

The background of the top half of the page is a blurred, bokeh-style image of a city skyline at night. The lights are in shades of blue, yellow, and white, creating a soft, out-of-focus effect. The text 'NOVEMBER 2021 PERFORMANCE UPDATE' is overlaid on this background in a clean, white, sans-serif font.

NOVEMBER 2021 PERFORMANCE UPDATE

MONTHLY PERFORMANCE UPDATE AS OF NOVEMBER 30, 2021

NOVEMBER 2021 | POLITICS AND POLICY

“What worries me most about the government – and this is about the government shutdown, they’re now capable of doing nursery school level legislative activities. And you feel like they’re just barely doing that.”

– New York Times columnist David Brooks on PBS Newshour

After a spectacular October the broad markets posted lackluster results in November with the S&P 500 returning -0.69% while the bond market benchmarked by the Bloomberg Barclays US Aggregate gained 0.30%. But the components within saw huge disparity & volatility emanating recessionary flight-to-safety behaviors not seen since the start of the pandemic in a busy month filled with headlines news driving the markets: rise of the Omicron variant, hyper inflation fears, President Biden's planned renomination of Jerome Powell, and passing of the \$1.2 trillion Infrastructure Bill. This disparity in November had lopsided tail risks with growth stocks led by Technology returning 4.35% and value stocks led by Financials losing -5.68%, a spread of well over 1,000 bps.

All while International Developed and Emerging Markets equity markets were hammered returning -4.65% and -4.08%, respectively.

This disparity also occurred in the bond markets with full transparency by the Fed's rhetoric attempting to temper markets by providing interest projections. Long-Treasuries gained 2.65% while High Yield bonds declined -0.97%, a spread of 362 bps.

A larger number of the Sowell models struggled to keep pace in November given the disparity and its constructive positioning towards quality growth and smaller-cap stocks. Models that had higher factor exposure towards pure growth and technology momentarily benefited including the Classic Series and those models associated with the TAP Series given its 50% weighting to QQQ and that includes the MPD Growth and MPD Stratactical models.

Additional market volatility is fully expected during this secular market rotation as the economy continues to recover. Elements of the market are over-reacting as observed in November which is beginning to reverse itself already in December as growth stocks MTD through Dec. 17, 2021, returned

-1.2% and value stocks gained 3.03%. Our long-term investment outlook remains favorable as the economy continues to accelerate, albeit with increased volatility, as the Fed starts to raise rates. We continue to see a path towards rising

Source: Bloomberg



This increased uncertainty and volatility is also reflected by Bloomberg's short-interest report with Consumer Discretionary, Health Care, and Information Technology sectors seeing a rise above normal in the percentage of float shares being shorted:

Industry	Short Interest	% SI Change	SI Ratio	SIR Change	% Float	% Float Change
1) All Securities	11.24B	-1.16	3.90	-0.20	3.40	--
2) Energy	1.24B	-3.66	3.26	-0.22	3.38	--
3) Materials	887.18M	0.86	3.57	0.01	2.37	-0.03
4) Industrials	1.29B	-0.79	3.89	-0.11	2.78	-0.05
5) Consumer Discretionary	1.69B	-0.78	3.96	-0.18	5.20	0.01
6) Consumer Staples	529.04M	-3.26	4.54	-0.19	3.75	-0.06
7) Health Care	771.25M	0.20	4.53	-0.07	4.24	-0.12
8) Financials	1.41B	0.45	3.43	-0.19	2.28	0.09
9) Information Technology	1.23B	-0.27	3.99	-0.25	4.39	0.08
10) Communication Services	915.37M	-2.66	4.01	-0.31	3.90	-0.08
11) Utilities	398.61M	-2.08	4.02	-0.09	1.97	-0.02
12) Real Estate	882.76M	-2.44	4.62	-0.65	3.36	0.02

Source: Bloomberg

inflation with rising interest rates and maintain a constructive positioning.

COMPLETE PERFORMANCE DETAILS AS OF NOVEMBER 30, 2021

Below is a performance table of returns, net of fees, for Sowell Management's current investment management offerings as well as the benchmark the Sowell IC deems appropriate for each program.

