

S&P Dow Jones Indices

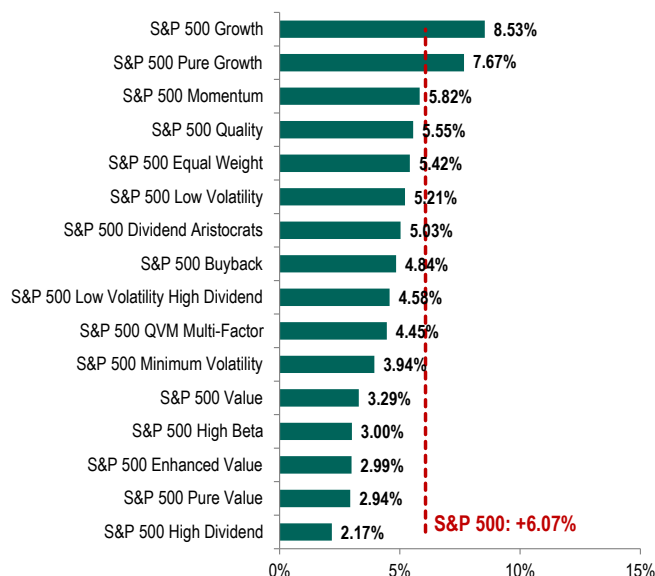
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Index Dashboard: S&P 500® Factor Indices

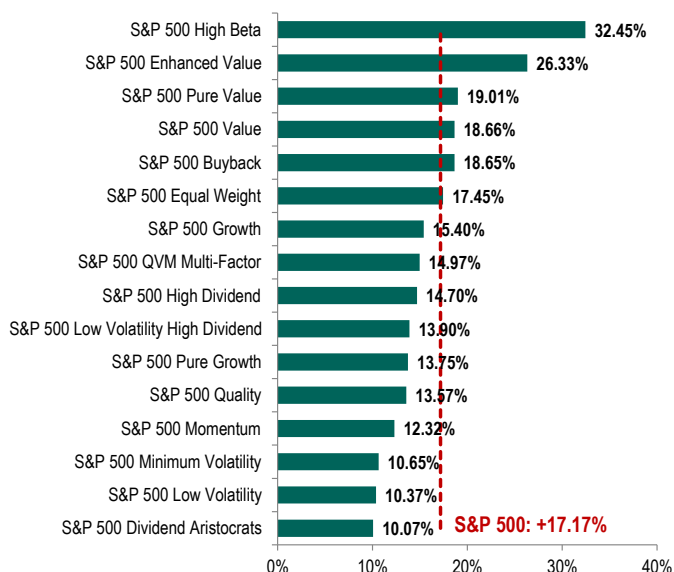
Q1 2017

QUARTERLY AND 12M TRAILING PERFORMANCE SUMMARY

Q1 2017 Total Return

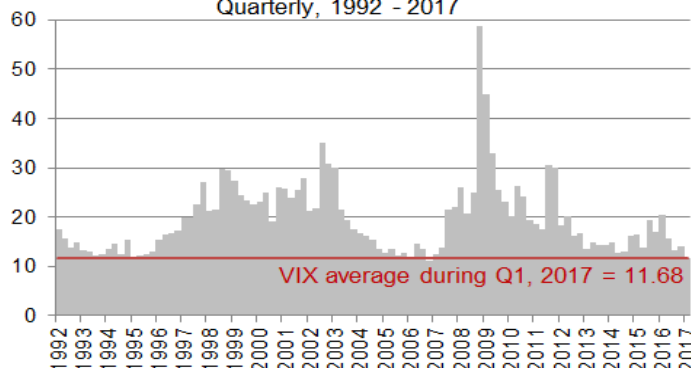


12M Total Return

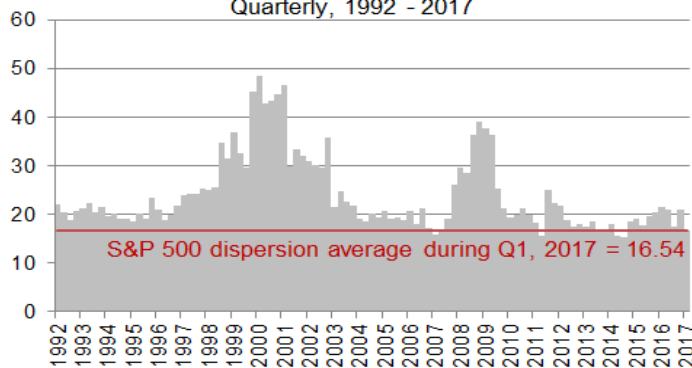


COMMENTARY

Average VIX
Quarterly, 1992 - 2017



Average S&P 500 Monthly Dispersion
Quarterly, 1992 - 2017



It is a rare occasion when one can say that “**smart beta underperformed**”. More typically, as one strategy falls another rises. However, **over the first quarter of 2017 nearly all of the S&P 500 factor indices trailed the benchmark S&P 500.**

On this occasion, **the size factor was at least partly to blame**: when Equal Weight underperforms (as in this quarter), the “average stock” underperforms, and hence the average stock-selection strategy – if it is not capitalization weighted – faces headwinds.

Growth was the exception, which was boosted in particular by strong performance in the largest technology companies; the S&P 500 Information Technology sector was up by 12.57% over the quarter. (Further sectoral performances may be found in our [U.S. Index dashboard](#).)

However, any such underperformance was muted, as every strategy performed within a 3% range of the S&P 500. In other words, the **dispersion of performances among factor indices was low**. In part this can be explained by a relative lack of overall market movements – either in individual stocks or in their averages. **Over the first quarter of 2017, volatility in U.S. equities was unusually low, as was dispersion.** The VIX® recorded its lowest quarterly average since 2006, while S&P 500 monthly dispersion averaged its lowest in two years.

