&P 500 Growth is comprised of S&P 500 stocks with above-average combinations of the ratio of earnings growth to price, sales growth, and momentum. The weighting is by capitalization, although the weight of some stocks is divided between the Value and Growth indices. As of March 31, 2023 the index comprised 231 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	5.9%	9.6%	9.6%	-15.3%	16.8%	11.9%	13.6%	11.5%
Relative to Benchmark	2.2%	2.1%	2.1%	-7.6%	-1.8%	0.7%	1.4%	1.5%
Index Volatility				26.0%	22.4%	20.3%	16.1%	16.6%
Tracking Error				7.0%	6.6%	5.6%	4.4%	4.1%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.2

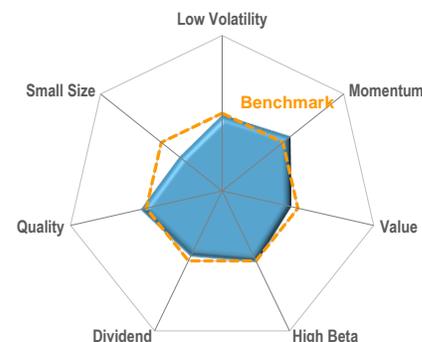
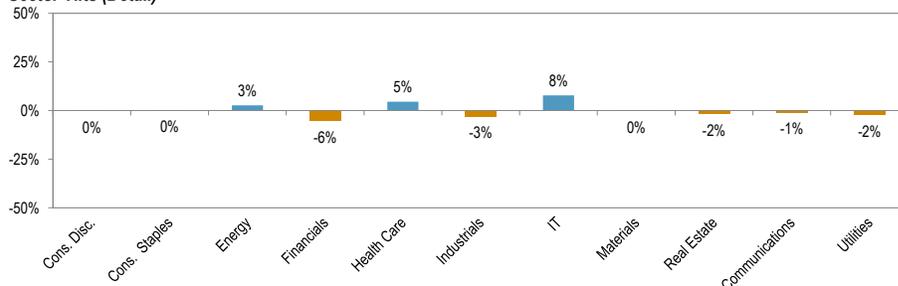
Portfolio Statistics	Index	Bmark
Active Share (Stock)	33%	0%
Active Share (Sector)	15%	0%
Concentration (HH Index)	328.3	143.2
Correlation (stock)	0.64	0.44
Ann. Turnover (last 10 yr)	0.25	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	35%	35%
12M - 1M price return	-1%	-4%
Book/Price	0.14	0.24
Earnings/Price	0.04	0.04
Sales/Price	0.30	0.41
Stock Beta	1.02	1.02
Yield (12M trailing)	1.4%	1.7%
R.O.E.	43%	32%
Market Cap (U.S. \$ bn)	720.6	515.6

#### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
IT	34%	26%	8%
Health Care	20%	15%	5%
Financials	6%	12%	6%
Industrials	5%	8%	3%

#### Sector Tilts (Detail)



Factor Exposure Chart

# S&P Dow Jones Indices

A Division of **S&P Global**

Index Dashboard: **S&P 500® Factor Indices**

March 2023

## S&P 500 Value

### Description

The S&P 500 Value comprises S&P 500 stocks with above-average combinations of book value-to-price, earnings-to-price, and sales-to-price. The weighting is by capitalization, although the weight of some stocks is divided between the Value and Growth indices. As of March 31, 2023 the index comprised 405 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	1.3%	5.2%	5.2%	-0.2%	19.1%	9.5%	10.2%	8.1%
Relative to Benchmark	-2.4%	-2.3%	-2.3%	7.6%	0.5%	-1.7%	-2.1%	-2.0%
Index Volatility				21.3%	17.4%	18.4%	14.8%	17.0%
Tracking Error				6.9%	7.4%	6.3%	5.0%	4.6%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.82

### Portfolio Statistics

	Index	Bmark
Active Share (Stock)	38%	0%
Active Share (Sector)	17%	0%
Concentration (HH Index)	105.7	143.2
Correlation (stock)	0.34	0.44
Ann. Turnover (last 10 yr)	0.26	0.04