SOWELL MANAGEMENT PROGRAMS					
Strategic Allocation Models	Nov 2021 Net	L3M Net	L6M Net	YTD Net	L12M Net
AMP Income	-1.01	-2.02	-0.09	-0.07	1.10
Benchmark: Custom Blend*	-0.26	-0.92	1.17	1.14	2.14
AMP Total Return	-1.42	-2.00	0.94	3.16	5.06
Benchmark: Custom Blend	-0.64	-1.03	1.49	3.35	5.04
AMP Income and Growth	-2.04	-2.65	0.71	3.80	6.57
Benchmark: Custom Blend	-1.02	-1.14	1.80	5.58	7.98
AMP Conservative	-2.37	-2.84	1.09	6.50	9.71
Benchmark: Custom Blend	-1.27	-1.23	1.99	7.08	9.98
AMP Balanced	-2.72	-3.37	0.76	6.92	11.03
Benchmark: Custom Blend	-1.65	-1.37	2.28	9.35	13.02
AMP Growth	-3.12	-3.67	0.87	8.12	12.76
Benchmark: Custom Blend	-1.90	-1.46	2.47	10.88	15.08
AMP Global Growth	-3.16	-3.73	0.72	7.95	12.56
Benchmark: Custom Blend	-1.90	-1.46	2.47	10.88	15.08
AMP Aggressive Growth	-3.57	-4.03	1.05	9.94	15.33
Benchmark: Custom Blend	-2.28	-1.61	2.74	13.20	18.21
Classic Bond	-0.08	-1.02	0.13	-1.29	-0.86
Benchmark: Barclays US Aggregate Bond Index	0.30	-0.60	1.02	-1.29	-1.15
Classic Total Return	-0.52	-1.37	0.55	2.10	2.89
Benchmark: Custom Blend	-0.24	-0.78	1.43	1.67	2.72
Classic Income and Growth	-0.86	-1.53	1.03	3.46	5.10
Benchmark: Custom Blend	-0.64	-1.03	1.49	3.35	5.04
Classic Conservative	-1.04	-1.65	1.41	5.21	7.25
Benchmark: Custom Blend	-0.89	-1.10	1.69	4.83	6.99
Classic Balanced	-1.43	-1.59	2.66	8.56	11.59
Benchmark: Custom Blend	-1.52	-1.32	2.19	8.59	12.00
Classic Growth	-1.80	-1.83	3.19	11.25	15.06
Benchmark: Custom Blend	-2.03	-1.51	2.56	11.65	16.12
Classic Aggressive Growth	-1.82	-1.66	4.07	13.98	18.50
Benchmark: Custom Blend	-2.41	-1.66	2.83	13.98	19.27
Global Macro Conservative	-0.94	-2.02	0.10	1.28	4.03
Benchmark: Custom Blend	-0.92	-1.15	1.65	4.83	7.09
Global Macro Core	-1.17	-1.65	0.12	3.90	7.90
Benchmark: Custom Blend	-1.43	-1.32	2.05	7.83	11.08
Global Macro Growth	-1.42	-1.40	0.36	6.22	11.18
Benchmark: Custom Blend	-1.92	-1.49	2.44	10.88	15.14

Chart continued on the following page.

SOWELL MANAGEMENT PROGRAMS

Tactical Allocation Models	Nov 2021 Net	L3M Net	L6M Net	YTD Net	L12M Net
TAP Conservative	0.32	1.14	6.81	11.68	14.07
Benchmark: Custom Blend	-0.30	0.27	5.10	10.63	13.01
TAP 1x	0.54	2.13	12.52	22.16	27.16
Benchmark: S&P 500	-0.69	1.32	9.38	23.18	27.92
Morningstar US Fund Tactical Allocation	-1.58	-1.53	1.56	10.24	14.51
TAP Complete	-1.67	-0.37	5.08	16.57	22.22
Benchmark: S&P 500	-0.69	1.32	9.38	23.18	27.92
Morningstar US Fund Tactical Allocation	-1.58	-1.53	1.56	10.24	14.51
TAP 2x	0.92	3.85	25.82	45.81	51.90
Benchmark: S&P 500	-0.69	1.32	9.38	23.18	27.92
Morningstar US Fund Tactical Allocation	-1.58	-1.53	1.56	10.24	14.51
TAP Global Allocation	-2.33	-1.62	2.29	12.58	17.57
Benchmark: MSCI ACWI	-2.41	-1.66	2.83	13.98	19.27
US High Yield (1)	-1.48	-1.28	1.31	6.33	8.89
Benchmark: Bloomberg Barclays US Corporate High Yield	-0.97	-1.15	1.07	3.34	5.29
Equity Selection Models	Nov 2021 Net	L3M Net	L6M Net	YTD Net	L12M Net
Flagship Equity	-1.33	-2.07	5.70	18.18	23.71
Benchmark: S&P 500	-0.69	1.32	9.38	23.18	27.92
Flagship Dividend	-2.07	-2.09	-2.12	13.22	15.82
Benchmark: MSCI USA High Dividend Yield Index	-1.55	-2.85	-0.04	12.48	14.92
Liquid Alternative Models	Nov 2021 Net	L3M Net	L6M Net	YTD Net	L12M Net
Liquid Alt Conservative	-1.90	-1.88	-1.65	0.03	3.04
Benchmark: Wilshire Liquid Alt Index	-1.01	-1.03	-0.61	3.94	5.68
MPD™ Multi-Methodology Models	Nov 2021 Net	L3M Net	L6M Net	YTD Net	L12M Net
MPD™ Total Return	-1.32	-1.59	0.09	4.05	6.44
Benchmark: Custom Blend	-0.51	-0.71	2.26	4.42	6.18
MPD™ Conservative	-1.44	-1.65	1.13	6.36	9.46
Benchmark: Custom Blend	-0.94	-0.69	3.08	8.01	10.76
MPD™ Balanced	-1.93	-2.16	2.00	8.89	13.15
Benchmark: Custom Blend	-1.32	-0.57	4.15	12.01	15.78
MPD™ Growth	-1.45	-1.57	4.35	13.07	17.93
Benchmark: Custom Blend	-1.55	-0.38	5.16	15.37	19.94
MPD™ Aggressive Growth	-1.16	-0.46	11.01	24.25	29.90
Benchmark: Custom Blend	-1.74	-0.10	6.41	19.14	24.55
MPD™ Stratactical Conservative	-1.59	-1.55	2.17	8.31	12.01
Benchmark: Custom Blend	-0.94	-0.69	3.08	8.01	10.76
MPD™ Stratactical Balanced	-1.20	-0.80	6.95	14.82	18.98
Benchmark: Custom Blend	-1.32	-0.57	4.15	12.01	15.78
MPD™ Stratactical Growth	-1.38	-0.66	8.72	18.80	23.88
Benchmark: Custom Blend	-1.55	-0.38	5.16	15.37	19.94