S&P Dow Jones Indices

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Index Dashboard: S&P 500® Factor Indices

Q1 2017

TOTAL RETURN AND VOLATILITY

TOTAL RETURN	1M	QTR	1YR	3YR	5YR	10YR	15YR	VOLATILITY (ANN.)	1YR	3YR	5YR	10YR	15YR
S&P 500 Growth	1.3%	8.5%	15.4%	11.5%	13.8%	9.2%	7.2%	S&P 500 Growth	6.5%	10.9%	10.4%	14.7%	13.7%
S&P 500 Pure Growth	1.5%	7.7%	13.7%	8.1%	13.9%	10.5%	9.3%	S&P 500 Pure Growth	7.2%	11.0%	11.7%	17.5%	17.2%
S&P 500 Momentum	0.2%	5.8%	12.3%	9.4%	11.9%	7.3%	7.1%	S&P 500 Momentum	6.3%	10.1%	9.8%	15.0%	14.1%
S&P 500 Quality	0.2%	5.6%	13.6%	9.8%	12.6%	9.9%	9.4%	S&P 500 Quality	5.7%	10.2%	10.5%	14.2%	13.5%
S&P 500 Equal Weight	0.0%	5.4%	17.4%	9.6%	14.0%	8.7%	9.3%	S&P 500 Equal Weight	7.1%	10.8%	10.7%	17.9%	16.8%
S&P 500 Low Volatility	-0.1%	5.2%	10.4%	11.3%	13.2%	8.9%	9.0%	S&P 500 Low Volatility	8.1%	9.3%	9.3%	11.2%	10.3%
S&P 500 Dividend Aristocrats	0.2%	5.0%	10.1%	10.8%	14.4%	10.1%	9.6%	S&P 500 Dividend Aristocrats	7.6%	9.7%	9.7%	14.1%	12.9%
S&P 500 Buyback	0.1%	4.8%	18.7%	9.6%	15.7%	10.1%	10.6%	S&P 500 Buyback	9.0%	12.5%	12.3%	17.8%	15.9%
S&P 500 Low Volatility High Dividend	-0.6%	4.6%	13.9%	15.8%	15.2%	11.6%	11.4%	S&P 500 Low Volatility High Dividend	7.8%	9.4%	9.5%	13.9%	13.0%
S&P 500 QVM Multi-Factor	-0.4%	4.5%	15.0%	9.1%	13.4%	8.7%	10.2%	S&P 500 QVM Multi-Factor	8.0%	10.8%	10.5%	14.9%	13.9%
S&P 500 Minimum Volatility	-0.4%	3.9%	10.6%	11.9%	14.3%	7.9%	8.9%	S&P 500 Minimum Volatility	7.2%	8.4%	8.5%	12.1%	11.4%
S&P 500 Value	-1.2%	3.3%	18.7%	8.9%	12.7%	5.7%	6.8%	S&P 500 Value	7.4%	10.4%	10.5%	16.4%	15.4%
S&P 500 High Beta	-0.4%	3.0%	32.4%	8.0%	12.9%	3.1%	4.5%	S&P 500 High Beta	14.3%	18.0%	17.2%	27.9%	28.6%
S&P 500 Enhanced Value	-2.2%	3.0%	26.3%	8.8%	14.4%	5.9%	7.8%	S&P 500 Enhanced Value	12.0%	13.4%	13.7%	21.7%	19.6%
S&P 500 Pure Value	-2.5%	2.9%	19.0%	7.1%	15.2%	8.1%	9.8%	S&P 500 Pure Value	10.3%	13.4%	13.7%	24.2%	21.8%
S&P 500 High Dividend	-1.3%	2.2%	14.7%	13.3%	15.6%	7.5%	8.9%	S&P 500 High Dividend	7.4%	9.8%	9.8%	18.6%	16.8%
S&P 500	0.1%	6.1%	17.2%	10.4%	13.3%	7.5%	7.1%	S&P 500	6.0%	10.3%	10.1%	15.2%	14.2%

Performance figures for more than one year are annualized.

RELATIVE RETURN AND TRACKING ERROR

PERFORMANCE v S&P 500	1M	QTR	1YR	3YR	5YR	10YR	15YR	TRACKING ERROR v S&P 500 (ANN.)	1YR	3YR	5YR	10YR	15YR
S&P 500 Growth	1.1%	2.5%	-1.8%	1.2%	0.5%	1.7%	0.2%	S&P 500 Growth	3.8%	2.7%	2.5%	3.1%	3.1%
S&P 500 Pure Growth	1.4%	1.6%	-3.4%	-2.3%	0.6%	3.0%	2.2%	S&P 500 Pure Growth	4.3%	4.3%	4.8%	5.7%	6.1%
S&P 500 Momentum	0.0%	-0.2%	-4.9%	-0.9%	-1.4%	-0.3%	0.0%	S&P 500 Momentum	5.0%	4.9%	4.5%	6.6%	7.5%
S&P 500 Quality	0.1%	-0.5%	-3.6%	-0.6%	-0.7%	2.4%	2.4%	S&P 500 Quality	1.5%	2.0%	2.0%	3.2%	3.4%
S&P 500 Equal Weight	-0.1%	-0.7%	0.3%	-0.8%	0.7%	1.2%	2.3%	S&P 500 Equal Weight	2.2%	2.4%	2.4%	4.5%	4.5%
S&P 500 Low Volatility	-0.2%	-0.9%	-6.8%	0.9%	-0.1%	1.4%	1.9%	S&P 500 Low Volatility	7.7%	6.9%	6.9%	8.1%	7.8%
S&P 500 Dividend Aristocrats	0.1%	-1.0%	-7.1%	0.4%	1.1%	2.6%	2.5%	S&P 500 Dividend Aristocrats	4.3%	4.1%	3.9%	5.7%	5.4%
S&P 500 Buyback	0.0%	-1.2%	1.5%	-0.8%	2.4%	2.6%	3.5%	S&P 500 Buyback	5.3%	4.7%	4.5%	5.7%	5.4%
S&P 500 Low Volatility High Dividend	-0.8%	-1.5%	-3.3%	5.4%	1.9%	4.1%	4.3%	S&P 500 Low Volatility High Dividend	4.9%	7.0%	7.1%	7.8%	7.4%
S&P 500 QVM Multi-Factor	-0.5%	-1.6%	-2.2%	-1.3%	0.1%	1.2%	3.1%	S&P 500 QVM Multi-Factor	4.6%	3.4%	3.1%	4.1%	5.8%
S&P 500 Minimum Volatility	-0.5%	-2.1%	-6.5%	1.6%	1.0%	0.4%	1.8%	S&P 500 Minimum Volatility	6.5%	5.7%	4.9%	6.0%	5.7%
S&P 500 Value	-1.3%	-2.8%	1.5%	-1.5%	-0.6%	-1.8%	-0.3%	S&P 500 Value	4.0%	2.9%	2.8%	3.4%	3.3%
S&P 500 High Beta	-0.5%	-3.1%	15.3%	-2.4%	-0.4%	-4.4%	-2.6%	S&P 500 High Beta	12.7%	11.1%	10.3%	15.1%	16.9%
S&P 500 Enhanced Value	-2.3%	-3.1%	9.2%	-1.5%	1.1%	-1.6%	0.7%	S&P 500 Enhanced Value	8.7%	6.4%	7.0%	9.3%	8.5%
S&P 500 Pure Value	-2.6%	-3.1%	1.8%	-3.3%	1.9%	0.5%	2.7%	S&P 500 Pure Value	6.7%	6.0%	6.6%	12.6%	11.6%
S&P 500 High Dividend	-1.4%	-3.9%	-2.5%	3.0%	2.3%	0.0%	1.8%	S&P 500 High Dividend	5.1%	7.1%	7.0%	9.9%	8.9%

Performance figures for more than one year are annualized.

