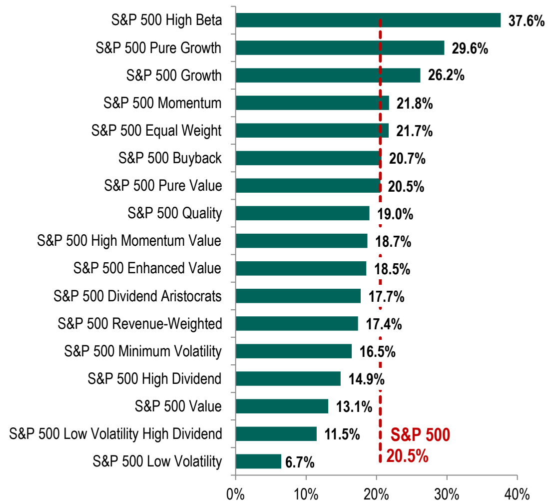
Index Dashboard: S&P 500® Factor Indices

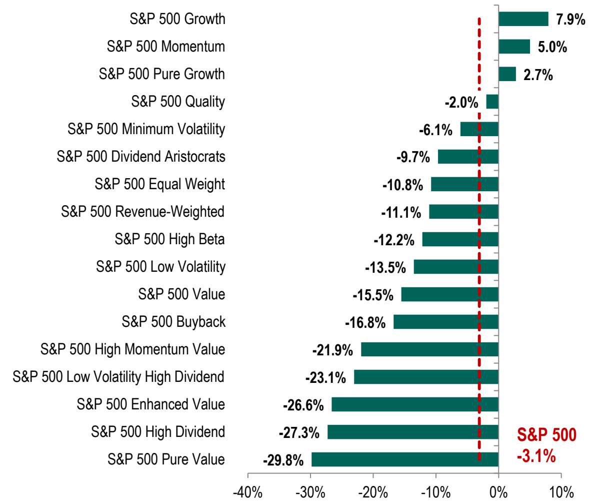
June 2020

QUARTER AND HALF-YEAR PERFORMANCE SUMMARY

Q2 Total Return



YTD 2020 Total Return



COMMENTARY

Growth and Momentum have stood supreme this year, outperforming in both the first and second quarter of 2020 and finishing wi th a positive return year-to-date. As spring turned to summer, however, every factor was overtaken by the rocket-like recovery in High Beta, which rode hopes for a rapid economic recovery to a 38% gain in Q2.

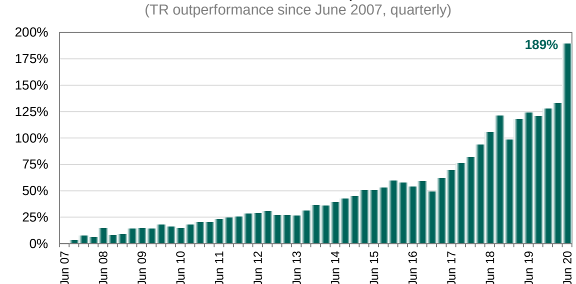
Value and Dividend strategies continued to have a difficult time and, although small- and mid-cap U.S. equities began to perform a little better more recently, the overall strength of the largest companies has left a significant majority of our S&P 500 factor indices traili ng the capitalization-weighted benchmark year-to-date.

A reprieve in underperformance of stocks with strong value characteristics may be in the prayers of many quantitative equity managers, but despite transient flickers of recovery, such hopes keep being dashed against the rocks of growth's outperformance.

Since June 2007, the S&P 500 Growth index has a cumulative total return of 376%, doubling S&P 500 Value's return of 187%. While the underperformance has largely been a steady grind over the quarters, this year, and particularly this quarter, the trend strengthened materially.

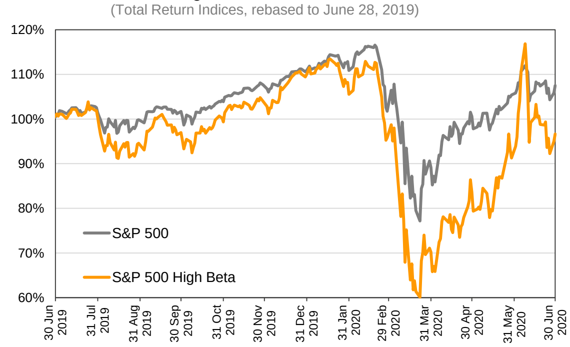
S&P 500 Growth - Cumulative Outperformance vs Value

(TR outperformance since June 2007, quarterly)



S&P 500 High Beta's Roller Coaster Ride

(Total Return Indices, rebased to June 28, 2019)



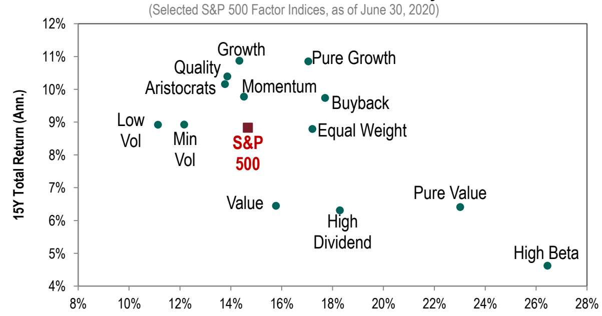
The S&P 500 High Beta Index has been on a roller coaster ride over the past 12 months. Up more than 10% at one point, by March the index had fallen by almost half from its February high. It then picked up on on a near-vertical recovery in lockdown-sensitive industries such as airlines, banks and hotels, to rise an astonishing 94%. By the second week of June, the High Beta index was making all-time highs. A decline of more than 20% followed; it is now not far from where it was last summer.

The chart on the right illustrates the updated long-term risk/return profiles for a selected range of single factor indices after the turmoil of 2020. Low Volatility retains the highest ratio of return to volatility over the past 15 years, but this improvement is now almost entirely attributable to a reduction in risk.

Growth has moved into the lead on a pure returns basis, and the generally inverse relationship between risk and return across the factor series continues to emphasize the point that – in the long term – it has been better diminish risk than to seek market-beating returns.

15-Yr Annualized Return & Volatility

(Selected S&P 500 Factor Indices, as of June 30, 2020)

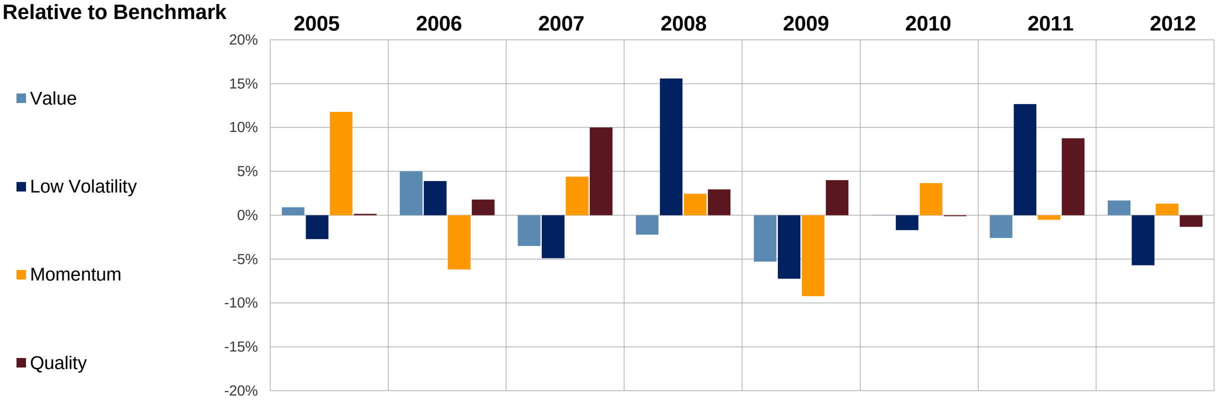


ANNUAL PERFORMANCE

Core factor performance by calendar year, 2005-present:

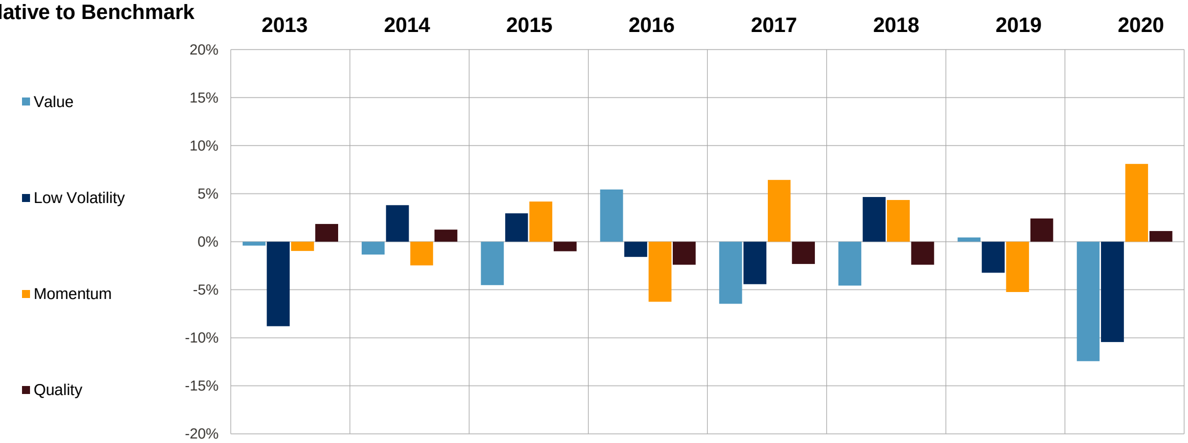
Total Return	2005	2006	2007	2008	2009	2010	2011	2012
Value	5.82%	20.80%	1.99%	-39.22%	21.18%	15.10%	-0.48%	17.68%
Low Volatility	2.20%	19.69%	0.58%	-21.41%	19.22%	13.36%	14.78%	10.30%
Momentum	16.69%	9.61%	9.89%	-34.56%	17.24%	18.72%	1.60%	17.33%
Quality	5.07%	17.59%	15.50%	-34.06%	30.46%	14.95%	10.89%	14.68%
S&P 500	4.91%	15.79%	5.49%	-37.00%	26.46%	15.06%	2.11%	16.00%