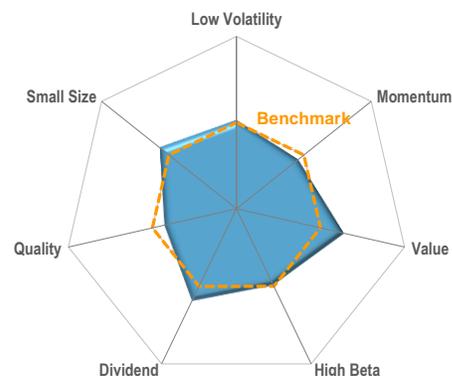
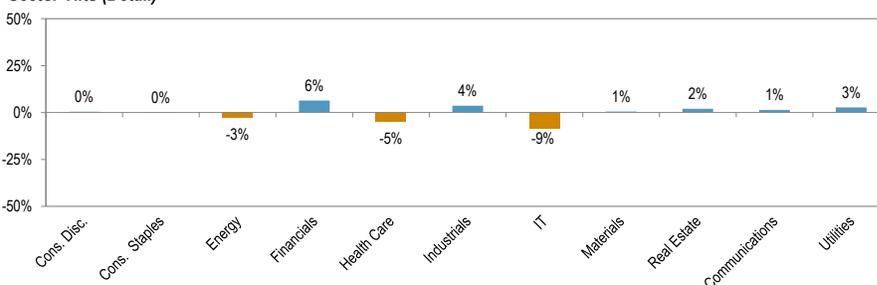
### Index-Weighted Avg.

	Index	Bmark
Stock Volatility	34%	35%
12M - 1M price return	-8%	-4%
Book/Price	0.36	0.24
Earnings/Price	0.04	0.04
Sales/Price	0.54	0.41
Stock Beta	1.02	1.02
Yield (12M trailing)	2.0%	1.7%
R.O.E.	20%	32%
Market Cap (U.S. \$ bn)	282.8	515.6

### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Financials	18%	12%	6%
Industrials	12%	8%	4%
IT	18%	26%	9%
Health Care	10%	15%	5%

### Sector Tilts (Detail)



Factor Exposure Chart

## S&P 500 Pure Growth

### Description

The S&P 500 Pure Growth comprises those S&P 500 stocks with 100% of their market cap in the S&P 500 Growth index and a growth score in the highest quartile. The weighting is proportional to the growth score. As of March 31, 2023 the index comprised 75 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-0.2%	0.3%	0.3%	-16.3%	15.7%	7.7%	11.6%	11.4%
Relative to Benchmark	-3.9%	-7.2%	-7.2%	-8.6%	-2.9%	-3.5%	-0.6%	1.4%
Index Volatility				26.6%	23.9%	22.3%	17.7%	19.2%
Tracking Error				8.2%	9.7%	8.1%	6.8%	6.7%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.21

### Portfolio Statistics

	Index	Bmark
Active Share (Stock)	84%	0%
Active Share (Sector)	40%	0%
Concentration (HH Index)	153.4	143.2
Correlation (stock)	0.58	0.44
Ann. Turnover (last 10 yr)	0.65	0.04

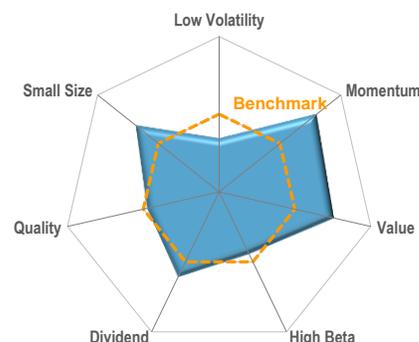
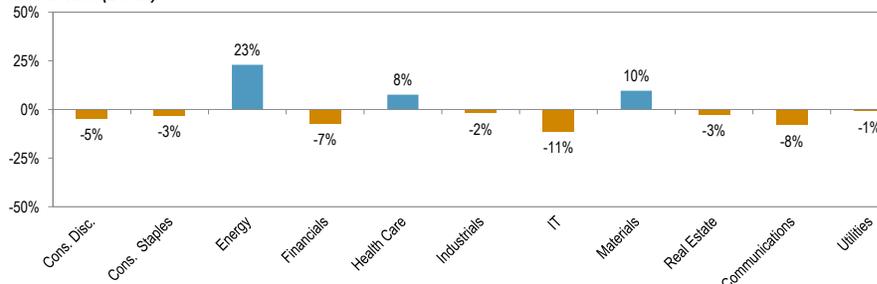
### Index-Weighted Avg.