RELATIVE RETURN CORRELATIONS

	S&P 500 Low Volatility	S&P 500 Minimum Volatility	S&P 500 Low Volatility High Dividend	S&P 500 High Dividend	S&P 500 Dividend Aristocrats	S&P 500 Quality	S&P 500 Momentum	S&P 500 Growth	S&P 500 QVM Multi-Factor	S&P 500 Pure Growth	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 Low Volatility	1.00	0.88	0.72	0.53	0.73	0.25	0.29	0.03	-0.14	-0.11	-0.02	-0.11	-0.36	-0.46	-0.55	-0.69
S&P 500 Minimum Volatility	0.88	1.00	0.71	0.56	0.66	0.25	0.35	0.06	-0.09	-0.11	-0.05	-0.12	-0.37	-0.45	-0.59	-0.66
S&P 500 Low Volatility High Dividend	0.72	0.71	1.00	0.89	0.61	0.07	-0.01	-0.24	-0.30	-0.14	0.23	0.25	0.04	-0.18	-0.27	-0.30
S&P 500 High Dividend	0.53	0.56	0.89	1.00	0.52	-0.03	-0.19	-0.40	-0.33	-0.16	0.40	0.49	0.31	0.05	-0.02	-0.01
S&P 500 Dividend Aristocrats	0.73	0.66	0.61	0.52	1.00	0.37	0.07	-0.25	-0.23	-0.01	0.25	0.19	-0.06	-0.09	-0.28	-0.41
S&P 500 Quality	0.25	0.25	0.07	-0.03	0.37	1.00	0.25	0.22	0.22	0.35	-0.23	-0.01	-0.28	0.04	-0.36	-0.23
S&P 500 Momentum	0.29	0.35	-0.01	-0.19	0.07	0.25	1.00	0.62	0.57	0.13	-0.61	-0.29	-0.55	-0.33	-0.57	-0.46
S&P 500 Growth	0.03	0.06	-0.24	-0.40	-0.25	0.22	0.62	1.00	0.71	-0.11	-1.00	-0.47	-0.72	-0.31	-0.69	-0.35
S&P 500 QVM Multi-Factor	-0.14	-0.09	-0.30	-0.33	-0.23	0.22	0.57	0.71	1.00	0.12	-0.70	0.05	-0.33	0.09	-0.31	0.03
S&P 500 Pure Growth	-0.11	-0.11	-0.14	-0.16	-0.01	0.35	0.13	-0.11	0.12	1.00	0.11	0.13	0.08	0.41	0.25	0.07
S&P 500 Value	-0.02	-0.05	0.23	0.40	0.25	-0.23	-0.61	-1.00	-0.70	0.11	1.00	0.47	0.72	0.30	0.68	0.33
S&P 500 Equal Weight	-0.11	-0.12	0.25	0.49	0.19	-0.01	-0.29	-0.47	0.05	0.13	0.47	1.00	0.73	0.66	0.48	0.64
S&P 500 Pure Value	-0.36	-0.37	0.04	0.31	-0.06	-0.28	-0.55	-0.72	-0.33	0.08	0.72	0.73	1.00	0.60	0.83	0.72
S&P 500 Buyback	-0.46	-0.45	-0.18	0.05	-0.09	0.04	-0.33	-0.31	0.09	0.41	0.30	0.66	0.60	1.00	0.60	0.62
S&P 500 Enhanced Value	-0.55	-0.59	-0.27	-0.02	-0.28	-0.36	-0.57	-0.69	-0.31	0.25	0.68	0.48	0.83	0.60	1.00	0.67
S&P 500 High Beta	-0.69	-0.66	-0.30	-0.01	-0.41	-0.23	-0.46	-0.35	0.03	0.07	0.33	0.64	0.72	0.62	0.67	1.00

Correlation of weekly S&P 500 total return outperformance, three years to March 31st 2017