Relative to Benchmark

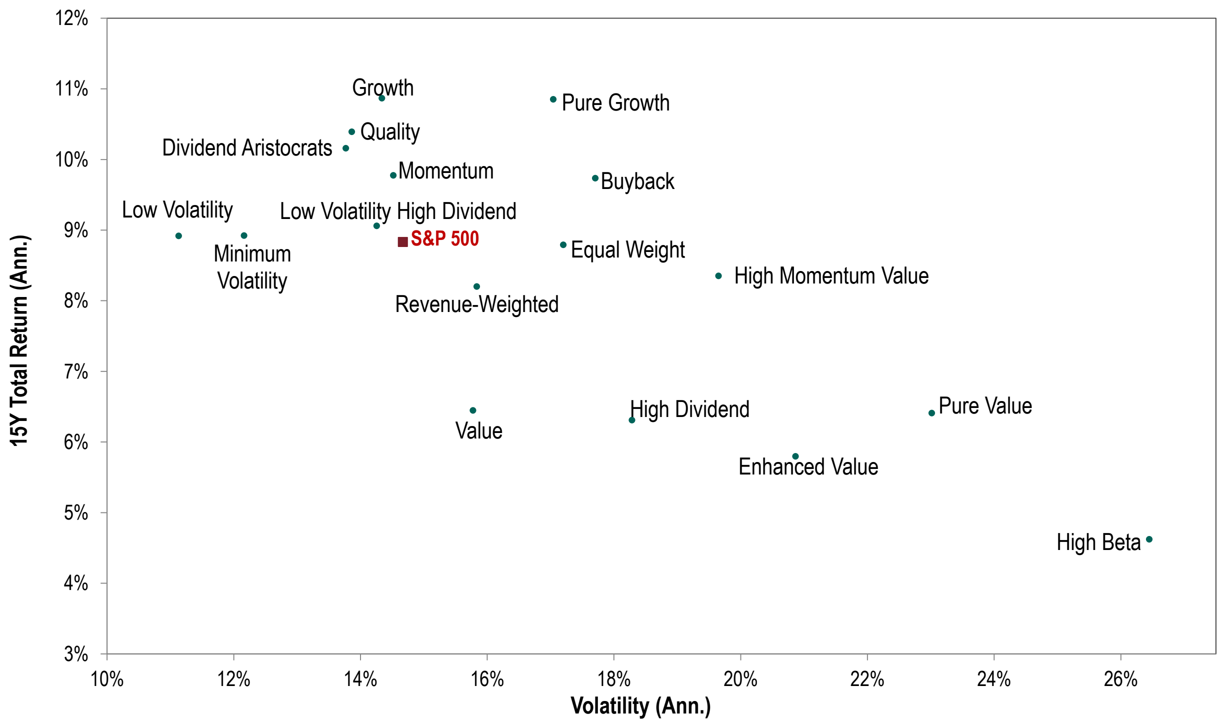


Total Return	2013	2014	2015	2016	2017	2018	2019	2020
Value	31.99%	12.36%	-3.13%	17.40%	15.36%	-8.95%	31.93%	-15.52%
Low Volatility	23.59%	17.49%	4.34%	10.37%	17.41%	0.27%	28.26%	-13.53%
Momentum	31.42%	11.23%	5.56%	5.70%	28.27%	-0.04%	26.25%	5.02%
Quality	34.24%	14.95%	0.38%	9.56%	19.51%	-6.79%	33.91%	-1.98%
S&P 500	32.39%	13.69%	1.38%	11.96%	21.83%	-4.38%	31.49%	-3.08%

Relative to Benchmark



15 YEAR RISK & RETURN - ABSOLUTE



TOTAL RETURN AND VOLATILITY

TOTAL RETURN	1M	3M	12M	3Y	5Y	10Y	15Y
S&P 500 Growth	4.1%	26.2%	17.8%	16.7%	14.6%	16.6%	10.9%
S&P 500 Pure Growth	2.7%	29.6%	9.9%	12.4%	10.9%	16.2%	10.9%
S&P 500 Quality	0.6%	19.0%	9.3%	10.5%	9.7%	14.3%	10.4%
S&P 500 Dividend Aristocrats	1.2%	17.7%	-0.3%	8.1%	9.2%	13.9%	10.2%
S&P 500 Momentum	2.7%	21.8%	10.0%	15.4%	13.6%	15.4%	9.8%
S&P 500 Buyback	2.2%	20.7%	-7.7%	4.9%	6.2%	13.6%	9.7%
S&P 500 Low Volatility High Dividend	-0.6%	11.5%	-17.6%	-2.1%	5.3%	10.8%	9.1%
S&P 500 Minimum Volatility	0.4%	16.5%	3.7%	9.4%	10.5%	14.1%	8.9%
S&P 500 Low Volatility	-0.4%	6.7%	-7.2%	6.2%	9.0%	12.4%	8.9%
S&P 500 Equal Weight	1.6%	21.7%	-3.2%	5.4%	7.1%	12.6%	8.8%
S&P 500 High Momentum Value	1.3%	18.7%	-15.0%	-2.5%	2.9%	11.3%	8.4%
S&P 500 Revenue-Weighted	0.5%	17.4%	-1.6%	5.9%	7.1%	12.8%	8.2%
S&P 500 Value	-1.0%	13.1%	-4.5%	3.7%	6.0%	10.9%	6.4%
S&P 500 Pure Value	2.1%	20.5%	-24.2%	-4.5%	0.3%	9.9%	6.4%
S&P 500 High Dividend	0.6%	14.9%	-22.6%	-2.8%	3.8%	10.4%	6.3%
S&P 500 Enhanced Value	0.6%	18.5%	-17.4%	-1.3%	3.2%	10.6%	5.8%
S&P 500 High Beta	5.9%	37.6%	-3.4%	4.9%	5.7%	10.3%	4.6%
S&P 500	2.0%	20.5%	7.5%	10.7%	10.7%	14.0%	8.8%

Performance figures for more than one year are annualized.

VOLATILITY (ANN.)	12M	3Y	5Y	10Y	15Y
S&P 500 Growth	20.2%	16.5%	14.8%	13.3%	14.3%
S&P 500 Pure Growth	25.5%	19.6%	16.9%	15.7%	17.0%
S&P 500 Quality	19.0%	15.9%	14.0%	12.7%	13.9%
S&P 500 Dividend Aristocrats	20.9%	16.2%	14.0%	12.5%	13.8%
S&P 500 Momentum	18.0%	16.1%	14.0%	13.4%	14.5%
S&P 500 Buyback	29.1%	21.9%	19.0%	16.3%	17.7%
S&P 500 Low Volatility High Dividend	26.1%	18.4%	15.7%	13.0%	14.3%
S&P 500 Minimum Volatility	19.7%	15.3%	13.1%	11.2%	12.2%
S&P 500 Low Volatility	18.2%	13.6%	12.2%	10.6%	11.1%
S&P 500 Equal Weight	26.0%	19.5%	16.7%	15.2%	17.2%
S&P 500 High Momentum Value	30.8%	22.2%	18.7%	16.4%	19.6%
S&P 500 Revenue-Weighted	22.4%	18.0%	15.5%	14.3%	15.8%
S&P 500 Value	22.6%	17.8%	15.4%	14.1%	15.8%
S&P 500 Pure Value	36.1%	25.7%	21.8%	19.3%	23.0%
S&P 500 High Dividend	32.6%	22.0%	18.2%	14.8%	18.3%
S&P 500 Enhanced Value	33.4%	23.9%	20.7%	18.4%	20.9%
S&P 500 High Beta	36.9%	27.6%	24.9%	23.2%	26.4%
S&P 500	20.9%	16.7%	14.6%	13.4%	14.7%

S&P Dow Jones Indices
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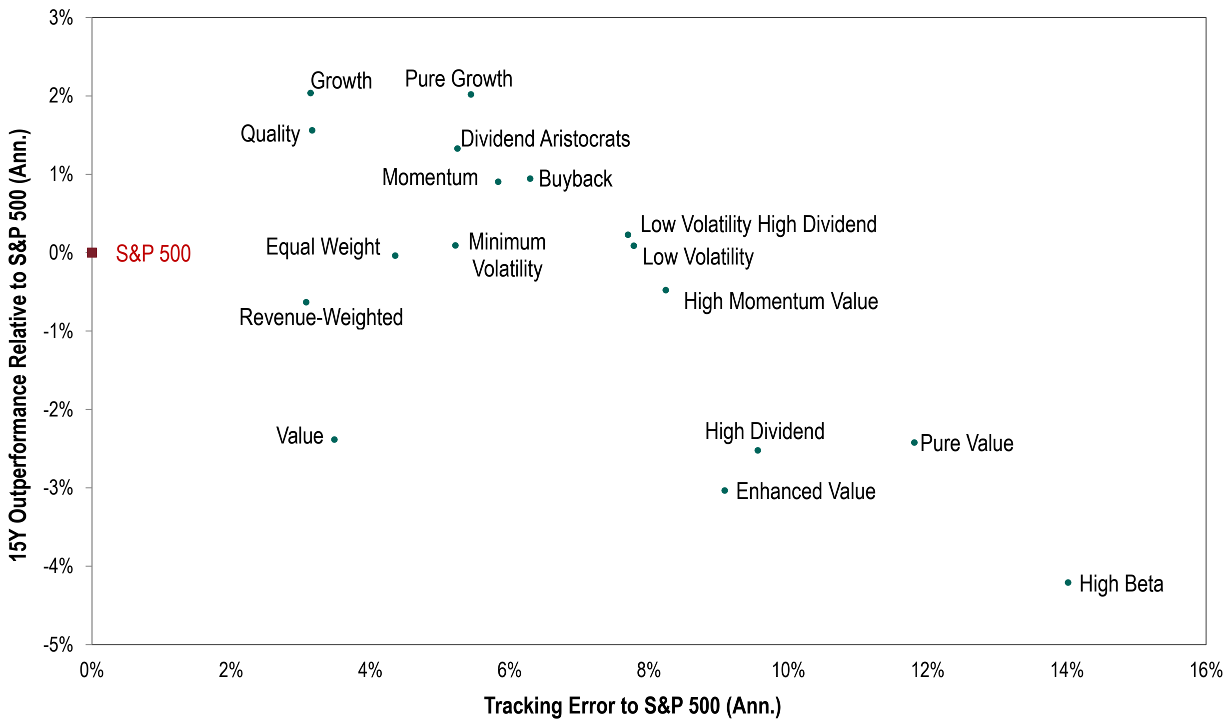
Index Dashboard: S&P 500® Factor Indices
June 2020

RELATIVE TO S&P 500



RELATIVE RETURN AND TRACKING ERROR

PERFORMANCE v S&P 500	1M	QTR	1YR	3YR	5YR	10YR	15YR
S&P 500 Growth	2.1%	5.7%	10.2%	6.0%	3.9%	2.6%	2.0%
S&P 500 Pure Growth	0.7%	9.1%	2.4%	1.7%	0.2%	2.2%	2.0%
S&P 500 Quality	-1.4%	-1.6%	1.8%	-0.2%	-1.1%	0.3%	1.6%
S&P 500 Dividend Aristocrats	-0.8%	-2.8%	-7.8%	-2.7%	-1.5%	-0.1%	1.3%
S&P 500 Momentum	0.7%	1.2%	2.5%	4.7%	2.9%	1.4%	0.9%
S&P 500 Buyback	0.2%	0.2%	-15.2%	-5.9%	-4.5%	-0.4%	0.9%
S&P 500 Low Volatility High Dividend	-2.6%	-9.0%	-25.1%	-12.8%	-5.4%	-3.2%	0.2%
S&P 500 Minimum Volatility	-1.6%	-4.1%	-3.8%	-1.3%	-0.3%	0.1%	0.1%
S&P 500 Low Volatility	-2.4%	-13.8%	-14.7%	-4.5%	-1.8%	-1.6%	0.1%
S&P 500 Equal Weight	-0.4%	1.2%	-10.8%	-5.3%	-3.6%	-1.3%	0.0%
S&P 500 High Momentum Value	-0.7%	-1.8%	-22.5%	-13.3%	-7.9%	-2.7%	-0.5%
S&P 500 Revenue-Weighted	-1.4%	-3.2%	-9.1%	-4.8%	-3.6%	-1.2%	-0.6%
S&P 500 Value	-2.9%	-7.4%	-12.0%	-7.0%	-4.7%	-3.1%	-2.4%
S&P 500 Pure Value	0.1%	0.0%	-31.7%	-15.2%	-10.4%	-4.1%	-2.4%
S&P 500 High Dividend	-1.4%	-5.6%	-30.1%	-13.5%	-7.0%	-3.6%	-2.5%
S&P 500 Enhanced Value	-1.4%	-2.0%	-24.9%	-12.1%	-7.5%	-3.4%	-3.0%
S&P 500 High Beta	3.9%	17.1%	-10.9%	-5.8%	-5.0%	-3.7%	-4.2%

Performance figures for more than one year are annualized.