	Index	Bmark
Stock Volatility	39%	35%
12M - 1M price return	16%	-4%
Book/Price	0.28	0.24
Earnings/Price	0.09	0.04
Sales/Price	0.51	0.41
Stock Beta	0.94	1.02
Yield (12M trailing)	2.1%	1.7%
R.O.E.	35%	32%
Market Cap (U.S. \$ bn)	99.6	515.6

### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Energy	28%	5%	23%
Materials	12%	3%	10%
IT	15%	26%	11%
Communications	-1%	7%	8%

### Sector Tilts (Detail)



Factor Exposure Chart

# S&P Dow Jones Indices

A Division of **S&P Global**

Index Dashboard: S&P 500® Factor Indices  
March 2023

## S&P 500 Pure Value

### Description

The S&P 500 Pure Value comprises S&P 500 stocks with 100% of their market cap in the S&P 500 Value index and a value score in the highest quartile. The weighting is proportional to the value score. As of March 31, 2023 the index comprised 82 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-6.6%	-1.9%	-1.9%	-8.6%	27.1%	6.1%	9.6%	9.7%
Relative to Benchmark	-10.3%	-9.4%	-9.4%	-0.8%	8.5%	-5.1%	-2.7%	-0.4%
Index Volatility				26.7%	22.4%	25.7%	20.3%	24.5%
Tracking Error				15.5%	13.9%	14.3%	10.9%	12.9%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.86

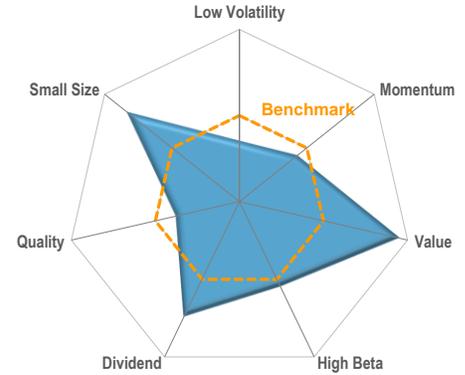
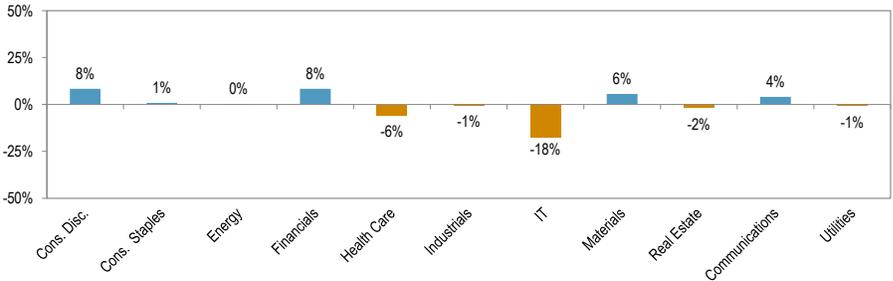
Portfolio Statistics	Index	Bmark
Active Share (Stock)	91%	0%
Active Share (Sector)	28%	0%
Concentration (HH Index)	157.8	143.2
Correlation (stock)	0.34	0.44
Ann. Turnover (last 10 yr)	0.46	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	39%	35%
12M - 1M price return	-11%	-4%
Book/Price	0.78	0.24
Earnings/Price	0.07	0.04
Sales/Price	1.80	0.41
Stock Beta	1.08	1.02
Yield (12M trailing)	2.9%	1.7%
R.O.E.	11%	32%
Market Cap (U.S. \$ bn)	41.5	515.6

### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Financials	20%	12%	8%
Cons. Disc.	19%	10%	8%
IT	8%	26%	18%
Health Care	9%	15%	6%

### Sector Tilts (Detail)



Factor Exposure Chart

## S&P 500 Buyback

### Description

The S&P 500 Buyback is designed to measure the performance of the top 100 stocks in the S&P 500 by buyback ratio. The components are equally weighted. As of March 31, 2023 the index comprised 100 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-2.9%	2.0%	2.0%	-4.9%	23.9%	10.1%	12.4%	12.3%
Relative to Benchmark	-6.6%	-5.5%	-5.5%	2.9%	5.3%	-1.1%	0.1%	2.3%
Index Volatility				24.2%	20.4%	22.1%	17.8%	19.2%
Tracking Error				9.3%	7.9%	8.2%	6.6%	6.6%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.96