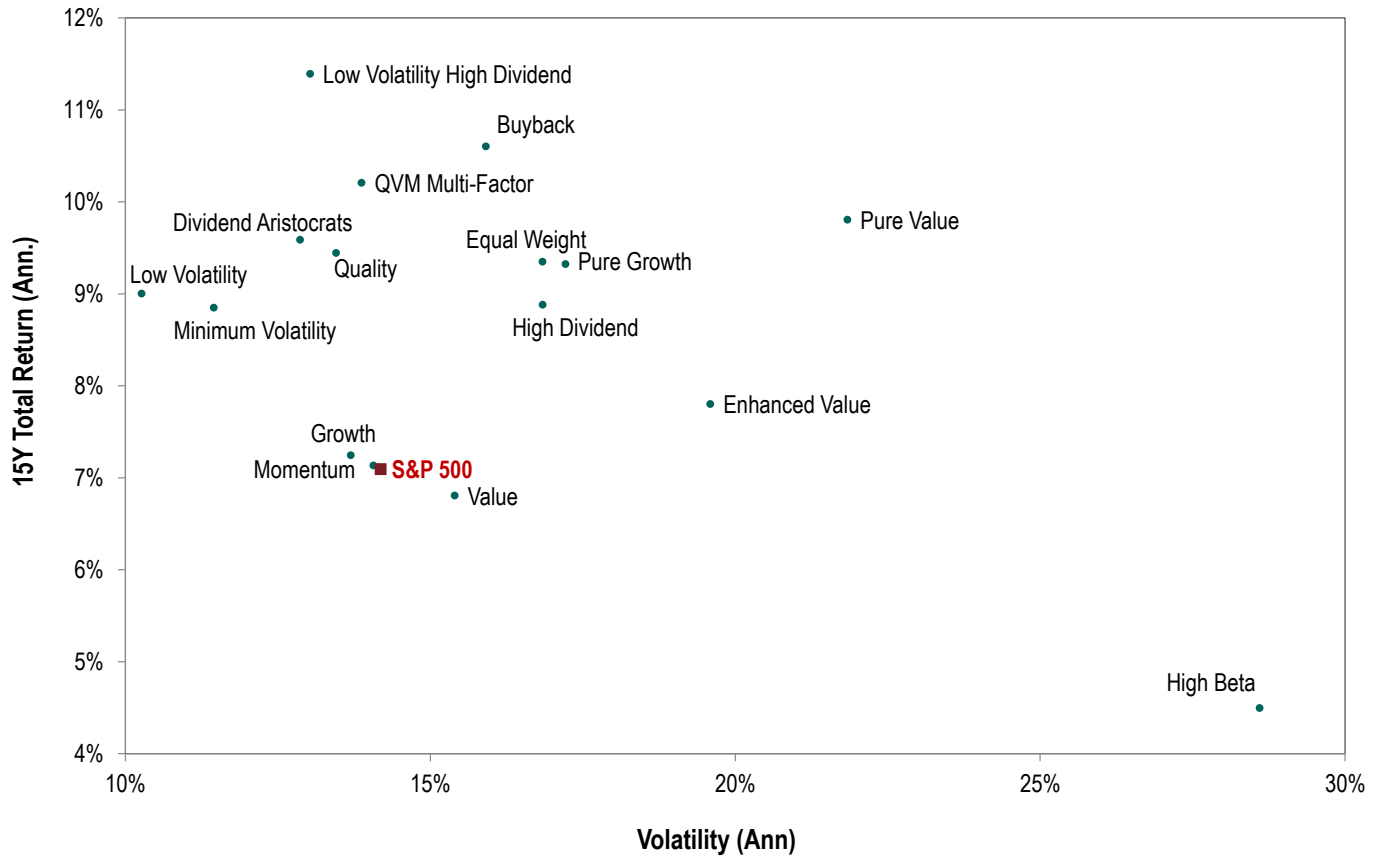
S&P Dow Jones Indices

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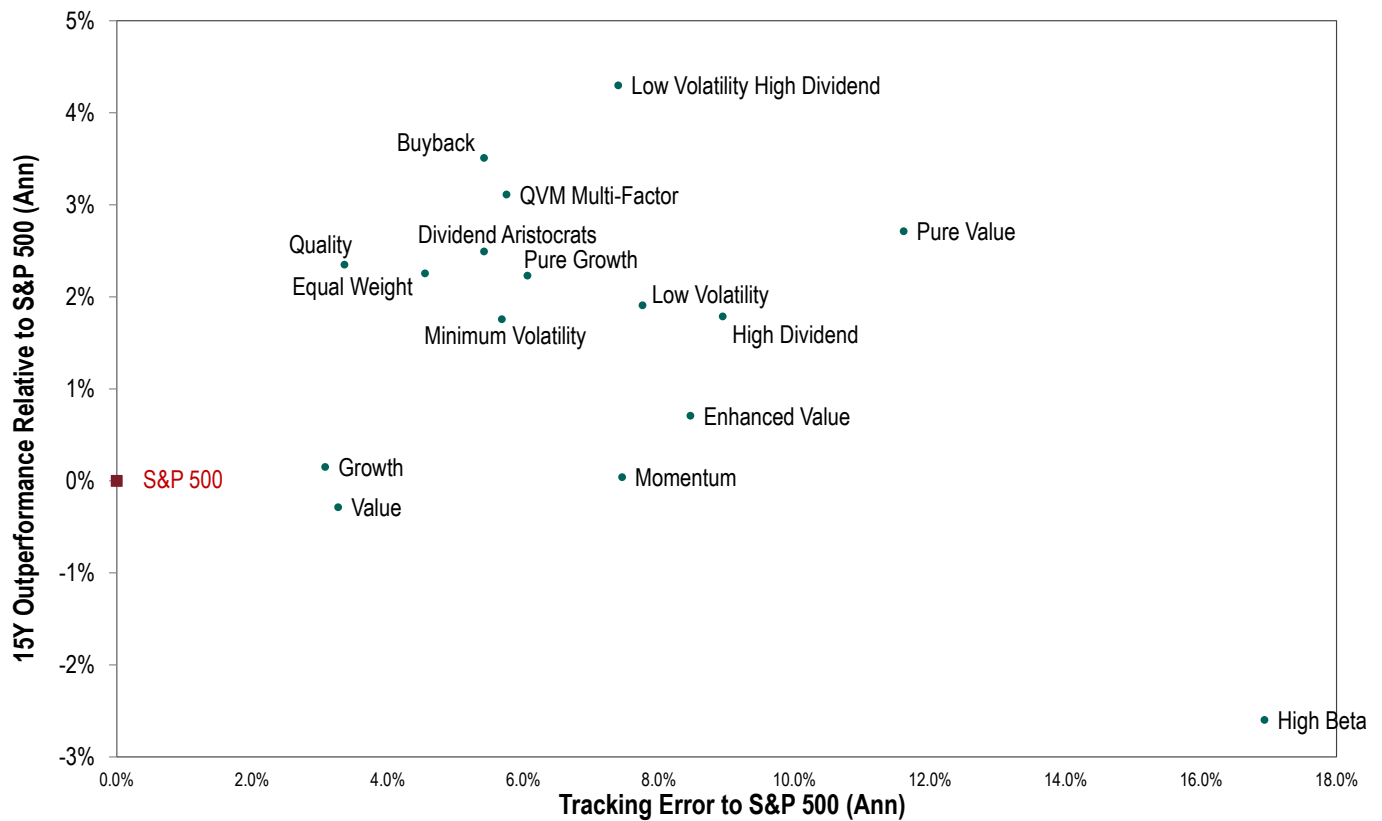
Index Dashboard: S&P 500® Factor Indices

Q1 2017

15 YEAR RISK & RETURN - ABSOLUTE



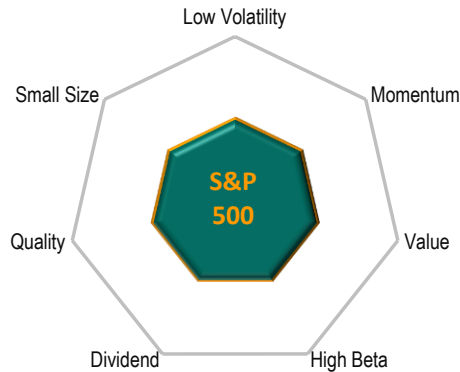
15 YEAR RISK & RETURN - RELATIVE TO S&P 500



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.