TRACKING ERROR v S&P 500 (ANN.)	1YR	3YR	5YR	10YR	15YR
S&P 500 Growth	4.0%	3.4%	3.4%	2.9%	3.1%
S&P 500 Pure Growth	6.7%	5.6%	5.1%	5.4%	5.4%
S&P 500 Quality	3.4%	3.3%	2.8%	3.0%	3.2%
S&P 500 Dividend Aristocrats	4.0%	4.7%	4.6%	4.5%	5.3%
S&P 500 Momentum	6.4%	6.2%	5.5%	5.0%	6.3%
S&P 500 Buyback	10.2%	7.2%	6.5%	5.4%	5.8%
S&P 500 Low Volatility High Dividend	9.3%	8.2%	8.1%	8.1%	7.7%
S&P 500 Minimum Volatility	3.4%	3.4%	4.9%	5.0%	5.2%
S&P 500 Low Volatility	9.6%	8.4%	7.8%	8.0%	7.8%
S&P 500 Equal Weight	6.0%	4.4%	3.8%	3.3%	4.4%
S&P 500 High Momentum Value	12.2%	8.3%	7.3%	6.0%	8.2%
S&P 500 Revenue-Weighted	3.6%	3.5%	3.1%	2.7%	3.1%
S&P 500 Value	4.8%	4.0%	3.9%	3.3%	3.5%
S&P 500 Pure Value	17.3%	11.8%	10.2%	8.7%	11.8%
S&P 500 High Dividend	14.9%	10.5%	9.3%	8.5%	9.6%
S&P 500 Enhanced Value	14.8%	10.3%	9.4%	7.9%	9.1%
S&P 500 High Beta	17.4%	12.5%	12.8%	12.0%	14.0%

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of June 30, 2020.

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Index Dashboard: S&P 500® Factor Indices

June 2020

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 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 High Momentum 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%	43%	35%	26%	15%	26%	9%	3%	4%	16%	16%	5%	19%	2%	7%	4%	5%	33%
S&P 500 Growth	43%	100%	31%	36%	19%	23%	10%	1%	3%	36%	28%	4%	36%	0%	11%	1%	7%	71%
S&P 500 Quality	35%	31%	100%	14%	15%	23%	12%	3%	3%	18%	22%	6%	19%	4%	12%	3%	4%	32%
S&P 500 Pure Growth	26%	36%	14%	100%	9%	11%	4%	0%	2%	14%	0%	8%	22%	0%	18%	3%	15%	26%
S&P 500 Low Volatility	15%	19%	15%	9%	100%	28%	22%	14%	10%	24%	31%	14%	20%	6%	10%	5%	0%	27%
S&P 500 Minimum Volatility	26%	23%	23%	11%	28%	100%	18%	16%	14%	30%	34%	13%	20%	12%	8%	9%	4%	34%
S&P 500 Dividend Aristocrats	9%	10%	12%	4%	22%	18%	100%	12%	14%	18%	22%	13%	13%	8%	4%	9%	3%	16%
S&P 500 Low Volatility High Dividend	3%	1%	3%	0%	14%	16%	12%	100%	59%	13%	21%	11%	10%	14%	5%	12%	9%	9%
S&P 500 High Dividend	4%	3%	3%	2%	10%	14%	14%	59%	100%	16%	21%	16%	12%	19%	11%	16%	19%	11%
S&P 500 Revenue-Weighted	16%	36%	18%	14%	24%	30%	18%	13%	16%	100%	59%	31%	50%	32%	21%	32%	17%	58%
S&P 500 Value	16%	28%	22%	0%	31%	34%	22%	21%	21%	59%	100%	25%	49%	23%	18%	22%	14%	57%
S&P 500 High Momentum Value	5%	4%	6%	8%	14%	13%	13%	11%	16%	31%	25%	100%	20%	37%	24%	34%	21%	15%
S&P 500 Equal Weight	19%	36%	19%	22%	20%	20%	13%	10%	12%	50%	49%	20%	100%	20%	19%	19%	19%	50%
S&P 500 Pure Value	2%	0%	4%	0%	6%	12%	8%	14%	19%	32%	23%	37%	20%	100%	24%	49%	34%	11%
S&P 500 Buyback	7%	11%	12%	18%	10%	8%	4%	5%	11%	21%	18%	24%	19%	24%	100%	24%	34%	15%
S&P 500 Enhanced Value	4%	1%	3%	3%	5%	9%	9%	12%	16%	32%	22%	34%	19%	49%	24%	100%	23%	10%
S&P 500 High Beta	5%	7%	4%	15%	0%	4%	3%	9%	19%	17%	14%	21%	19%	34%	34%	23%	100%	11%