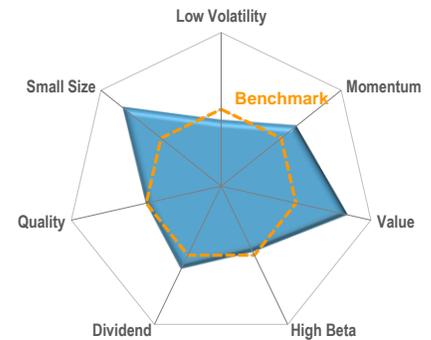
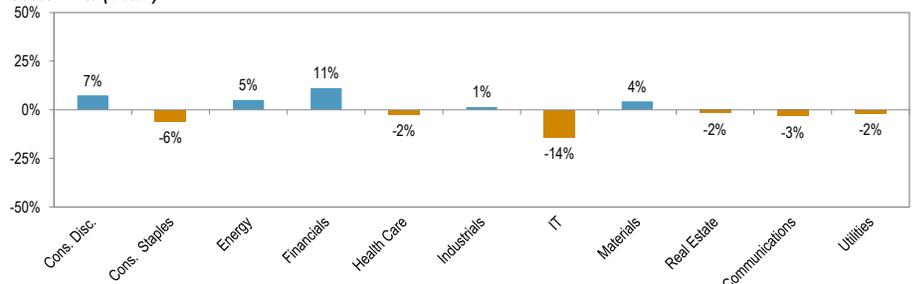
Portfolio Statistics	Index	Bmark
Active Share (Stock)	88%	0%
Active Share (Sector)	30%	0%
Concentration (HH Index)	101.8	143.2
Correlation (stock)	0.42	0.44
Ann. Turnover (last 10 yr)	0.94	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	37%	35%
12M - 1M price return	2%	-4%
Book/Price	0.38	0.24
Earnings/Price	0.08	0.04
Sales/Price	0.99	0.41
Stock Beta	0.98	1.02
Yield (12M trailing)	2.1%	1.7%
R.O.E.	30%	32%
Market Cap (U.S. \$ bn)	45.6	515.6

### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Financials	23%	12%	11%
Cons. Disc.	18%	10%	7%
IT	12%	26%	14%
Cons. Staples	1%	7%	6%

### Sector Tilts (Detail)



Factor Exposure Chart

# S&P Dow Jones Indices

A Division of **S&P Global**

Index Dashboard: **S&P 500® Factor Indices**

March 2023

## S&P 500 High Beta

### Description

The S&P 500 High Beta is designed to measure the performance of the top 100 stocks in the S&P 500 by sensitivity to market returns. The weighting is in proportional to the beta coefficient of each constituent. As of March 31, 2023 the index comprised 98 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-0.8%	12.5%	12.5%	-7.0%	35.5%	12.5%	13.2%	8.5%
Relative to Benchmark	-4.5%	5.0%	5.0%	0.7%	16.9%	1.3%	0.9%	-1.5%
Index Volatility				35.0%	30.2%	30.5%	24.4%	28.6%
Tracking Error				15.0%	16.9%	16.1%	13.3%	15.4%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.44

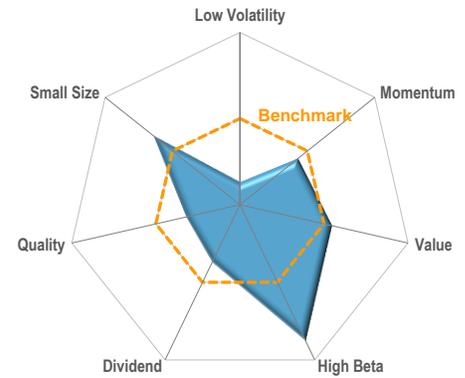
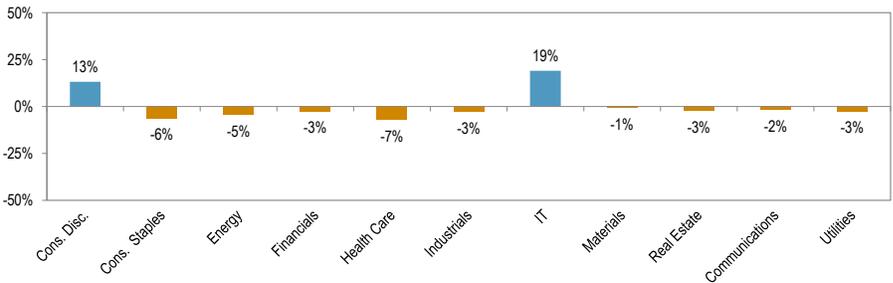
Portfolio Statistics	Index	Bmark
Active Share (Stock)	80%	0%
Active Share (Sector)	32%	0%
Concentration (HH Index)	107.0	143.2
Correlation (stock)	0.52	0.44
Ann. Turnover (last 10 yr)	0.93	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	50%	35%
12M - 1M price return	-13%	-4%
Book/Price	28%	24%
Earnings/Price	4%	4%
Sales/Price	56%	41%
Stock Beta	145%	102%
Yield (12M trailing)	0.9%	1.7%
R.O.E.	22%	32%
Market Cap (U.S. \$ bn)	137.9	515.6

### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
IT	45%	26%	19%
Cons. Disc.	24%	10%	13%
Health Care	8%	15%	7%
Cons. Staples	1%	7%	6%

### Sector Tilts (Detail)



Factor Exposure Chart

## S&P 500 Enhanced Value

### Description

The S&P 500 Enhanced Value is designed to measure the performance of the 100 stocks in the S&P 500 with the highest average book value-to-price, earnings-to-price, and sales-to-price. The weighting is proportional to both the value score and the market capitalization of each component. As of March 31, 2023 the index comprised 97 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-5.2%	-1.1%	-1.1%	-7.8%	22.6%	6.6%	9.9%	8.2%
Relative to Benchmark	-8.8%	-8.6%	-8.6%	-0.1%	4.0%	-4.6%	-2.4%	-1.8%
Index Volatility				26.8%	22.7%	24.6%	19.6%	22.6%
Tracking Error				13.3%	12.9%	12.8%	10.1%	10.5%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.9

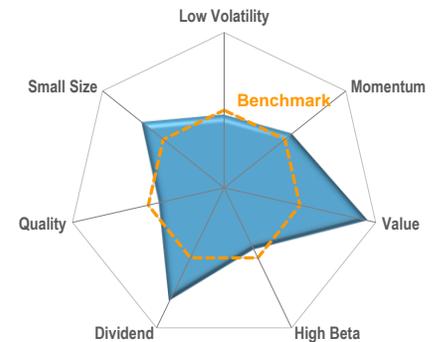
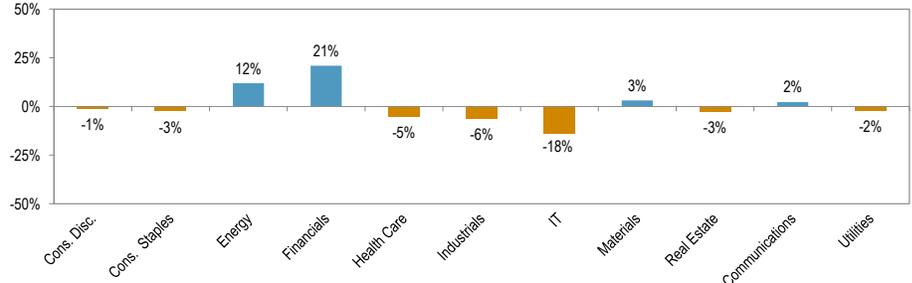
Portfolio Statistics	Index	Bmark
Active Share (Stock)	88%	0%
Active Share (Sector)	38%	0%
Concentration (HH Index)	240.2	143.2
Correlation (stock)	0.42	0.44
Ann. Turnover (last 10 yr)	0.42	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	36%	35%
12M - 1M price return	1%	-4%
Book/Price	0.73	0.24
Earnings/Price	0.10	0.04
Sales/Price	1.38	0.41
Stock Beta	0.94	1.02
Yield (12M trailing)	3.4%	1.7%
R.O.E.	17%	32%
Market Cap (U.S. \$ bn)	110.6	515.6

### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Financials	33%	12%	21%
Energy	17%	5%	12%
IT	8%	26%	18%
Industrials	2%	8%	6%

### Sector Tilts (Detail)



Factor Exposure Chart

# S&P Dow Jones Indices

A Division of **S&P Global**

Index Dashboard: S&P 500® Factor Indices  
March 2023

## S&P 500 Equal Weight

### Description

The S&P 500 Equal Weight comprises all the constituents in the S&P 500, equally weighted at each quarterly rebalance. As of March 31, 2023 the index comprised 503 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-0.9%	2.9%	2.9%	-6.3%	22.1%	10.0%	11.4%	10.7%
Relative to Benchmark	-4.6%	-4.6%	-4.6%	1.4%	3.5%	-1.2%	-0.8%	0.6%
Index Volatility				23.1%	19.5%	20.3%	16.0%	18.6%
Tracking Error				6.0%	5.8%	5.5%	4.3%	4.9%