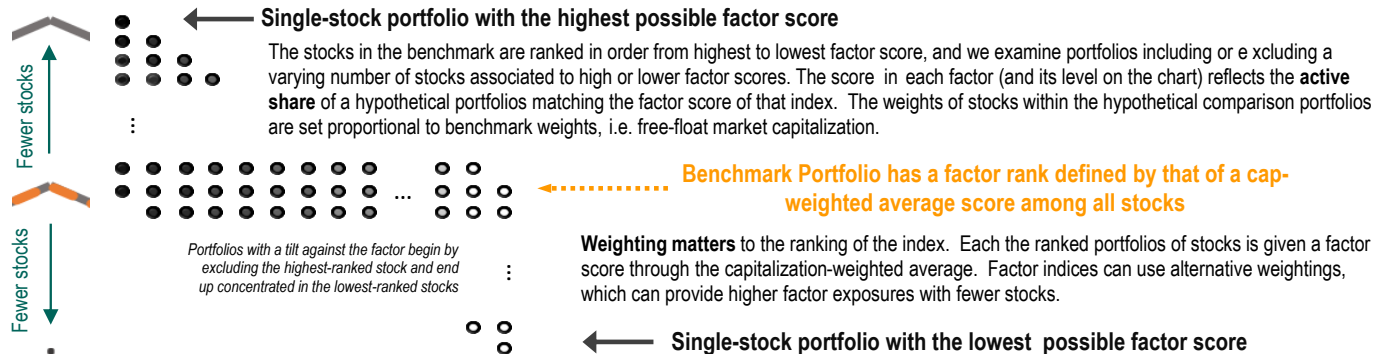
Factor	Measurement at single-stock level
Volatility	Trailing 12-month daily volatility.
Momentum	Twelve-month price change as of one month ago ("13 minus 1 momentum"), divided by the daily volatility during the twelve-month period that ended one month prior. For more details, see the S&P Momentum methodology.
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



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	12M - 1M Return	Daily Price Volatility
S&P 500 index-weighted average	4.04%	32.0%	46.3%	7.09%	19.23%	1.44	18.66%	1.37%
S&P 500 index-weighted standard deviation	2.93%	25.0%	45.1%	17.56%	29.92%	1.83	22.63%	0.47%

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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	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-0.1%	5.2%	10.4%	11.3%	13.2%	8.9%	9.0%
Relative to Benchmark	-0.2%	-0.9%	-6.8%	0.9%	-0.1%	1.4%	1.9%
Index Volatility			8.13%	9.29%	9.25%	11.24%	10.26%
Tracking Error			7.67%	6.89%	6.94%	8.14%	7.76%

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

Portfolio Statistics

Active Share (Stock)	70%
Active Share (Sector)	34%
Concentration (HH Index)	101.4
Correlation (stock)	0.35
Average Market Cap (\$ bn)	71.94

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Utilities	19%	3%	16%
Consumer Staples	18%	9%	9%
Health Care	6%	14%	-8%
Information Technology	7%	22%	-15%

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, 2017 the index comprised 98 constituents.

Index Statistics	1M	3M	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-0.4%	3.9%	10.6%	11.9%	14.3%	7.9%	8.9%
Relative to Benchmark	-0.5%	-2.1%	-6.5%	1.6%	1.0%	0.4%	1.8%
Index Volatility			7.25%	8.43%	8.53%	12.12%	11.45%
Tracking Error			6.53%	5.71%	4.90%	6.03%	5.68%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.74

Portfolio Statistics

Active Share (Stock)	81%
Active Share (Sector)	21%
Concentration (HH Index)	152.4
Correlation (stock)	0.21
Average Market Cap (\$ bn)	58.36

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Real Estate	8%	3%	5%
Consumer Discretionary	17%	12%	5%
Energy	2%	7%	-5%
Information Technology	16%	22%	-6%

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.

Index Statistics	1M	3M	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-0.6%	4.6%	13.9%	15.8%	15.2%	11.6%	11.4%
Relative to Benchmark	-0.8%	-1.5%	-3.3%	5.4%	1.9%	4.1%	4.3%
Index Volatility			7.83%	9.43%	9.47%	13.95%	13.03%
Tracking Error			4.93%	7.02%	7.09%	7.80%	7.40%

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

Portfolio Statistics

Active Share (Stock)	81%
Active Share (Sector)	39%
Concentration (HH Index)	206.7
Correlation (stock)	0.31
Average Market Cap (\$ bn)	73.05

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Utilities	22%	3%	19%
Real Estate	18%	3%	16%
Financials	4%	14%	-10%
Information Technology	10%	22%	-12%

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	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-1.3%	2.2%	14.7%	13.3%	15.6%	7.5%	8.9%
Relative to Benchmark	-1.4%	-3.9%	-2.5%	3.0%	2.3%	0.0%	1.8%
Index Volatility			7.40%	9.82%	9.79%	18.64%	16.84%
Tracking Error			5.10%	7.15%	6.99%	9.90%	8.94%

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

Portfolio Statistics

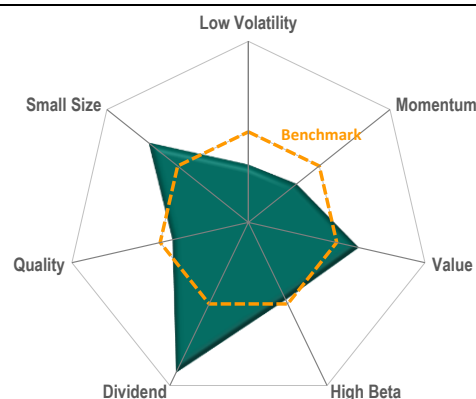
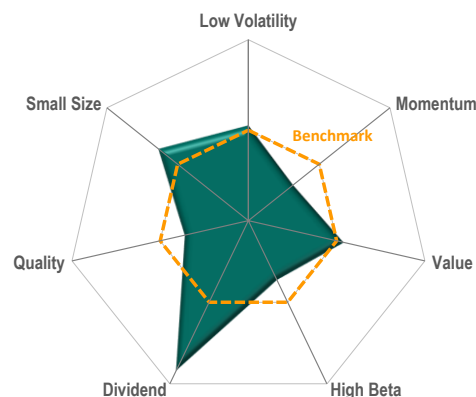
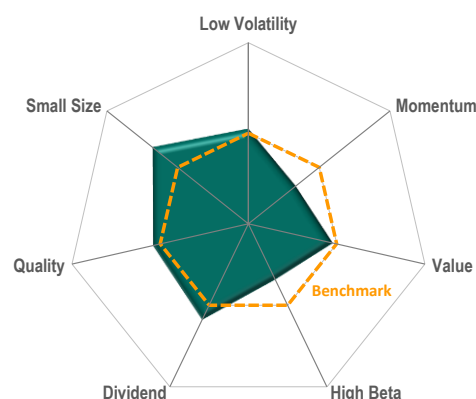
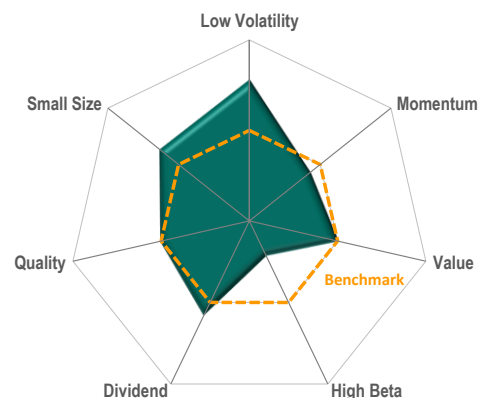
Active Share (Stock)	83%
Active Share (Sector)	43%
Concentration (HH Index)	130.7
Correlation (stock)	0.25
Average Market Cap (\$ bn)	47.66

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Real Estate	22%	3%	19%
Utilities	19%	3%	16%
Health Care	4%	14%	-10%
Information Technology	9%	22%	-14%

Index Dashboard: S&P 500® Factor Indices

Q1 2017



S&P Dow Jones Indices

A Division of **S&P Global**

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.