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

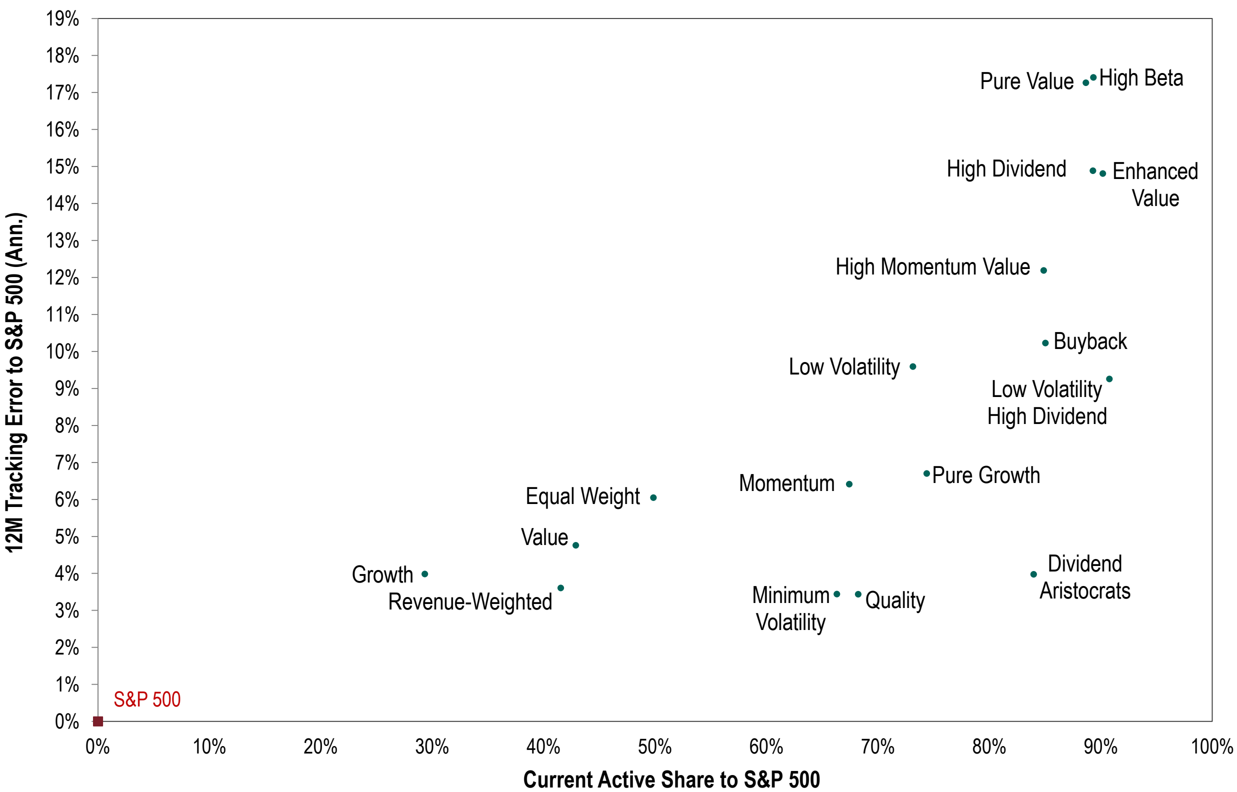
RELATIVE RETURN CORRELATIONS

	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 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 High Momentum 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	0.57	0.22	0.29	0.08	-0.04	-0.40	-0.50	-0.52	-0.50	-0.56	-0.37	-0.47	-0.47	-0.46	-0.49	-0.34
S&P 500 Growth	0.57	1.00	0.26	0.36	-0.22	-0.18	-0.64	-0.67	-0.65	-0.78	-1.00	-0.72	-0.69	-0.71	-0.68	-0.77	-0.45
S&P 500 Quality	0.22	0.26	1.00	-0.16	-0.14	0.05	-0.02	-0.42	-0.49	-0.22	-0.26	-0.53	-0.42	-0.50	-0.41	-0.52	-0.39
S&P 500 Pure Growth	0.29	0.36	-0.16	1.00	-0.02	-0.11	-0.21	-0.09	0.04	-0.25	-0.34	0.19	0.25	0.15	0.23	0.09	0.34
S&P 500 Low Volatility	0.08	-0.22	-0.14	-0.02	1.00	0.72	0.39	0.54	0.41	-0.07	0.23	0.18	0.17	-0.02	0.00	0.03	-0.30
S&P 500 Minimum Volatility	-0.04	-0.18	0.05	-0.11	0.72	1.00	0.47	0.45	0.32	0.10	0.18	0.01	0.12	-0.07	-0.09	-0.06	-0.31
S&P 500 Dividend Aristocrats	-0.40	-0.64	-0.02	-0.21	0.39	0.47	1.00	0.61	0.52	0.55	0.64	0.43	0.56	0.41	0.43	0.43	0.21
S&P 500 Low Volatility High Dividend	-0.50	-0.67	-0.42	-0.09	0.54	0.45	0.61	1.00	0.93	0.51	0.68	0.66	0.75	0.64	0.58	0.65	0.39
S&P 500 High Dividend	-0.52	-0.65	-0.49	0.04	0.41	0.32	0.52	0.93	1.00	0.54	0.66	0.78	0.83	0.78	0.71	0.77	0.54
S&P 500 Revenue-Weighted	-0.50	-0.78	-0.22	-0.25	-0.07	0.10	0.55	0.51	0.54	1.00	0.77	0.60	0.64	0.71	0.64	0.74	0.48
S&P 500 Value	-0.56	-1.00	-0.26	-0.34	0.23	0.18	0.64	0.68	0.66	0.77	1.00	0.73	0.71	0.72	0.70	0.78	0.48
S&P 500 High Momentum Value	-0.37	-0.72	-0.53	0.19	0.18	0.01	0.43	0.66	0.78	0.60	0.73	1.00	0.88	0.91	0.92	0.95	0.75
S&P 500 Equal Weight	-0.47	-0.69	-0.42	0.25	0.17	0.12	0.56	0.75	0.83	0.64	0.71	0.88	1.00	0.90	0.91	0.88	0.81
S&P 500 Pure Value	-0.47	-0.71	-0.50	0.15	-0.02	-0.07	0.41	0.64	0.78	0.71	0.72	0.91	0.90	1.00	0.92	0.96	0.84
S&P 500 Buyback	-0.46	-0.68	-0.41	0.23	0.00	-0.09	0.43	0.58	0.71	0.64	0.70	0.92	0.91	0.92	1.00	0.93	0.84
S&P 500 Enhanced Value	-0.49	-0.77	-0.52	0.09	0.03	-0.06	0.43	0.65	0.77	0.74	0.78	0.95	0.88	0.96	0.93	1.00	0.79
S&P 500 High Beta	-0.34	-0.45	-0.39	0.34	-0.30	-0.31	0.21	0.39	0.54	0.48	0.48	0.75	0.81	0.84	0.84	0.79	1.00

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

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of June 30, 2020.

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



FACTOR EXPOSURE SUMMARY (See following page for factor scoring methodology)

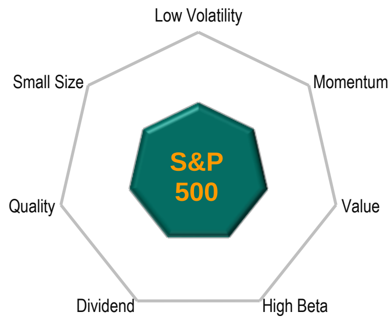
INDEX	AVERAGE	LOW VOLATILITY	MOMENTUM	VALUE	HIGH BETA	DIVIDEND	QUALITY	SMALL SIZE
S&P 500 High Momentum Value	18.7%	-51.2%	-35.2%	80.9%	53.2%	36.4%	-11.5%	58.4%
S&P 500 High Dividend	15.5%	-58.2%	-55.8%	64.5%	45.5%	86.8%	-28.4%	54.3%
S&P 500 Buyback	15.5%	-70.3%	-43.0%	68.3%	66.3%	47.8%	-8.7%	48.1%
S&P 500 Enhanced Value	15.3%	-70.7%	-62.9%	91.5%	67.5%	64.6%	-26.7%	43.8%
S&P 500 Pure Value	14.7%	-78.1%	-65.0%	88.3%	69.9%	53.7%	-26.7%	60.6%
S&P 500 High Beta	14.6%	-94.3%	-68.0%	73.6%	92.3%	60.1%	-32.1%	70.6%
S&P 500 Low Volatility High Dividend	12.6%	-43.1%	-66.0%	59.1%	39.0%	86.9%	-39.5%	52.0%
S&P 500 Value	10.9%	-13.9%	-35.2%	50.9%	15.8%	44.4%	-8.7%	23.1%
S&P 500 Dividend Aristocrats	10.1%	-17.8%	-30.1%	33.0%	10.6%	30.4%	-0.9%	45.6%
S&P 500 Revenue-Weighted	9.5%	-28.8%	-22.1%	60.7%	20.2%	30.0%	-9.6%	16.3%
S&P 500 Equal Weight	9.3%	-51.3%	-30.9%	38.2%	42.2%	25.8%	-10.0%	50.8%
S&P 500 Low Volatility	9.0%	62.9%	-7.3%	-0.2%	-32.2%	9.2%	-1.6%	31.9%
S&P 500 Quality	5.6%	3.4%	9.4%	-8.9%	-9.4%	-1.0%	39.9%	5.8%
S&P 500 Minimum Volatility	4.1%	6.1%	-7.3%	9.6%	-3.0%	15.9%	-8.7%	16.3%
S&P 500 Momentum	1.6%	2.7%	35.5%	-20.8%	-0.5%	-5.9%	13.8%	-13.8%
S&P 500	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
S&P 500 Pure Growth	-4.0%	-33.7%	19.7%	-16.9%	19.5%	-29.5%	-8.7%	21.4%
S&P 500 Growth	-7.2%	3.5%	25.4%	-24.1%	-6.7%	-19.7%	5.2%	-33.7%

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of June 30, 2020.

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.



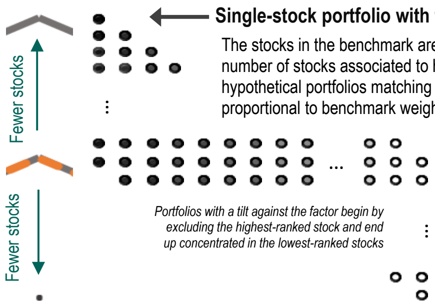
Factor	Measurement at single-stock level
Volatility	Trailing 12-month daily volatility.
Momentum	Twelve-month price change as of one month ago ("13 minus 1 momentum"), divided by the daily volatility during the twelve-month period that ended one month prior. For more details, see the S&P Momentum methodology.
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 daily returns to the benchmark's returns.
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. Average and standard deviations for each metric follow below.
Size	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



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

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
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
S&P 500 index-weighted average	0.039	0.288	0.432	13.52%	30.22%	1.26	22.44%	2.71%
S&P 500 index-weighted standard deviation	0.038	0.353	0.558	26.49%	27.08%	1.09	32.76%	0.68%

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of June 30, 2020.

S&P Dow Jones Indices
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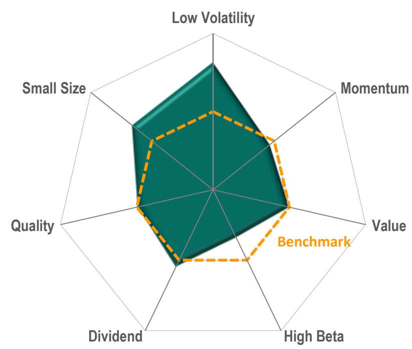
S&P 500 Low Volatility

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.

Index Statistics	**1M**	**3M**	**YTD**	**12M**	**3Y**	**5Y**	**10Y**	**15Y**
Total Return (Ann)	-0.4%	6.7%	-13.5%	-7.2%	6.2%	9.0%	12.4%	8.9%
Relative to Benchmark	-2.4%	-13.8%	-10.5%	-14.7%	-4.5%	-1.8%	-1.6%	0.1%
Index Volatility				18.2%	13.6%	12.2%	10.6%	11.1%
Tracking Error				9.6%	8.4%	7.8%	8.0%	7.8%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.94



Factor Exposure Chart

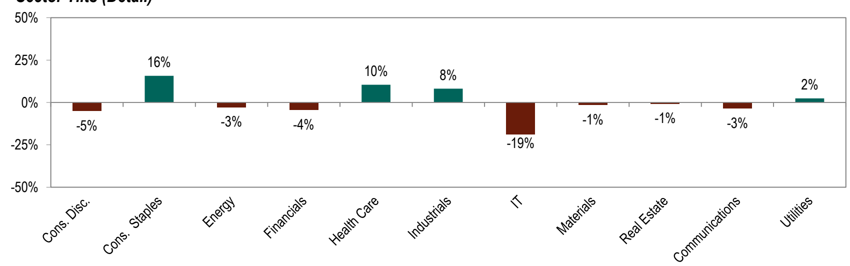
Portfolio Statistics	***Index***	***Bmark***
Active Share (Stock)	73%	0%
Active Share (Sector)	37%	0%
Concentration (HH Index)	100.9	135.6
Correlation (stock)	0.86	0.57
Ann. Turnover (last 10 yr)	0.62	0.05

Top Sector Tilts (versus benchmark)

Sector	***Index***	***Bmark***	***Difference***
Cons. Staples	23%	7%	16%
Health Care	25%	15%	10%
IT	9%	27%	19%
Cons. Disc.	6%	11%	5%

Index-Weighted Avg.	***Index***	***Bmark***
Stock Volatility	36%	44%
12M - 1M price return	16%	22%
Book/Price	0.24	0.29
Earnings/Price	0.04	0.04
Sales/Price	0.47	0.43
Stock Beta	0.77	0.99
Yield (12M trailing)	2.1%	2.0%
R.O.E.	30%	30%
Market Cap (U.S. $ bn)	92.5	368.1

Sector Tilts (Detail)



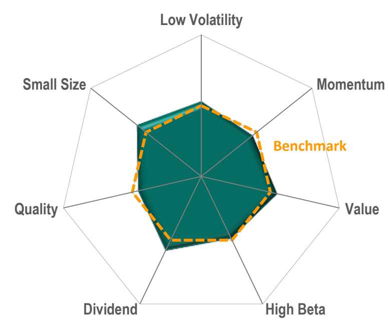
S&P 500 Minimum Volatility

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 June 30, 2020 the index comprised 103 constituents.