SOWELL BENCHMARK DESCRIPTIONS

AMP Income: 15% MSCI ACWI Index, 85% Bloomberg Barclays US Universal Bond Index

AMP Total Return: 30% MSCI ACWI Index, 70% Bloomberg Barclays US Universal Bond Index

AMP Income and Growth: 45% MSCI ACWI Index, 55% Bloomberg Barclays US Universal Bond Index

AMP Conservative: 55% MSCI ACWI Index, 45% Bloomberg Barclays US Universal Bond Index

AMP Balanced: 70% MSCI ACWI Index, 30% Bloomberg Barclays US Universal Bond Index

AMP Growth: 80% MSCI ACWI Index, 20% Bloomberg Barclays US Universal Bond Index

AMP Global Growth: 80% MSCI ACWI Index, 20% Bloomberg Barclays US Universal Bond Index

AMP Aggressive Growth: 95% MSCI ACWI Index, 5% Bloomberg Barclays US Universal Bond Index

Classic Bond: 100% Bloomberg Barclays US Aggregate Bond Index

Classic Total Return: 20% MSCI ACWI index, 80% Bloomberg Barclays US Aggregate Bond Index

Classic Income & Growth: 30% MSCI ACWI index, 70% Bloomberg Barclays US Aggregate Bond Index

Classic Conservative: 40% MSCI ACWI Index, 60% Bloomberg Barclays US Universal Bond Index

Classic Balanced: 65% MSCI ACWI Index, 35% Bloomberg Barclays US Universal Bond Index

Classic Growth: 85% MSCI ACWI Index, 15% Bloomberg Barclays US Universal Bond Index

Classic Aggressive Growth: 100% MSCI ACWI Index

Global Macro Conservative: 40% MSCI ACWI Index, 60% Bloomberg Barclays US Universal Bond Index

Global Macro Core: 60% MSCI ACWI Index, 40% Bloomberg Barclays US Universal Bond Index

Global Macro Growth: 80% MSCI ACWI Index, 20% Bloomberg Barclays US Universal Bond Index

TAP Conservative: 50% S&P 500 Index, 50% Bloomberg Barclays US Universal Bond Index

TAP 1x: S&P 500 Index

TAP Complete: S&P 500 Index

TAP 2x: S&P 500 Index

TAP Global Allocation: MSCI ACWI Index

US High Yield: Bloomberg Barclays US Corporate High Yield Index

Flagship Equity: S&P 500 Index

Flagship Top Stocks: S&P 500 Index

Flagship Dividend: MSCI USA High Dividend Yield Index

Liquid Alt Conservative: Wilshire Liquid Alt Index

MPD Total Return: 13% MSCI ACWI Index, 17% Russell 3000 Index, 70% Bloomberg Barclays US Universal Bond Index

MPD Conservative: 24% MSCI ACWI Index, 26% Russell 3000 Index, 50% Bloomberg Barclays US Universal Bond Index

MPD Balanced: 30% MSCI ACWI Index, 40% Russell 3000 Index, 30% Bloomberg Barclays US Universal Bond Index

MPD Growth: 30% MSCI ACWI Index, 55% Russell 3000 Index, 15% Bloomberg Barclays US Universal Bond Index

MPD Aggressive Growth: 25% MSCI ACWI Index, 75% Russell 3000 Index

MPD Stratactical Conservative: 24% MSCI ACWI Index, 26% Russell 3000 Index, 50% Bloomberg Barclays US Universal Bond Index

MPD Stratactical Balanced: 30% MSCI ACWI Index, 30% Russell 3000 Index, 40% Bloomberg Barclays US Universal Bond Index

MPD Stratactical Growth: 30% MSCI ACWI Index, 55% Russell 3000 Index, 15% Bloomberg Barclays US Universal Bond Index

CHART DISCLOSURES

Returns for Sowell Management Models are preliminary composite results, net of actual fees paid monthly in advance. Returns are net of brokerage commissions, fund charges (where applicable), and the reinvestment of dividends and other earnings of fully discretionary accounts under management, including those accounts no longer with the firm. Non-fee paying accounts are not included in this composite. Sowell Management maintains a complete list and description of composites, which is available upon request. Returns for the periods shown are created by geometrically linking monthly returns for each period. The returns illustrated are for the periods specified in the report. Returns are preliminary results and are not audited. Total return and principal value will vary. Performance expressed in U. S. Dollars. Actual results may vary depending on market conditions, investment decisions and reactions, economic events, and changes in investment objectives. It should not be assumed that any management style, model, security, or recommendations made in the future will be profitable, without loss, or will equal the performance of the investments as shown. Performance results do not reflect the impact of taxes. Select programs may engage in a significant amount of trading. Gains or losses will generally be short-term in nature; consequently, such programs may not be suitable for clients seeking tax efficiency. Sowell Management does not provide tax or legal advice.