Index Statistics	1M	3M	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	0.2%	5.6%	13.6%	9.8%	12.6%	9.9%	9.4%
Relative to Benchmark	0.1%	-0.5%	-3.6%	-0.6%	-0.7%	2.4%	2.4%
Index Volatility			5.68%	10.18%	10.45%	14.18%	13.45%
Tracking Error			1.54%	2.01%	2.03%	3.25%	3.36%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.92

Portfolio Statistics

Active Share (Stock)	81%
Active Share (Sector)	32%
Concentration (HH Index)	241.1
Correlation (stock)	0.30
Average Market Cap (\$ bn)	95.27

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Industrials	21%	10%	11%
Consumer Staples	18%	9%	9%
Financials	6%	14%	-9%
Health Care	3%	14%	-11%

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	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-2.2%	3.0%	26.3%	8.8%	14.4%	5.9%	7.8%
Relative to Benchmark	-2.3%	-3.1%	9.2%	-1.5%	1.1%	-1.6%	0.7%
Index Volatility			12.02%	13.36%	13.69%	21.66%	19.59%
Tracking Error			8.71%	6.39%	6.99%	9.31%	8.47%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.29

Portfolio Statistics

Active Share (Stock)	83%
Active Share (Sector)	31%
Concentration (HH Index)	235.2
Correlation (stock)	0.38
Average Market Cap (\$ bn)	98.98

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Financials	40%	14%	25%
Consumer Staples	13%	9%	4%
Industrials	4%	10%	-6%
Information Technology	3%	22%	-19%

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.

Index Statistics	1M	3M	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	0.2%	5.8%	12.3%	9.4%	11.9%	7.3%	7.1%
Relative to Benchmark	0.0%	-0.2%	-4.9%	-0.9%	-1.4%	-0.3%	0.0%
Index Volatility			6.30%	10.15%	9.81%	14.97%	14.07%
Tracking Error			4.96%	4.90%	4.54%	6.56%	7.46%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.84

Portfolio Statistics

Active Share (Stock)	80%
Active Share (Sector)	35%
Concentration (HH Index)	247.9
Correlation (stock)	0.21
Average Market Cap (\$ bn)	113.52

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Financials	38%	14%	23%
Industrials	19%	10%	9%
Health Care	6%	14%	-8%
Consumer Staples	0%	9%	-9%

S&P 500 QVM Multi-Factor

Description

The S&P 500 QVM Multi-Factor comprises the 100 stocks with the highest combined quality, value and momentum scores, weighted in proportion to both market capitalization and multifactor score.

Index Statistics	1M	3M	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-0.4%	4.5%	15.0%	9.1%	13.4%	8.7%	10.2%
Relative to Benchmark	-0.5%	-1.6%	-2.2%	-1.3%	0.1%	1.2%	3.1%
Index Volatility			7.95%	10.75%	10.54%	14.92%	13.87%
Tracking Error			4.61%	3.36%	3.10%	4.10%	5.75%

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

Portfolio Statistics

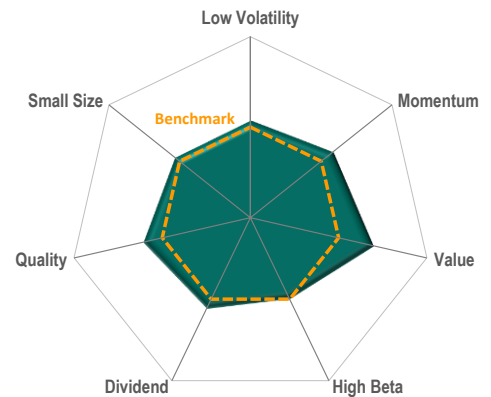
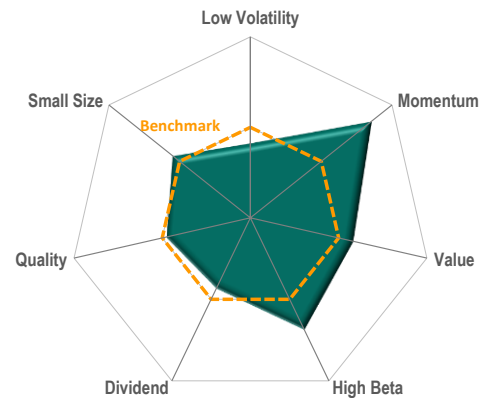
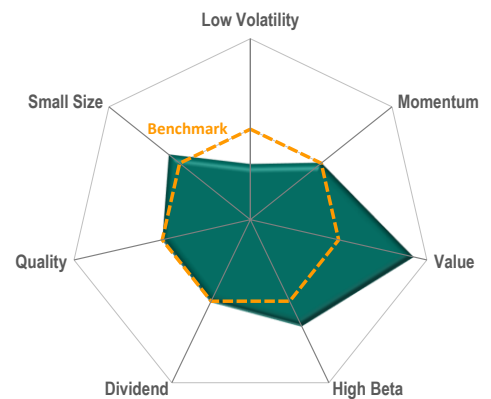
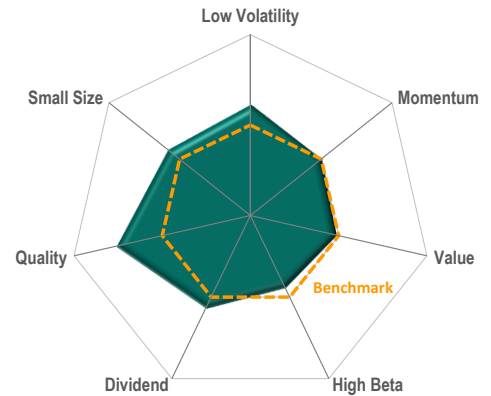
Active Share (Stock)	79%
Active Share (Sector)	30%
Concentration (HH Index)	244.6
Correlation (stock)	0.28
Average Market Cap (\$ bn)	124.41

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Financials	24%	14%	10%
Consumer Staples	17%	9%	8%
Information Technology	16%	22%	-6%
Health Care	4%	14%	-10%

Index Dashboard: S&P 500® Factor Indices

Q1 2017



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Index Dashboard: S&P 500® Factor Indices

Q1 2017

S&P 500 Growth

Description

The S&P 500 Growth index 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 March 31, 2017 the index comprised 323 constituents.