Index Statistics	**1M**	**3M**	**YTD**	**12M**	**3Y**	**5Y**	**10Y**	**15Y**
Total Return (Ann)	0.4%	16.5%	-6.1%	3.7%	9.4%	10.5%	14.1%	8.9%
Relative to Benchmark	-1.6%	-4.1%	-3.0%	-3.8%	-1.3%	-0.3%	0.1%	0.1%
Index Volatility				19.7%	15.3%	13.1%	11.2%	12.2%
Tracking Error				3.4%	3.4%	4.9%	5.0%	5.2%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.94



Factor Exposure Chart

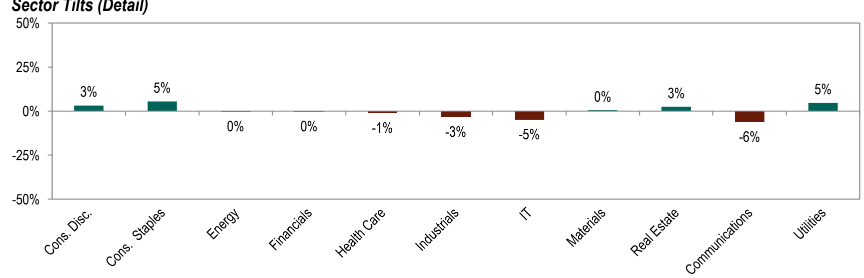
Portfolio Statistics	***Index***	***Bmark***
Active Share (Stock)	66%	0%
Active Share (Sector)	16%	0%
Concentration (HH Index)	160.6	135.6
Correlation (stock)	0.59	0.57
Ann. Turnover (last 10 yr)	0.43	0.05

Top Sector Tilts (versus benchmark)

Sector	***Index***	***Bmark***	***Difference***
Cons. Staples	12%	7%	5%
Utilities	8%	3%	5%
Communications	5%	11%	6%
IT	23%	27%	5%

Index-Weighted Avg.	***Index***	***Bmark***
Stock Volatility	42%	44%
12M - 1M price return	17%	22%
Book/Price	0.31	0.29
Earnings/Price	0.04	0.04
Sales/Price	0.47	0.43
Stock Beta	0.95	0.99
Yield (12M trailing)	2.3%	2.0%
R.O.E.	28%	30%
Market Cap (U.S. $ bn)	203.0	368.1

Sector Tilts (Detail)



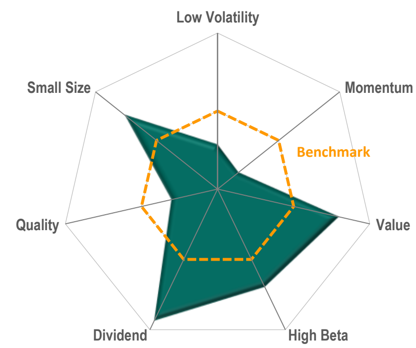
S&P 500 Low Volatility High Dividend

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.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-0.6%	11.5%	-23.1%	-17.6%	-2.1%	5.3%	10.8%	9.1%
Relative to Benchmark	-2.6%	-9.0%	-20.0%	-25.1%	-12.8%	-5.4%	-3.2%	0.2%
Index Volatility				26.1%	18.4%	15.7%	13.0%	14.3%
Tracking Error				9.3%	8.2%	8.1%	8.1%	7.7%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.04



Factor Exposure Chart

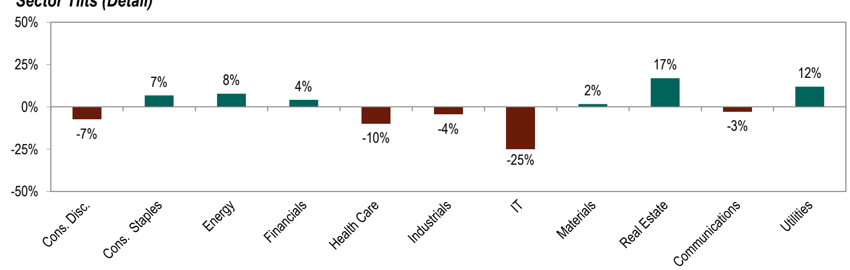
Portfolio Statistics	*Index*	*Bmark*
Active Share (Stock)	91%	0%
Active Share (Sector)	49%	0%
Concentration (HH Index)	212.3	135.6
Correlation (stock)	0.55	0.57
Ann. Turnover (last 10 yr)	0.56	0.05

Top Sector Tilts (versus benchmark)

Sector	*Index*	*Bmark*	*Difference*
Real Estate	20%	3%	17%
Utilities	15%	3%	12%
IT	3%	27%	25%
Health Care	5%	15%	10%

Index-Weighted Avg.	*Index*	*Bmark*
Stock Volatility	50%	44%
12M - 1M price return	-11%	22%
Book/Price	0.60	0.29
Earnings/Price	0.06	0.04
Sales/Price	0.71	0.43
Stock Beta	1.23	0.99
Yield (12M trailing)	5.8%	2.0%
R.O.E.	18%	30%
Market Cap (U.S. $ bn)	51.8	368.1

Sector Tilts (Detail)



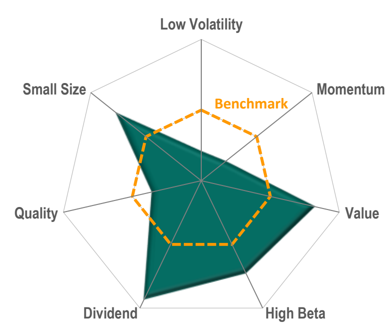
S&P 500 High Dividend

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.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	0.6%	14.9%	-27.3%	-22.6%	-2.8%	3.8%	10.4%	6.3%
Relative to Benchmark	-1.4%	-5.6%	-24.2%	-30.1%	-13.5%	-7.0%	-3.6%	-2.5%
Index Volatility				32.6%	22.0%	18.2%	14.8%	18.3%
Tracking Error				14.9%	10.5%	9.3%	8.5%	9.6%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.16



Factor Exposure Chart

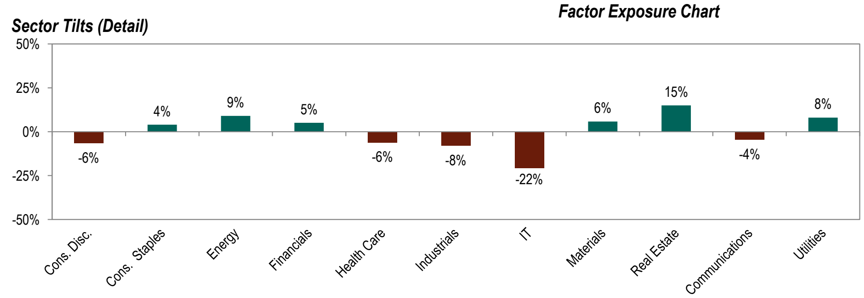
Portfolio Statistics	*Index*	*Bmark*
Active Share (Stock)	89%	0%
Active Share (Sector)	47%	0%
Concentration (HH Index)	164.2	135.6
Correlation (stock)	0.60	0.57
Ann. Turnover (last 10 yr)	0.37	0.05

Top Sector Tilts (versus benchmark)

Sector	*Index*	*Bmark*	*Difference*
Real Estate	18%	3%	15%
Energy	12%	3%	9%
IT	5%	27%	22%
Industrials	0%	8%	8%

Index-Weighted Avg.	*Index*	*Bmark*
Stock Volatility	53%	44%
12M - 1M price return	-7%	22%
Book/Price	0.69	0.29
Earnings/Price	0.04	0.04
Sales/Price	0.93	0.43
Stock Beta	1.27	0.99
Yield (12M trailing)	5.8%	2.0%
R.O.E.	15%	30%
Market Cap (U.S. $ bn)	48.3	368.1

Sector Tilts (Detail)



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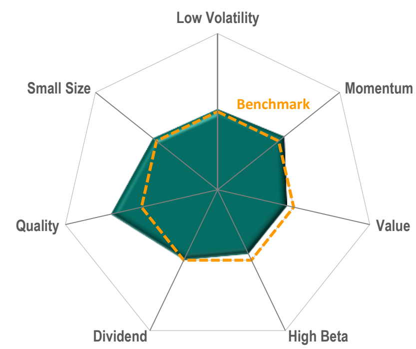
S&P 500 Quality

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..

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	0.6%	19.0%	-2.0%	9.3%	10.5%	9.7%	14.3%	10.4%
Relative to Benchmark	-1.4%	-1.6%	1.1%	1.8%	-0.2%	-1.1%	0.3%	1.6%
Index Volatility				19.0%	15.9%	14.0%	12.7%	13.9%
Tracking Error				3.4%	3.3%	2.8%	3.0%	3.2%

Benchmark: S&P 500.   1 Yr trailing beta to benchmark = 0.98



Factor Exposure Chart

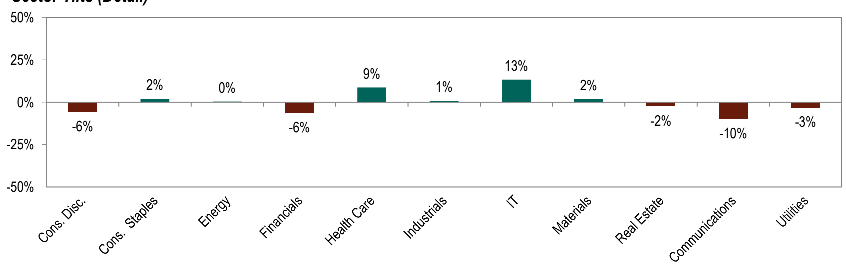
Portfolio Statistics	*Index*	*Bmark*
Active Share (Stock)	68%	0%
Active Share (Sector)	27%	0%
Concentration (HH Index)	271.0	135.6
Correlation (stock)	0.60	0.57
Ann. Turnover (last 10 yr)	0.63	0.05

Top Sector Tilts (versus benchmark)

Sector	*Index*	*Bmark*	*Difference*
IT	41%	27%	13%
Health Care	23%	15%	9%
Communications	1%	11%	10%
Financials	4%	10%	6%

Index-Weighted Avg.	*Index*	*Bmark*
Stock Volatility	42%	44%
12M - 1M price return	29%	22%
Book/Price	0.20	0.29
Earnings/Price	0.04	0.04
Sales/Price	0.30	0.43
Stock Beta	0.90	0.99
Yield (12M trailing)	1.9%	2.0%
R.O.E.	33%	30%
Market Cap (U.S. $ bn)	299.4	368.1

Sector Tilts (Detail)



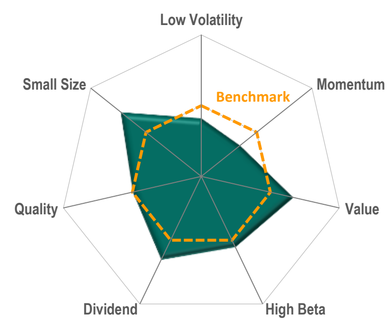
S&P 500 Dividend Aristocrats

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 June 30, 2020 the index comprised 66 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	1.2%	17.7%	-9.7%	-0.3%	8.1%	9.2%	13.9%	10.2%
Relative to Benchmark	-0.8%	-2.8%	-6.6%	-7.8%	-2.7%	-1.5%	-0.1%	1.3%
Index Volatility				20.9%	16.2%	14.0%	12.5%	13.8%
Tracking Error				4.0%	4.7%	4.6%	4.5%	5.3%

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



Factor Exposure Chart

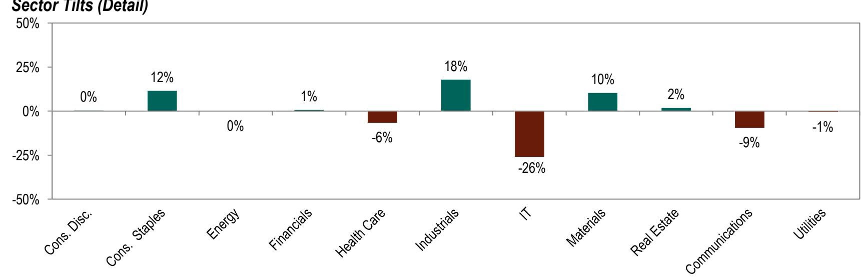
Portfolio Statistics	*Index*	*Bmark*
Active Share (Stock)	84%	0%
Active Share (Sector)	42%	0%
Concentration (HH Index)	153.4	135.6
Correlation (stock)	0.50	0.57
Ann. Turnover (last 10 yr)	0.19	0.05

Top Sector Tilts (versus benchmark)

Sector	*Index*	*Bmark*	*Difference*
Industrials	26%	8%	18%
Cons. Staples	19%	7%	12%
IT	1%	27%	26%
Communications	1%	11%	9%

Index-Weighted Avg.	*Index*	*Bmark*
Stock Volatility	46%	44%
12M - 1M price return	7%	22%
Book/Price	0.34	0.29
Earnings/Price	0.04	0.04
Sales/Price	0.67	0.43
Stock Beta	1.06	0.99
Yield (12M trailing)	2.7%	2.0%
R.O.E.	29%	30%
Market Cap (U.S. $ bn)	63.6	368.1

Sector Tilts (Detail)



Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of June 30, 2020.