(1) Performance results derived from control client account average net of management fees paid monthly in arrears, brokerage commissions, fund charges, and the reinvestment of dividends and other earnings of fully discretionary accounts under management. Control clients are not composites.

(2) The Sowell team conducted a periodic review and audit of all the model composites in the month of November and identified changes to the representative clients that make up the composites throughout 2020 and have resulted in restating the monthly returns for the following composite models: AMP Income, AMP Total Return, AMP Balanced, AMP Growth, AMP Global Growth, AMP Aggressive

Growth, Global Macro Conservative, TAP Conservative, TAP 1X, TAP US Complete, TAP 2X, Flagship Equity, Flagship Dividend, MPD Balanced, MPD Global Growth, MPD Total Return, MPD Aggressive Growth, MPD Stratactical Conservative, MPD Stratactical Conservative, MPD Stratactical Balanced, Classic Aggressive Growth, Classic Balanced, Classic Conservative and Classic Growth. Returns for Sowell Management Models are preliminary composite results, net of actual fees paid monthly in advance. Returns are net of brokerage commissions, fund charges (where applicable), and the reinvestment of dividends and other earnings of fully discretionary accounts under management, including those accounts no longer with the firm. Non-fee paying accounts are not included in this composite. Sowell Management maintains a complete list and description of composites, which is available upon request. Returns for the periods shown are created by geometrically linking monthly returns for each period. The returns illustrated are for the periods specified in the report. Returns are preliminary results and are not audited. Total return and principal value will vary. Performance expressed in U. S. Dollars.

Actual results may vary depending on market conditions, investment decisions and reactions, economic events, and changes in investment objectives. It should not be assumed that any management style, model, security, or recommendations made in the future will be profitable, without loss, or will equal the performance of the investments as shown. Performance results do not reflect the impact of taxes. Select programs may engage in a significant amount of trading. Gains or losses will generally be short-term in nature; consequently, such programs may not be suitable for clients seeking tax efficiency. Sowell Management does not provide tax or legal advice.

(3) As of December 31st, 2020, Sowell Management will be making the following changes to the benchmark return methodology and calculation for the respective benchmark composites since its inception date:

Composite	Previous Model Benchmark	New Model Benchmark	Inception Date
Sowell AMP Aggressive Growth	75% MSCI ACWI Index, 20% Russell 2000 Index, 5% Bloomberg Barclays US Universal Bond Index	95% MSCI ACWI Index, 5% Bloomberg Barclays US Universal Bond Index	12/31/2000
Sowell AMP Balanced	55% MSCI ACWI Index, 15% Russell 2000 Index, 30% Bloomberg Barclays US Universal Bond Index	70% MSCI ACWI Index, 30% Bloomberg Barclays US Universal Bond Index	12/31/2000
Sowell AMP Conservative	43% MSCI ACWI Index, 12% Russell 2000 Index, 45% Bloomberg Barclays US Universal Bond Index	55% MSCI ACWI Index, 45% Bloomberg Barclays US Universal Bond Index	4/30/2009
Sowell AMP Global Growth	44% MSCI ACWI Index, 16% Russell 2000 Index, 20% MSCI ACWI Ex US Index, 20% Bloomberg Barclays US Universal Bond Index	80% MSCI ACWI Index, 20% Bloomberg Barclays US Universal Bond Index	7/31/2001
Sowell AMP Growth	63% MSCI ACWI Index, 17% Russell 2000 Index, 20% Bloomberg Barclays US Universal Bond Index	80% MSCI ACWI Index, 20% Bloomberg Barclays US Universal Bond Index	12/31/2000
Sowell AMP Income	11% MSCI ACWI Index, 4% Russell 2000 Index, 85% Bloomberg Barclays US Universal Bond Index	15% MSCI ACWI Index, 85% Bloomberg Barclays US Universal Bond Index	4/30/2009
Sowell AMP Income and Growth	35% MSCI ACWI Index, 10% Russell 2000 Index, 55% Bloomberg Barclays US Universal Bond Index	45% MSCI ACWI Index, 55% Bloomberg Barclays US Universal Bond Index	7/31/2001
Sowell AMP Total Return	23% MSCI ACWI Index, 7% Russell 2000 Index, 70% Bloomberg Barclays US Universal Bond Index	30% MSCI ACWI Index, 70% Bloomberg Barclays US Universal Bond Index	12/31/2011
Sowell Classic Aggressive Growth	67% MSCI ACWI Index, 33% Russell 2000 Index	100% MSCI ACWI Index	1/31/2017
Sowell Classic Balanced	50% MSCI ACWI Index, 15% Russell 2000 Index, 35% Bloomberg Barclays US Universal Bond Index	65% MSCI ACWI Index, 35% Bloomberg Barclays US Universal Bond Index	6/30/2016
Sowell Classic Conservative	30% MSCI ACWI Index, 10% Russell 2000 Index, 60% Bloomberg Barclays US Universal Bond Index	40% MSCI ACWI Index, 60% Bloomberg Barclays US Universal Bond Index	4/30/2017
Sowell Classic Growth	63% MSCI ACWI Index, 22% Russell 2000 Index, 15% Bloomberg Barclays US Universal Bond Index	85% MSCI ACWI Index, 15% Bloomberg Barclays US Universal Bond Index	1/31/2017

For comparison purposes, returns are measured against various indexes. Indexes are portfolios of specific securities, the performance of which is often used as a benchmark in judging the relative performance of certain investments. Investors cannot invest directly in an index. The S&P 500 Index is an unmanaged index consisting of 500 common stocks and is provided as a representation of the U.S. stocks market for informational purposes. Economic factors, market conditions,

and investment strategies will affect the performance of any portfolio and there are no assurances that it will match or outperform any particular benchmark.