Index Statistics	1M	3M	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	1.3%	8.5%	15.4%	11.5%	13.8%	9.2%	7.2%
Relative to Benchmark	1.1%	2.5%	-1.8%	1.2%	0.5%	1.7%	0.2%
Index Volatility			6.54%	10.86%	10.41%	14.68%	13.69%
Tracking Error			3.78%	2.75%	2.54%	3.15%	3.08%

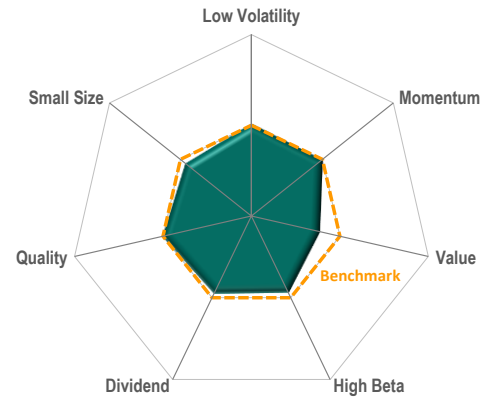
Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.96

Portfolio Statistics

Active Share (Stock)	31%
Active Share (Sector)	16%
Concentration (HH Index)	115.4
Correlation (stock)	0.25
Average Market Cap (\$ bn)	165.29

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Information Technology	29%	22%	7%
Consumer Discretionary	15%	12%	3%
Energy	4%	7%	-3%
Financials	4%	14%	-10%



S&P 500 Value

Description

The S&P 500 Value index 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, 2017 the index comprised 352 constituents.

Index Statistics	1M	3M	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-1.2%	3.3%	18.7%	8.9%	12.7%	5.7%	6.8%
Relative to Benchmark	-1.3%	-2.8%	1.5%	-1.5%	-0.6%	-1.8%	-0.3%
Index Volatility			7.43%	10.39%	10.46%	16.43%	15.40%
Tracking Error			4.01%	2.95%	2.77%	3.42%	3.27%

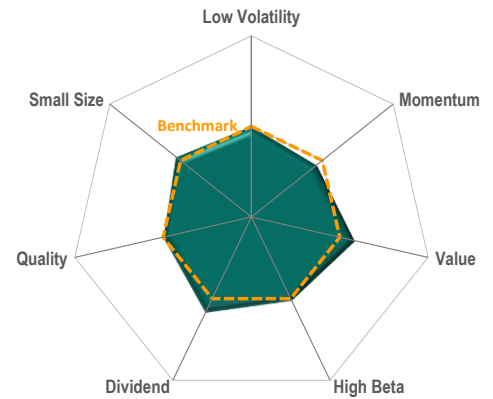
Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.04

Portfolio Statistics

Active Share (Stock)	36%
Active Share (Sector)	19%
Concentration (HH Index)	88.8
Correlation (stock)	0.28
Average Market Cap (\$ bn)	121.27

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Financials	20%	14%	6%
Consumer Staples	13%	9%	3%
Consumer Discretionary	8%	12%	-4%
Information Technology	8%	22%	-14%



S&P 500 Pure Growth

Description

The S&P 500 Pure Growth index 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, 2017 the index comprised 112 constituents.

Index Statistics	1M	3M	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	1.5%	7.7%	13.7%	8.1%	13.9%	10.5%	9.3%
Relative to Benchmark	1.4%	1.6%	-3.4%	-2.3%	0.6%	3.0%	2.2%
Index Volatility			7.16%	10.96%	11.67%	17.55%	17.21%
Tracking Error			4.32%	4.27%	4.78%	5.65%	6.06%

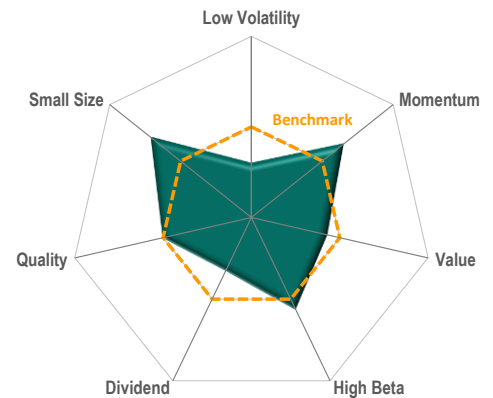
Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.08

Portfolio Statistics

Active Share (Stock)	80%
Active Share (Sector)	29%
Concentration (HH Index)	109.4
Correlation (stock)	0.23
Average Market Cap (\$ bn)	45.86

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Consumer Discretionary	22%	12%	10%
Information Technology	30%	22%	8%
Consumer Staples	1%	9%	-8%
Financials	5%	14%	-9%



S&P 500 Pure Value

Description

The S&P 500 Pure Value index 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, 2017 the index comprised 113 constituents.

Index Statistics	1M	3M	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-2.5%	2.9%	19.0%	7.1%	15.2%	8.1%	9.8%
Relative to Benchmark	-2.6%	-3.1%	1.8%	-3.3%	1.9%	0.5%	2.7%
Index Volatility			10.28%	13.43%	13.73%	24.15%	21.84%
Tracking Error			6.67%	5.98%	6.60%	12.62%	11.61%

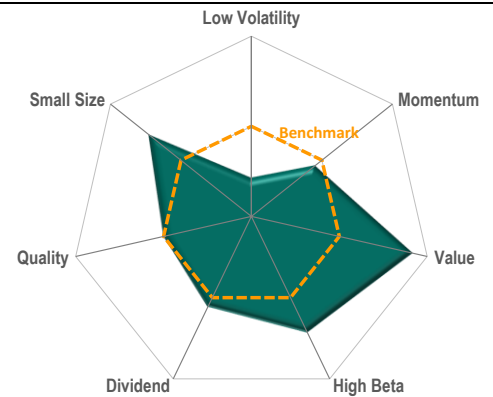
Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.32

Portfolio Statistics

Active Share (Stock)	82%
Active Share (Sector)	30%
Concentration (HH Index)	110.9
Correlation (stock)	0.32
Average Market Cap (\$ bn)	42.74

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Financials	33%	14%	19%
Consumer Discretionary	18%	12%	6%
Real Estate	0%	3%	-3%
Information Technology	3%	22%	-19%



S&P Dow Jones Indices

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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	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	0.1%	4.8%	18.7%	9.6%	15.7%	10.1%	10.6%
Relative to Benchmark	0.0%	-1.2%	1.5%	-0.8%	2.4%	2.6%	3.5%
Index Volatility			8.96%	12.54%	12.32%	17.75%	15.91%
Tracking Error			5.33%	4.71%	4.53%	5.71%	5.42%