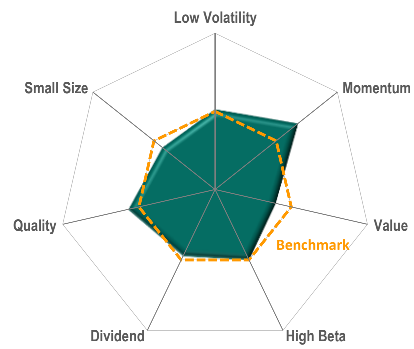
S&P 500 Momentum

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..

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	2.7%	21.8%	5.0%	10.0%	15.4%	13.6%	15.4%	9.8%
Relative to Benchmark	0.7%	1.2%	8.1%	2.5%	4.7%	2.9%	1.4%	0.9%
Index Volatility				18.0%	16.1%	14.0%	13.4%	14.5%
Tracking Error				6.4%	6.2%	5.5%	5.0%	6.3%

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



Factor Exposure Chart

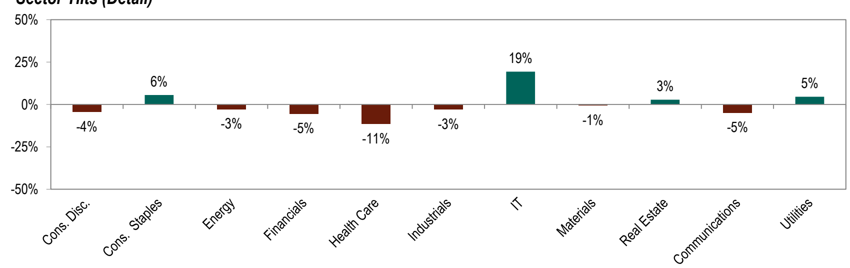
Portfolio Statistics	*Index*	*Bmark*
Active Share (Stock)	67%	0%
Active Share (Sector)	32%	0%
Concentration (HH Index)	362.3	135.6
Correlation (stock)	0.60	0.57
Ann. Turnover (last 10 yr)	1.17	0.05

Top Sector Tilts (versus benchmark)

Sector	*Index*	*Bmark*	*Difference*
IT	47%	27%	19%
Cons. Staples	13%	7%	6%
Health Care	3%	15%	11%
Financials	5%	10%	5%

Index-Weighted Avg.	*Index*	*Bmark*
Stock Volatility	43%	44%
12M - 1M price return	42%	22%
Book/Price	0.16	0.29
Earnings/Price	0.03	0.04
Sales/Price	0.24	0.43
Stock Beta	0.99	0.99
Yield (12M trailing)	1.6%	2.0%
R.O.E.	39%	30%
Market Cap (U.S. $ bn)	424.2	368.1

Sector Tilts (Detail)



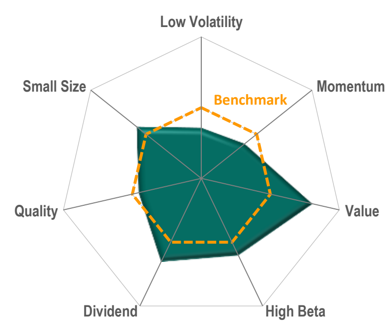
S&P 500 Revenue-Weighted

Description

The S&P 500 Revenue-Weighted comprises all the constituents of the S&P 500, weighted in proportion to revenues.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	0.5%	17.4%	-11.1%	-1.6%	5.9%	7.1%	12.8%	8.2%
Relative to Benchmark	-1.4%	-3.2%	-8.0%	-9.1%	-4.8%	-3.6%	-1.2%	-0.6%
Index Volatility				22.4%	18.0%	15.5%	14.3%	15.8%
Tracking Error				3.6%	3.5%	3.1%	2.7%	3.1%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.01



Factor Exposure Chart

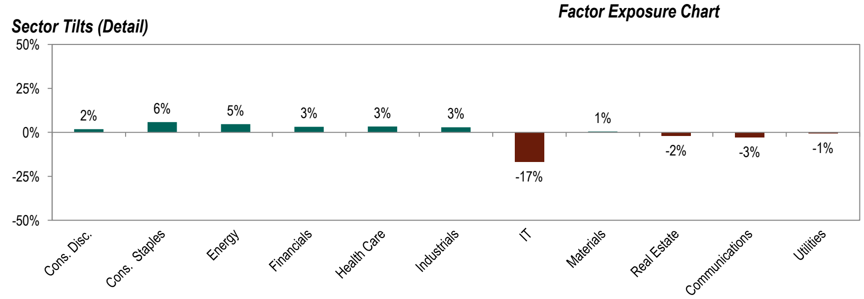
Portfolio Statistics	*Index*	*Bmark*
Active Share (Stock)	42%	0%
Active Share (Sector)	22%	0%
Concentration (HH Index)	91.2	135.6
Correlation (stock)	0.50	0.57
Ann. Turnover (last 10 yr)	0.19	0.05

Top Sector Tilts (versus benchmark)

Sector	*Index*	*Bmark*	*Difference*
Cons. Staples	13%	7%	6%
Energy	7%	3%	5%
IT	11%	27%	17%
Communications	8%	11%	3%

Index-Weighted Avg.	*Index*	*Bmark*
Stock Volatility	48%	44%
12M - 1M price return	9%	22%
Book/Price	0.50	0.29
Earnings/Price	0.04	0.04
Sales/Price	1.24	0.43
Stock Beta	1.12	0.99
Yield (12M trailing)	2.7%	2.0%
R.O.E.	22%	30%
Market Cap (U.S. $ bn)	193.8	368.1

Sector Tilts (Detail)



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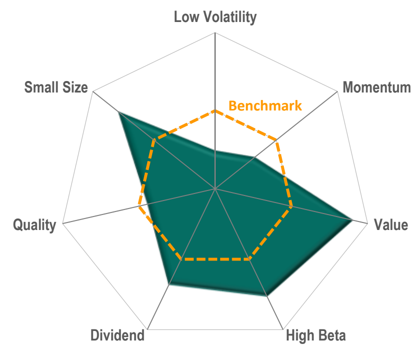
S&P 500 High Momentum Value

Description

The S&P 500 High Momentum Value is designed to measure the performance of the 100 stocks with the highest momentum selected from the 200 stocks in the S&P 500 with the highest value score, subject to turnover constraints. The weighting is proportional to the value score of each constituent.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	1.3%	18.7%	-21.9%	-15.0%	-2.5%	2.9%	11.3%	8.4%
Relative to Benchmark	-0.7%	-1.8%	-18.9%	-22.5%	-13.3%	-7.9%	-2.7%	-0.5%
Index Volatility				30.8%	22.2%	18.7%	16.4%	19.6%
Tracking Error				12.2%	8.3%	7.3%	6.0%	8.2%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.19



Factor Exposure Chart

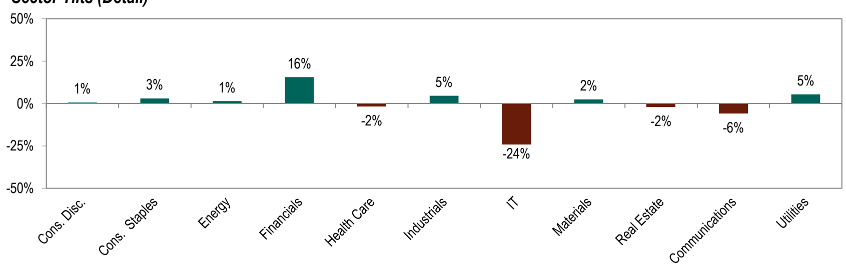
Portfolio Statistics	***Index***	***Bmark***
Active Share (Stock)	85%	0%
Active Share (Sector)	33%	0%
Concentration (HH Index)	110.7	135.6
Correlation (stock)	0.66	0.57
Ann. Turnover (last 10 yr)	0.79	0.05

Top Sector Tilts (versus benchmark)

Sector	***Index***	***Bmark***	***Difference***
Financials	26%	10%	16%
Utilities	8%	3%	5%
IT	4%	27%	24%
Communications	5%	11%	6%

Index-Weighted Avg.	***Index***	***Bmark***
Stock Volatility	52%	44%
12M - 1M price return	6%	22%
Book/Price	0.69	0.29
Earnings/Price	0.08	0.04
Sales/Price	1.33	0.43
Stock Beta	1.29	0.99
Yield (12M trailing)	2.9%	2.0%
R.O.E.	18%	30%
Market Cap (U.S. $ bn)	42.5	368.1

Sector Tilts (Detail)



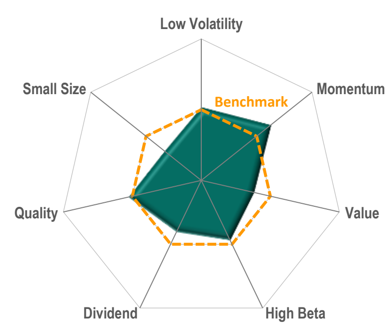
S&P 500 Growth

Description

The S&P 500 Growth is comprises 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 June 30, 2020 the index comprised 279 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	4.1%	26.2%	7.9%	17.8%	16.7%	14.6%	16.6%	10.9%
Relative to Benchmark	2.1%	5.7%	11.0%	10.2%	6.0%	3.9%	2.6%	2.0%
Index Volatility				20.2%	16.5%	14.8%	13.3%	14.3%
Tracking Error				4.0%	3.4%	3.4%	2.9%	3.1%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.98