The Bloomberg Barclays Aggregate Bond Index a broad bond index covering most U.S. traded bonds and some foreign bonds traded in the U.S. It is a representation of the overall bond market for informational purposes.

The Bloomberg Barclays Capital U.S. Corporate High Yield Bond Index is an index composed of fixed-rate, publicly issued, non-investment grade debt.

The MSCI ACWI index is an unmanaged index consisting of stocks from both developed and emerging markets, and is provided as a representation of the US stock market for informational purposes.

The MSCI USA High Dividend Yield Index is based on the MSCI USA Index, and includes large and mid cap stocks. The index is designed to reflect the performance of equities in the parent index (excluding REITs) with higher dividend income and quality characteristics than average dividend yields that are both sustainable and persistent.

"The Bloomberg Barclays US Universal Bond Index measures the performance of U.S. dollar-denominated taxable bonds that are rated either investment-grade or high yield. The index includes U.S. Treasury bonds, investment-grade and high yield U.S. corporate bonds, mortgage-backed securities, and Eurodollar bonds."

"The Russell 2000 Index measures the performance of the 2,000 smallest companies in the Russell 3000 Index. It is comprised of small and mid-cap domestic stocks."

"The Russell 3000 Index is a market-capitalization-weighted equity index that provides exposure to the entire U.S. stock market. The index tracks the performance of the 3,000 largest U.S.-traded stocks which represent about 98% of all U.S. incorporated equity securities."

The Wilshire Liquid Alternative Index measures the collective performance of the five Wilshire Liquid Alternative Strategies that make up the Wilshire Liquid Alternative Universe. It is a representation for how liquid alternative investment category performed as a whole.

Effective May 1, 2018 and again on January 1, 2019, the Firm has elected to retroactively change its blended benchmarks to better reflect the firm's investment management philosophy and a broader recognition of the indexes being compared. For additional details about this change, please email portfolios@sowellmanagement.com.

As of September 2018, the Liquid Alternative Growth strategy no longer had any composite or control accounts to report performance. We will continue to offer this portfolio strategy as part of our lineup.

As of January 1, 2019 the Liquid Alternative Income was renamed to Liquid Alt Conservative to better reflect a lower allocation to equity-based alternative funds which do not always reflect an income characteristic.

As of May 1, 2019, the MPD Income and Growth strategy no longer has any composite accounts to report performance. We will continue to offer this model as part of our lineup.

As of May 1, 2019, the MPD Global Growth strategy no longer had any composite or control accounts to report performance. We will continue to offer this model as part of our lineup.

PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE PERFORMANCE

Advisory Services Offered Through Sowell Management, a Registered Investment Advisor

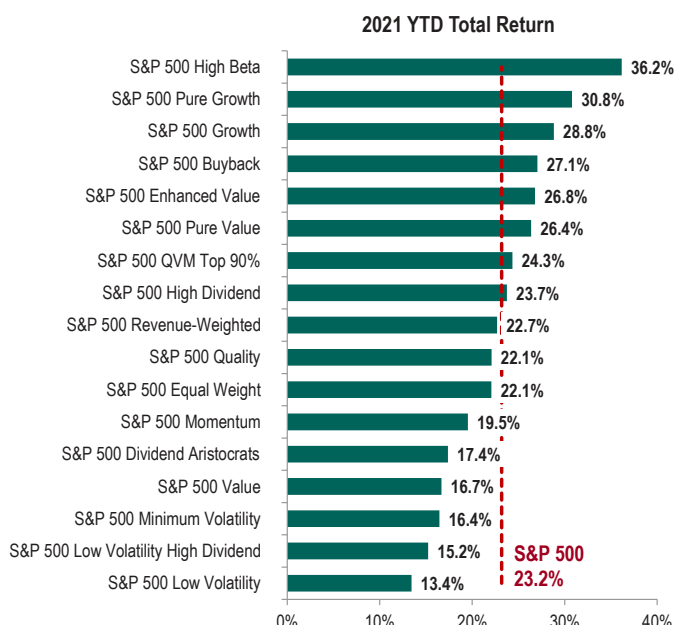
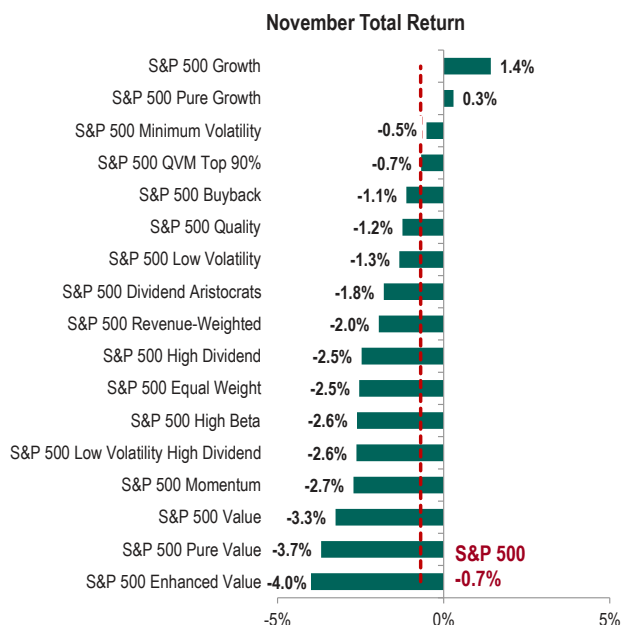
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S&P Dow Jones Indices Index Investment Strategy