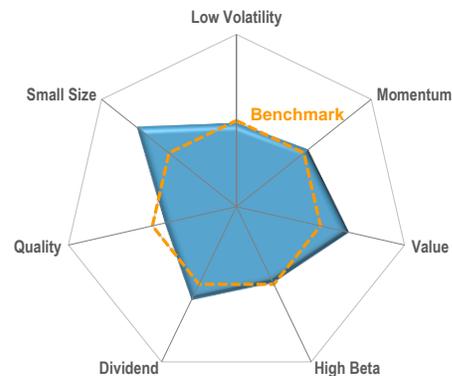
Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.95

Portfolio Statistics	Index	Bmark
Active Share (Stock)	49%	0%
Active Share (Sector)	17%	0%
Concentration (HH Index)	20.0	143.2
Correlation (stock)	0.43	0.44
Ann. Turnover (last 10 yr)	0.22	0.04

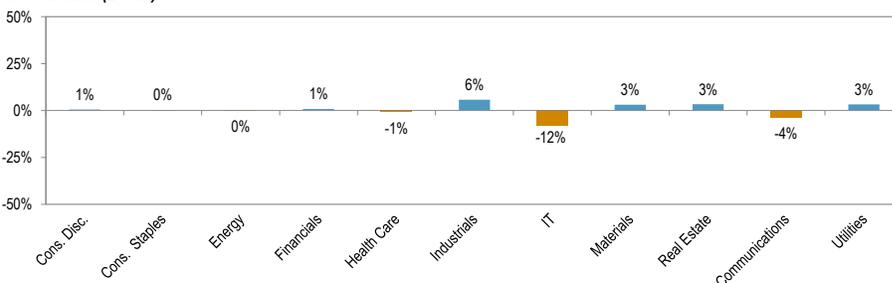
Index-Weighted Avg.	Index	Bmark
Stock Volatility	35%	35%
12M - 1M price return	-2%	-4%
Book/Price	0.33	0.24
Earnings/Price	0.05	0.04
Sales/Price	0.61	0.41
Stock Beta	1.00	1.02
Yield (12M trailing)	2.1%	1.7%
R.O.E.	23%	32%
Market Cap (U.S. \$ bn)	73.3	515.6

### Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Industrials	14%	8%	6%
Real Estate	6%	3%	3%
IT	14%	26%	12%
Communications	4%	7%	4%



### Sector Tilts (Detail)



## More Factor Resources



Access our latest research, education, videos, and webinars on smart beta at [spglobal.com/spdji/en/landing/investment-themes/factors/](https://spglobal.com/spdji/en/landing/investment-themes/factors/)



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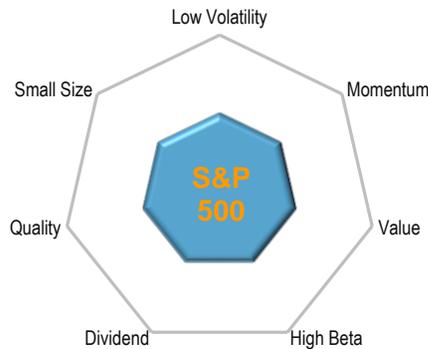


For more about S&P DJI's approach to factors, read "Factor Indices: A Simple Compendium" [spglobal.com/spdji/en/research/article/factor-indices-a-simple-compendium](https://spglobal.com/spdji/en/research/article/factor-indices-a-simple-compendium)