Factor Exposure Chart

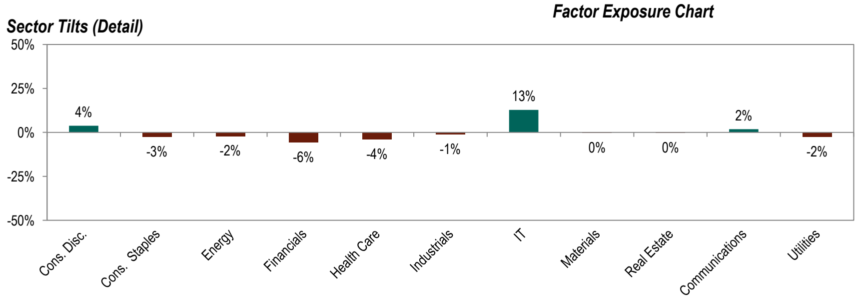
Portfolio Statistics	***Index***	***Bmark***
Active Share (Stock)	29%	0%
Active Share (Sector)	18%	0%
Concentration (HH Index)	322.6	135.6
Correlation (stock)	0.60	0.57
Ann. Turnover (last 10 yr)	0.25	0.05

Top Sector Tilts (versus benchmark)

Sector	***Index***	***Bmark***	***Difference***
IT	40%	27%	13%
Cons. Disc.	15%	11%	4%
Financials	4%	10%	6%
Health Care	11%	15%	4%

Index-Weighted Avg.	***Index***	***Bmark***
Stock Volatility	42%	44%
12M - 1M price return	35%	22%
Book/Price	0.14	0.29
Earnings/Price	0.03	0.04
Sales/Price	0.23	0.43
Stock Beta	0.92	0.99
Yield (12M trailing)	1.2%	2.0%
R.O.E.	36%	30%
Market Cap (U.S. $ bn)	537.2	368.1

Sector Tilts (Detail)



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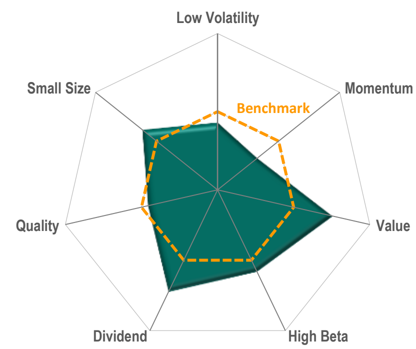
S&P 500 Value

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 June 30, 2020 the index comprised 390 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-1.0%	13.1%	-15.5%	-4.5%	3.7%	6.0%	10.9%	6.4%
Relative to Benchmark	-2.9%	-7.4%	-12.4%	-12.0%	-7.0%	-4.7%	-3.1%	-2.4%
Index Volatility				22.6%	17.8%	15.4%	14.1%	15.8%
Tracking Error				4.8%	4.0%	3.9%	3.3%	3.5%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.02



Factor Exposure Chart

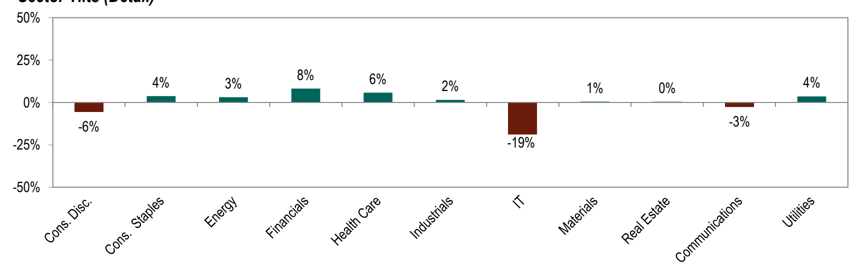
Portfolio Statistics	*Index*	*Bmark*
Active Share (Stock)	43%	0%
Active Share (Sector)	27%	0%
Concentration (HH Index)	85.1	135.6
Correlation (stock)	0.58	0.57
Ann. Turnover (last 10 yr)	0.27	0.05

Top Sector Tilts (versus benchmark)

Sector	*Index*	*Bmark*	*Difference*
Financials	18%	10%	8%
Health Care	20%	15%	6%
IT	9%	27%	19%
Cons. Disc.	5%	11%	6%

Index-Weighted Avg.	*Index*	*Bmark*
Stock Volatility	46%	44%
12M - 1M price return	4%	22%
Book/Price	0.51	0.29
Earnings/Price	0.05	0.04
Sales/Price	0.72	0.43
Stock Beta	1.09	0.99
Yield (12M trailing)	3.1%	2.0%
R.O.E.	21%	30%
Market Cap (U.S. $ bn)	120.8	368.1

Sector Tilts (Detail)



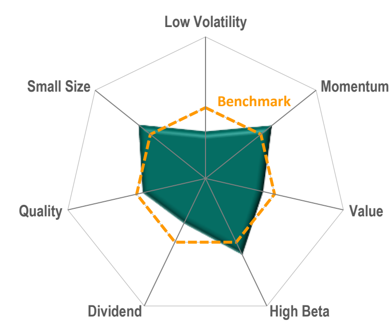
S&P 500 Pure Growth

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 June 30, 2020 the index comprised 109 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	2.7%	29.6%	2.7%	9.9%	12.4%	10.9%	16.2%	10.9%
Relative to Benchmark	0.7%	9.1%	5.8%	2.4%	1.7%	0.2%	2.2%	2.0%
Index Volatility				25.5%	19.6%	16.9%	15.7%	17.0%
Tracking Error				6.7%	5.6%	5.1%	5.4%	5.4%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.06



Factor Exposure Chart

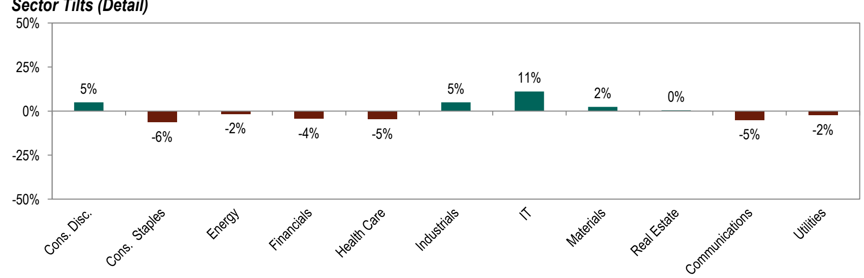
Portfolio Statistics	*Index*	*Bmark*
Active Share (Stock)	74%	0%
Active Share (Sector)	24%	0%
Concentration (HH Index)	109.1	135.6
Correlation (stock)	0.55	0.57
Ann. Turnover (last 10 yr)	0.64	0.05

Top Sector Tilts (versus benchmark)

Sector	*Index*	*Bmark*	*Difference*
IT	39%	27%	11%
Cons. Disc.	16%	11%	5%
Cons. Staples	1%	7%	6%
Communications	6%	11%	5%

Index-Weighted Avg.	*Index*	*Bmark*
Stock Volatility	49%	44%
12M - 1M price return	37%	22%
Book/Price	0.16	0.29
Earnings/Price	0.03	0.04
Sales/Price	0.30	0.43
Stock Beta	1.12	0.99
Yield (12M trailing)	1.0%	2.0%
R.O.E.	33%	30%
Market Cap (U.S. $ bn)	123.1	368.1

Sector Tilts (Detail)



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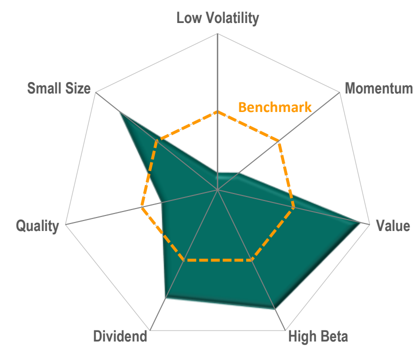
S&P 500 Pure Value

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 June 30, 2020 the index comprised 103 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	2.1%	20.5%	-29.8%	-24.2%	-4.5%	0.3%	9.9%	6.4%
Relative to Benchmark	0.1%	0.0%	-26.8%	-31.7%	-15.2%	-10.4%	-4.1%	-2.4%
Index Volatility				36.1%	25.7%	21.8%	19.3%	23.0%
Tracking Error				17.3%	11.8%	10.2%	8.7%	11.8%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.25



Factor Exposure Chart

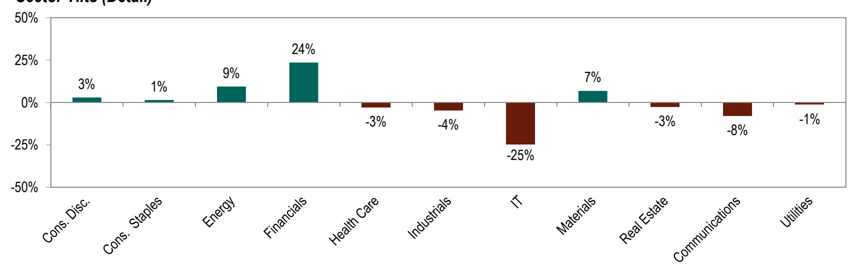
Portfolio Statistics	*Index*	*Bmark*
Active Share (Stock)	89%	0%
Active Share (Sector)	44%	0%
Concentration (HH Index)	126.4	135.6
Correlation (stock)	0.56	0.57
Ann. Turnover (last 10 yr)	0.48	0.05

Top Sector Tilts (versus benchmark)

Sector	*Index*	*Bmark*	*Difference*
Financials	34%	10%	24%
Energy	12%	3%	9%
IT	2%	27%	25%
Communications	3%	11%	8%

Index-Weighted Avg.	*Index*	*Bmark*
Stock Volatility	60%	44%
12M - 1M price return	-13%	22%
Book/Price	1.12	0.29
Earnings/Price	0.03	0.04
Sales/Price	1.91	0.43
Stock Beta	1.48	0.99
Yield (12M trailing)	3.6%	2.0%
R.O.E.	6%	30%
Market Cap (U.S. $ bn)	38.9	368.1

Sector Tilts (Detail)



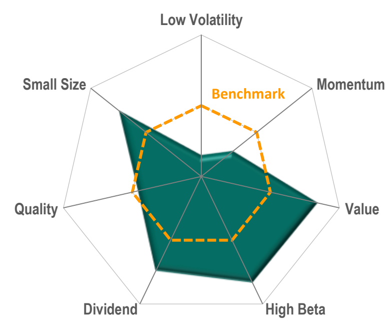
S&P 500 Buyback

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.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	2.2%	20.7%	-16.8%	-7.7%	4.9%	6.2%	13.6%	9.7%
Relative to Benchmark	0.2%	0.2%	-13.7%	-15.2%	-5.9%	-4.5%	-0.4%	0.9%
Index Volatility				29.1%	21.9%	19.0%	16.3%	17.7%
Tracking Error				10.2%	7.2%	6.5%	5.4%	5.8%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.19