5320 NORTSHORE DRIVE | NORTH LITTLE ROCK, AR 72118
501-219-2434 PHONE | 501-812-6380 FAX | 800-399-2391 |
sowellmanagement.com

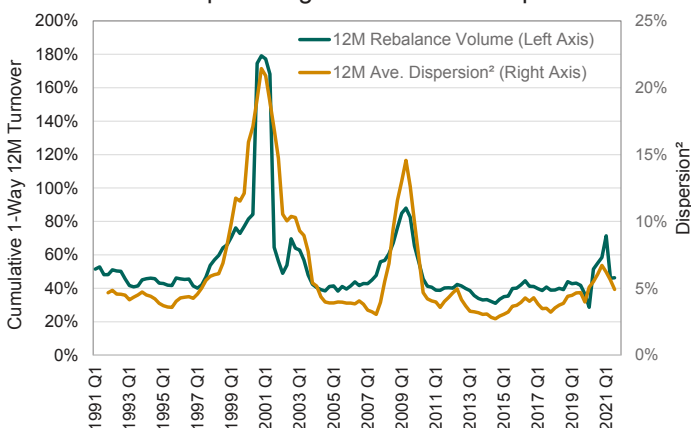
MONTHLY AND YTD PERFORMANCE SUMMARY



COMMENTARY

As market participants weighed the sparse data on the new Omicron strain, hawkish notes from the U.S. Federal Reserve accompanied a late November turnaround in the S&P 500. VIX® shot above 30 for the first time since February, as the **Value stocks that were hammered during the first and second major COVID waves came under pressure again**. Growth and Pure Growth were the only S&P 500-based factors to deliver positive returns by month end, while Value factors finished rock bottom. **When market leadership comes from the very largest companies, as it did in November, it becomes more difficult for factor indices to outperform**; only Minimum Volatility joined Growth and Pure Growth in doing so.

S&P 500 Equal Weight Turnover vs Dispersion²

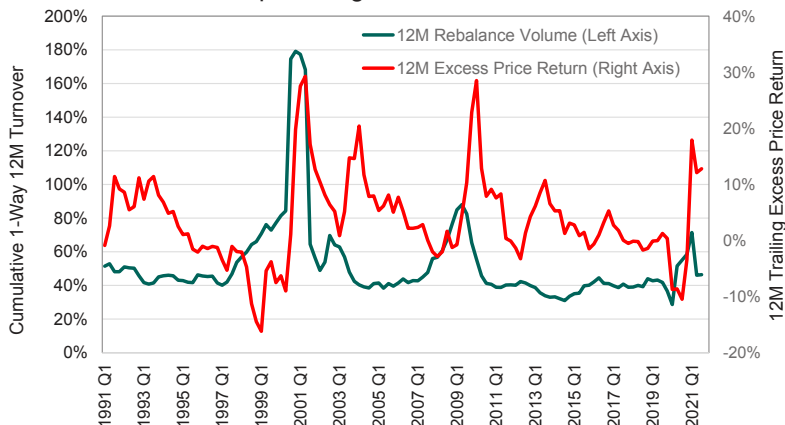


Along with higher benchmark volatility, the past two months have seen a **significant uptick in S&P 500 stock-level dispersion**. Higher stock dispersion typically results in higher dispersion in factor performances, and the 6% spread between S&P 500 factor performances was indeed wider than in the typical month, but high dispersion also has more subtle effects.

When there is a larger relative difference between winners and losers, constituent weights are more likely to drift further between index rebalances. Factor indices whose constituents are either factor-weighted or equally weighted will typically experience **higher turnover when stock-level dispersion rises**. The most obvious example is the S&P 500 Equal Weight, for which the relationship between dispersion and index turnover is illustrated in our first chart.

For some factor indices, higher turnover is a potentially a sign of concern. For example, high turnover at any rebalance of a Low Volatility index, or of a Momentum index, suggests that the index *until then* held constituents that were not among the least volatile, or did not have the strongest price performance, respectively. However, for other indices, and for the S&P 500 Equal Weight in particular, **higher turnover may indicate the potential for higher future returns from the very discipline of rebalancing**. On each occasion since 1990 that turnover has risen in the equal weight version of the S&P 500, one or two quarters later, the relative returns of the S&P 500 Equal Weight have spiked upward – potentially a consequence of mean reversion in the large dislocations in prices that often accompany high-dispersion periods.