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

Portfolio Statistics

Active Share (Stock)	85%
Active Share (Sector)	22%
Concentration (HH Index)	100.8
Correlation (stock)	0.29
Average Market Cap (\$ bn)	32.25

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Consumer Discretionary	22%	12%	9%
Financials	23%	14%	8%
Information Technology	18%	22%	-4%
Energy	1%	7%	-6%

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	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	0.0%	5.4%	17.4%	9.6%	14.0%	8.7%	9.3%
Relative to Benchmark	-0.1%	-0.7%	0.3%	-0.8%	0.7%	1.2%	2.3%
Index Volatility			7.07%	10.78%	10.74%	17.85%	16.84%
Tracking Error			2.19%	2.38%	2.39%	4.52%	4.55%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.12

Portfolio Statistics

Active Share (Stock)	45%
Active Share (Sector)	16%
Concentration (HH Index)	19.9
Correlation (stock)	0.23
Average Market Cap (\$ bn)	41.77

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Consumer Discretionary	16%	12%	4%
Industrials	14%	10%	3%
Health Care	12%	14%	-2%
Information Technology	13%	22%	-9%

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, 2017 the index comprised 51 constituents.

Index Statistics	1M	3M	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	0.2%	5.0%	10.1%	10.8%	14.4%	10.1%	9.6%
Relative to Benchmark	0.1%	-1.0%	-7.1%	0.4%	1.1%	2.6%	2.5%
Index Volatility			7.63%	9.75%	9.72%	14.14%	12.86%
Tracking Error			4.26%	4.15%	3.88%	5.68%	5.42%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.92

Portfolio Statistics

Active Share (Stock)	84%
Active Share (Sector)	31%
Concentration (HH Index)	196.7
Correlation (stock)	0.30
Average Market Cap (\$ bn)	69.50

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Consumer Staples	26%	9%	16%
Industrials	18%	10%	8%
Financials	10%	14%	-5%
Information Technology	2%	22%	-20%

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	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-0.4%	3.0%	32.4%	8.0%	12.9%	3.1%	4.5%
Relative to Benchmark	-0.5%	-3.1%	15.3%	-2.4%	-0.4%	-4.4%	-2.6%
Index Volatility			14.27%	18.00%	17.23%	27.88%	28.60%
Tracking Error			12.70%	11.09%	10.26%	15.05%	16.94%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.69

Portfolio Statistics

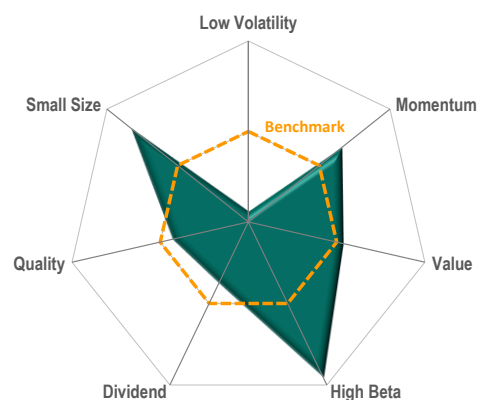
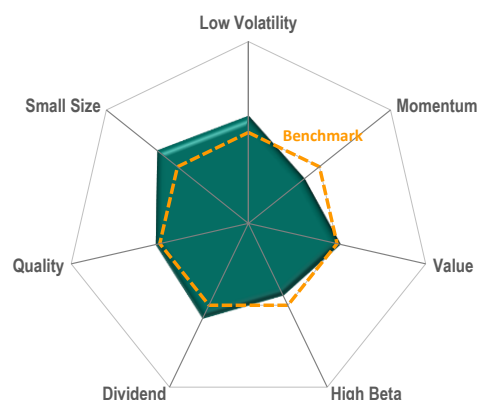
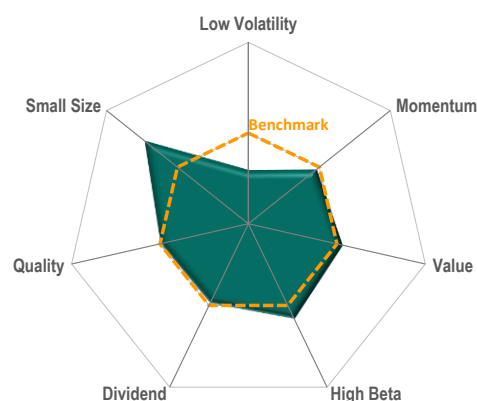
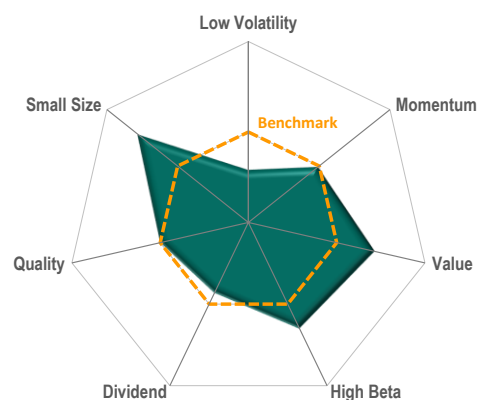
Active Share (Stock)	89%
Active Share (Sector)	36%
Concentration (HH Index)	107.4
Correlation (stock)	0.35
Average Market Cap (\$ bn)	24.68

Top Sector Tilts (versus benchmark)

Sector	Index	Benchmark	Difference
Financials	32%	14%	18%
Energy	23%	7%	16%
Consumer Staples	0%	9%	-9%
Health Care	4%	14%	-10%

Index Dashboard: S&P 500® Factor Indices

Q1 2017



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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 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. The back-test calculations are based on the same methodology that was in effect on the index Launch Date. Complete index methodology details are available at www.spdji.com.

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.

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency on their products. 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 a given index is set at a fixed value for calculation purposes. The Launch Date designates the date upon which the values of a given index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via S&P Dow Jones Indices's public website or its datafeed 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.

Prospective application of the methodology used to construct the index(es) as well as revisions to economic data may not result in performance commensurate with the back-test returns shown. The back-test period does not necessarily correspond to the entire available history of the index(es). Please refer to the index methodology for the particular index in question, available at www.spdji.com, for more details about such 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.

Another limitation of using back-tested information is that the back-tested calculation is generally prepared with the benefit of hindsight. Back-tested data and/or information reflects the application of the index methodology and selection of index constituents in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities, fixed income, or commodities markets in general which cannot be, and have not been accounted for in the preparation of the index information set forth, all of which can affect actual performance.

The index returns shown do not represent the results of actual trading of investable assets/securities. S&P Dow Jones Indices LLC maintains the index(es) 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(es) or investment funds that are intended to track the performance of the index(es). 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).