Factor Exposure Chart

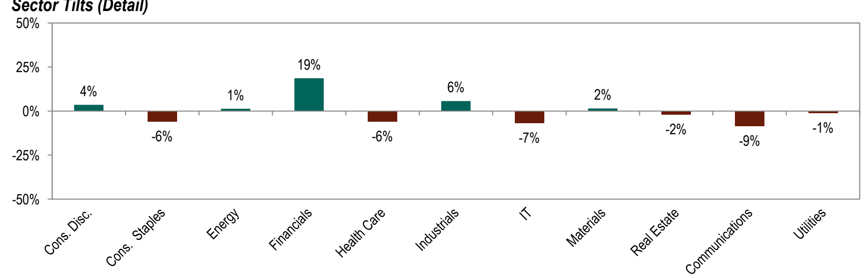
Portfolio Statistics	*Index*	*Bmark*
Active Share (Stock)	85%	0%
Active Share (Sector)	31%	0%
Concentration (HH Index)	103.6	135.6
Correlation (stock)	0.55	0.57
Ann. Turnover (last 10 yr)	0.90	0.05

Top Sector Tilts (versus benchmark)

Sector	*Index*	*Bmark*	*Difference*
Financials	29%	10%	19%
Industrials	14%	8%	6%
Communications	2%	11%	9%
IT	21%	27%	7%

Index-Weighted Avg.	*Index*	*Bmark*
Stock Volatility	57%	44%
12M - 1M price return	0%	22%
Book/Price	0.61	0.29
Earnings/Price	0.07	0.04
Sales/Price	0.96	0.43
Stock Beta	1.44	0.99
Yield (12M trailing)	3.3%	2.0%
R.O.E.	30%	30%
Market Cap (U.S. $ bn)	58.4	368.1

Sector Tilts (Detail)



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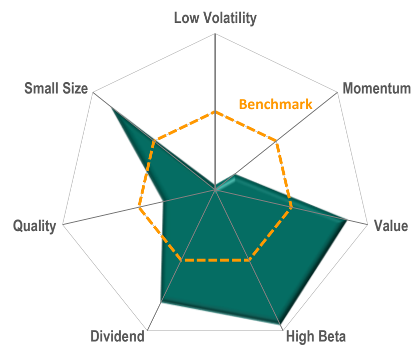
S&P 500 High Beta

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.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	5.9%	37.6%	-12.2%	-3.4%	4.9%	5.7%	10.3%	4.6%
Relative to Benchmark	3.9%	17.1%	-9.1%	-10.9%	-5.8%	-5.0%	-3.7%	-4.2%
Index Volatility				36.9%	27.6%	24.9%	23.2%	26.4%
Tracking Error				17.4%	12.5%	12.8%	12.0%	14.0%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.37



Factor Exposure Chart

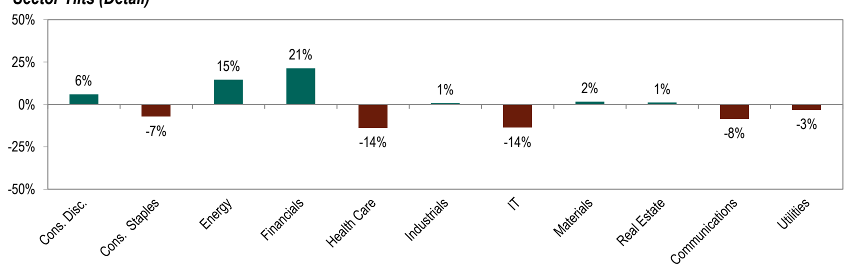
Portfolio Statistics	*Index*	*Bmark*
Active Share (Stock)	89%	0%
Active Share (Sector)	46%	0%
Concentration (HH Index)	107.3	135.6
Correlation (stock)	0.43	0.57
Ann. Turnover (last 10 yr)	0.87	0.05

Top Sector Tilts (versus benchmark)

Sector	*Index*	*Bmark*	*Difference*
Financials	31%	10%	21%
Energy	17%	3%	15%
Health Care	1%	15%	14%
IT	14%	27%	14%

Index-Weighted Avg.	*Index*	*Bmark*
Stock Volatility	76%	44%
12M - 1M price return	-18%	22%
Book/Price	93%	29%
Earnings/Price	1%	4%
Sales/Price	125%	43%
Stock Beta	193%	99%
Yield (12M trailing)	3.9%	2.0%
R.O.E.	9%	30%
Market Cap (U.S. $ bn)	28.4	368.1

Sector Tilts (Detail)



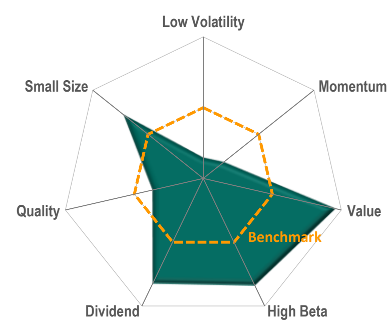
S&P 500 Enhanced Value

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.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	0.6%	18.5%	-26.6%	-17.4%	-1.3%	3.2%	10.6%	5.8%
Relative to Benchmark	-1.4%	-2.0%	-23.5%	-24.9%	-12.1%	-7.5%	-3.4%	-3.0%
Index Volatility				33.4%	23.9%	20.7%	18.4%	20.9%
Tracking Error				14.8%	10.3%	9.4%	7.9%	9.1%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.25



Factor Exposure Chart

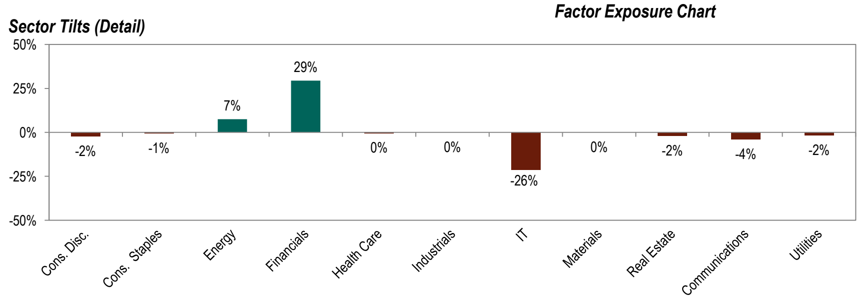
Portfolio Statistics	*Index*	*Bmark*
Active Share (Stock)	90%	0%
Active Share (Sector)	37%	0%
Concentration (HH Index)	234.2	135.6
Correlation (stock)	0.60	0.57
Ann. Turnover (last 10 yr)	0.44	0.05

Top Sector Tilts (versus benchmark)

Sector	*Index*	*Bmark*	*Difference*
Financials	39%	10%	29%
Energy	10%	3%	7%
IT	2%	27%	26%
Communications	7%	11%	4%

Index-Weighted Avg.	*Index*	*Bmark*
Stock Volatility	57%	44%
12M - 1M price return	-9%	22%
Book/Price	1.03	0.29
Earnings/Price	0.08	0.04
Sales/Price	1.67	0.43
Stock Beta	1.45	0.99
Yield (12M trailing)	4.1%	2.0%
R.O.E.	11%	30%
Market Cap (U.S. $ bn)	67.3	368.1

Sector Tilts (Detail)



S&P 500 Equal Weight

Description

The S&P 500 Equal Weight comprises all 500 stocks in the S&P 500, equally weighted.

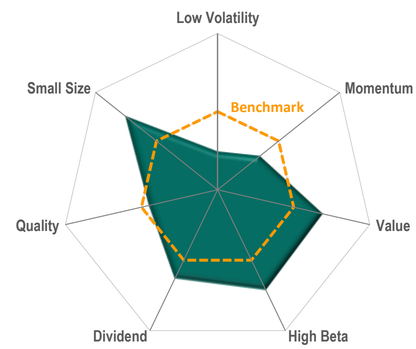
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	1.6%	21.7%	-10.8%	-3.2%	5.4%	7.1%	12.6%	8.8%
Relative to Benchmark	-0.4%	1.2%	-7.7%	-10.8%	-5.3%	-3.6%	-1.3%	0.0%
Index Volatility				26.0%	19.5%	16.7%	15.2%	17.2%
Tracking Error				6.0%	4.4%	3.8%	3.3%	4.4%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.07

Portfolio Statistics	***Index***	***Bmark***
Active Share (Stock)	50%	0%
Active Share (Sector)	21%	0%
Concentration (HH Index)	20.0	135.6
Correlation (stock)	0.52	0.57
Ann. Turnover (last 10 yr)	0.22	0.05

Top Sector Tilts (versus benchmark)

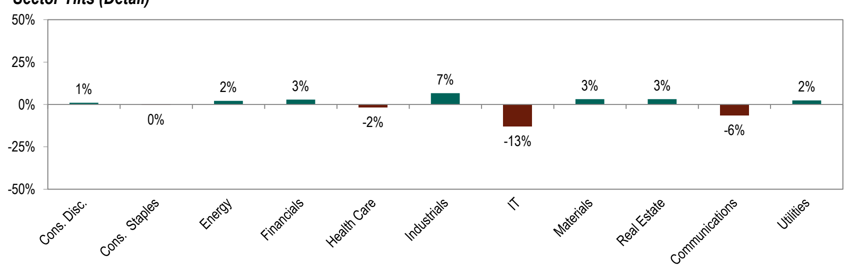
Sector	***Index***	***Bmark***	***Difference***
Industrials	15%	8%	7%
Materials	6%	3%	3%
IT	15%	27%	13%
Communications	4%	11%	6%



Factor Exposure Chart

Index-Weighted Avg.	***Index***	***Bmark***
Stock Volatility	52%	44%
12M - 1M price return	6%	22%
Book/Price	0.45	0.29
Earnings/Price	0.04	0.04
Sales/Price	0.73	0.43
Stock Beta	1.24	0.99
Yield (12M trailing)	2.6%	2.0%
R.O.E.	22%	30%
Market Cap (U.S. $ bn)	54.1	368.1

Sector Tilts (Detail)



More Factor Resources

factor ALLOCATOR

Factor Allocator is a complementary web-based tool from Optimal Asset Management that allows advisors to build and analyse simulated portfolios using S&P Factor Indices. Using 15 years of S&P factor index data, explore how individual risk factors behave together and in different market conditions to meet specific performance goals.
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Charts and graphs are provided for illustrative purposes. Past performance is not an indication or guarantee of future results. The charts and graphs may reflect hypothetical historical performance. All information presented prior to the launch date is back-tested. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index(es) was officially launched. However, it should be noted that the historic calculations of an Economic Index may change from month to month based on revisions to the underlying economic data used in the calculation of the index. Complete index methodology details are available at www.spdji.com. It is not possible to invest directly in any index.

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