S&P 500 Equal Weight Turnover vs Excess PR

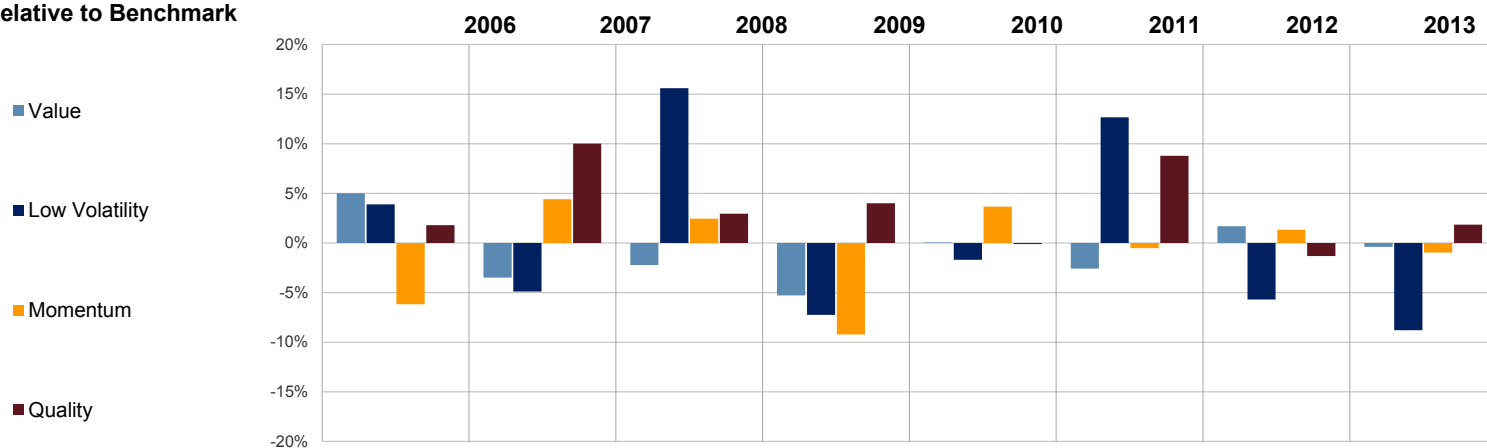


ANNUAL PERFORMANCE

Core factor performance by calendar year, 2006-present:

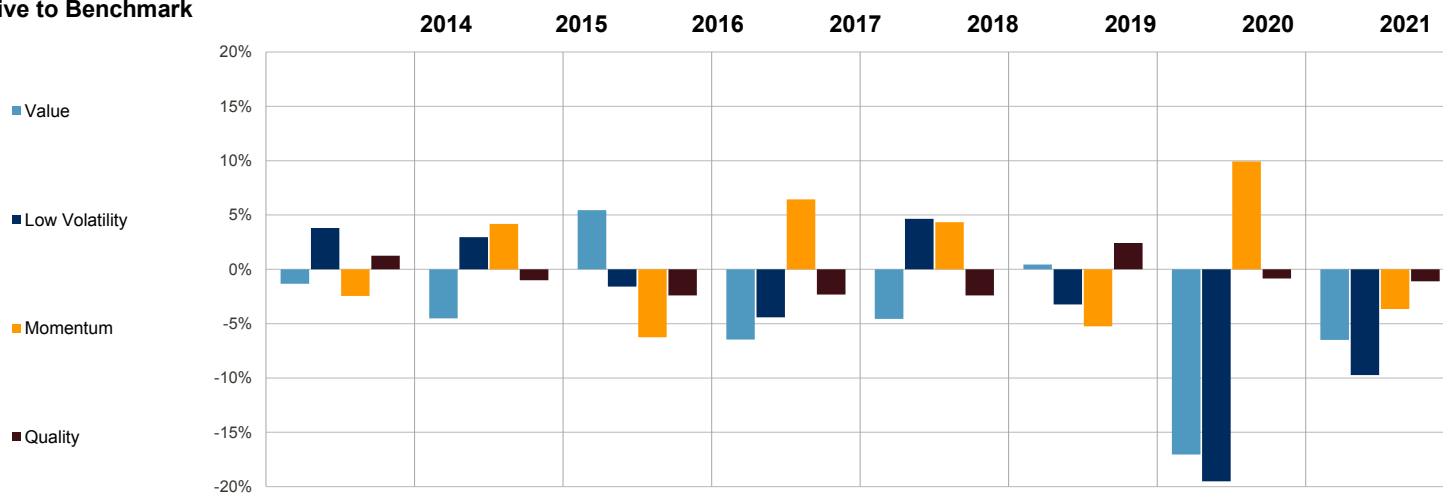
Total Return	2006	2007	2008	2009	2010	2011	2012	2013
Value	20.80%	1.99%	-39.22%	21.18%	15.10%	-0.48%	17.68%	31.99%
Low Volatility	19.69%	0.58%	-21.41%	19.22%	13.36%	14.78%	10.30%	23.59%
Momentum	9.61%	9.89%	-34.56%	17.24%	18.72%	1.60%	17.33%	31.42%
Quality	17.59%	15.50%	-34.06%	30.46%	14.95%	10.89%	14.68%	34.24%
S&P 500	15.79%	5.49%	-37.00%	26.46%	15.06%	2.11%	16.00%	32.39%