## 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.



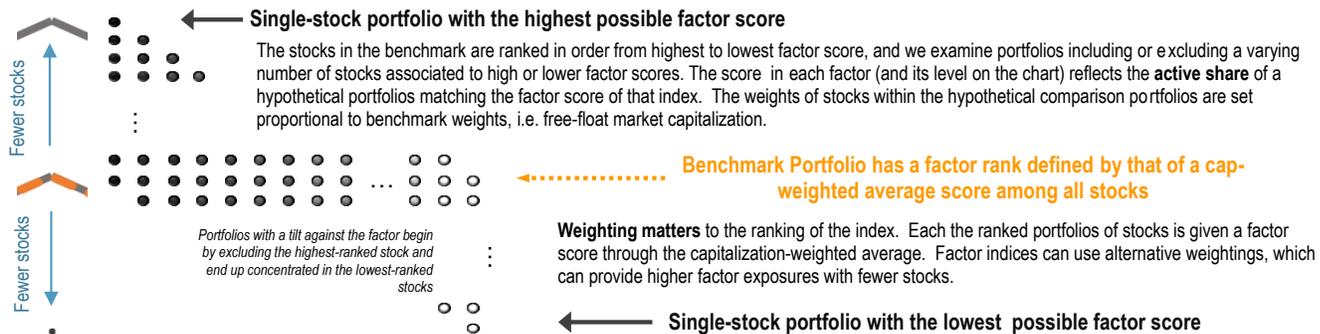
Factor	Measurement at single-stock level
<b>Volatility</b>	Trailing 12-month daily volatility.
<b>Momentum</b>	Twelve-month total return change as of one month ago ("13 minus 1 momentum"), divided by the daily volatility during the twelve-month period that ended one month prior. For more details, see the <a href="#">S&amp;P Momentum</a> methodology.
<b>Value</b>	The average of (normalized) earnings to price ratio, book to price ratio and sales to price ratio. For more details, see the <a href="#">S&amp;P Value</a> methodology.
<b>Beta</b>	Trailing 1 year beta of daily returns to the benchmark's returns.
<b>Dividend</b>	Trailing 12-month dividend.
<b>Quality</b>	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 <a href="#">S&amp;P Quality</a> methodology. Average and standard deviations for each metric follow below.
<b>Size</b>	Free-float market capitalization.

### Index Factor Ranking and Factor Diagram Scaling

#### Index Scores

Each index is provided 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 is below, further details may be found at this [link](#).

#### Factor Diagram Axis



### Notes On Additional Index Statistics

Statistic	Notes
Active Share (Stock)	Ranging from 0 to 100%, "active share" is a measure of how much a portfolio's composition differs from that of its benchmark, and provides the amount of trading theoretically required to switch from a position in one to a position in the other. The Active Share (Stock) for each index is calculated as the absolute sum of difference between S&P 500 stock weights and Index stock weights, divided by two.
Active Share (Sector)	The Active Share (Sector) is the absolute sum of difference between S&P 500 sector weights and Index sector weights, divided by two.
Concentration (HH Index)	The Herfindahl-Hirschman ("HH") concentration measure is equal to the index constituent's percentage weights, squared. For example, the HH measure of a single-stock portfolio is 10,000 (the maximum possible). The HH measure of a 100-stock, equally weighted index is 100.
Correlation (Stock)	Calculated as the weighted-average 1Yr trailing daily variance of current index constituents, divided by the 1Yr trailing daily Index variance. The value approximates an average stock-to-stock correlation of index constituents, weighted proportionally to both constituent weight and constituent volatility.

### Benchmark Statistics for Value, Quality and Momentum (normalization variables)

	VALUE			QUALITY			MOMENTUM	
	Earnings to Price	Book to Price	Sales to Price	Accrual Ratio	Return on Equity	Leverage Ratio	13M - 1M Return	Daily Price Volatility
<b>S&amp;P 500 index-weighted average</b>	0.042	0.243	0.414	4.86%	32.26%	1.44	-4.22%	2.21%
<b>S&amp;P 500 index-weighted standard deviation</b>	0.039	0.255	0.509	16.06%	30.14%	1.09	19.29%	0.72%

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## Performance Disclosure

The S&P 500 Buyback Index was launched November 29, 2012. The S&P 500 Enhanced Value Index was launched April 27, 2015. The S&P 500 Revenue-Weighted was launched on Dec 30, 2005. The S&P 500 Pure Value was launched December 16, 2005. The S&P 500 Quality Index was launched July 8, 2014. The S&P 500 Pure Growth was launched December 16, 2005. The S&P 500 Momentum was launched November 18, 2014. The S&P 500 High Beta Index was launched April 4, 2011. The S&P 500 Equal Weight Index was launched January 8, 2003. The S&P 500 Low Volatility High Dividend Index was launched September 17, 2012. The S&P 500 Dividend Aristocrats was launched May 2, 2005. The S&P 500 High Dividend Index was launched September 21, 2015. The S&P 500 Minimum Volatility Index was launched November 9, 2012. The S&P 500 Low Volatility Index was launched April 4, 2011. 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 reflect 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 methodology details are available at [www.spglobal.com/spdji](http://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 backtested. 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 result 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).