Relative to Benchmark



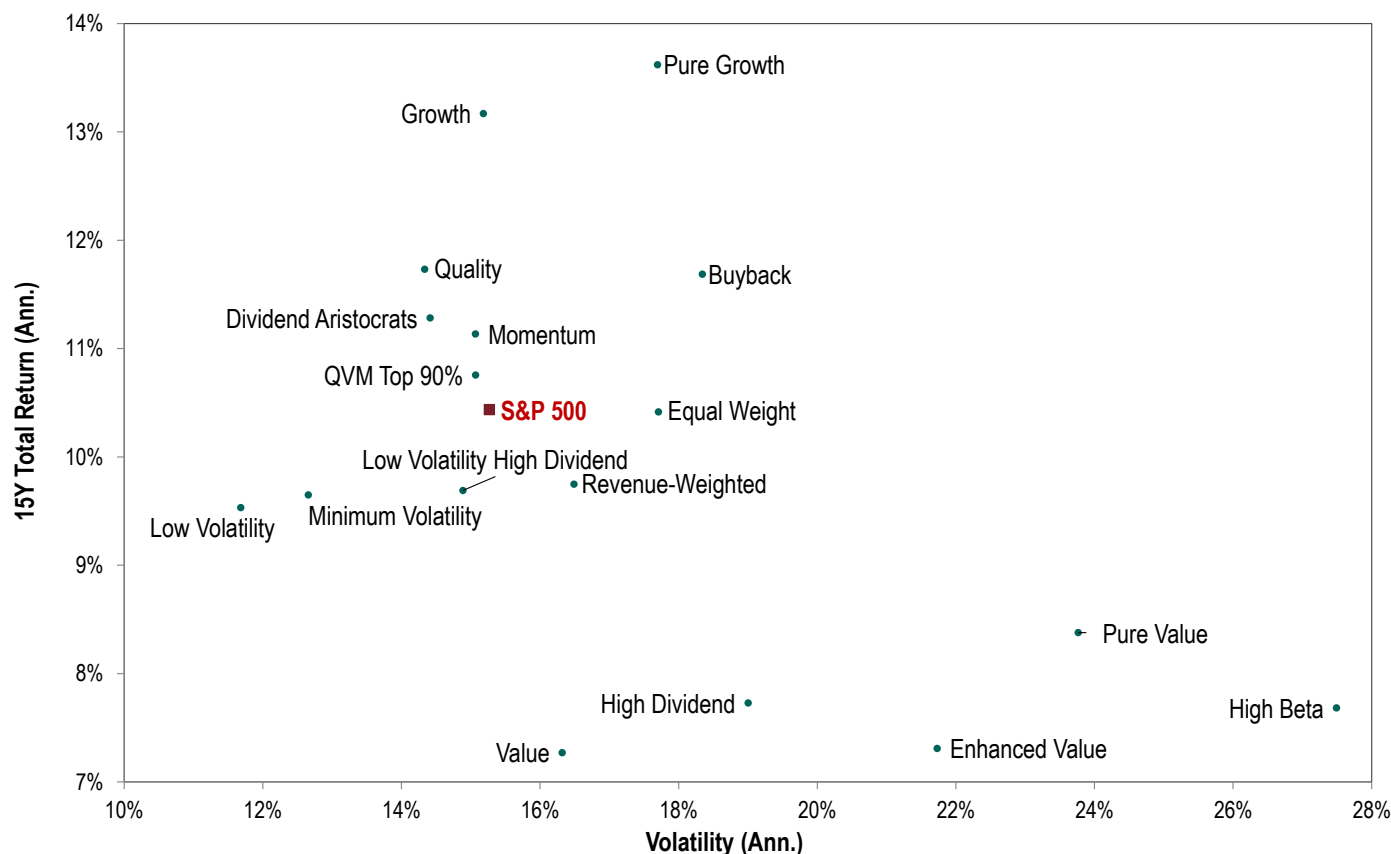
Total Return	2014	2015	2016	2017	2018	2019	2020	2021
Value	12.36%	-3.13%	17.40%	15.36%	-8.95%	31.93%	1.36%	16.68%
Low Volatility	17.49%	4.34%	10.37%	17.41%	0.27%	28.26%	-1.11%	13.45%
Momentum	11.23%	5.56%	5.70%	28.27%	-0.04%	26.25%	28.32%	19.53%
Quality	14.95%	0.38%	9.56%	19.51%	-6.79%	33.91%	17.55%	22.08%
S&P 500	13.69%	1.38%	11.96%	21.83%	-4.38%	31.49%	18.40%	23.18%

Relative to Benchmark



Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of November 30, 2021.

15 YEAR RISK & RETURN - ABSOLUTE



TOTAL RETURN	1M	3M	12M	3Y	5Y	10Y	15Y
S&P 500 Pure Growth	0.3%	4.5%	36.7%	25.7%	21.6%	18.2%	13.6%
S&P 500 Growth	1.4%	4.2%	34.1%	27.2%	23.9%	19.0%	13.2%
S&P 500 Quality	-1.2%	0.3%	26.8%	20.8%	16.9%	15.4%	11.7%
S&P 500 Buyback	-1.1%	-2.2%	34.9%	17.3%	15.4%	16.3%	11.7%
S&P 500 Dividend Aristocrats	-1.8%	-1.8%	19.2%	14.5%	14.3%	14.8%	11.3%
S&P 500 Momentum	-2.7%	-0.6%	23.5%	20.9%	20.7%	16.9%	11.1%
S&P 500 QVM Top 90%	-0.7%	1.7%	29.1%	20.6%	18.1%	16.2%	10.8%
S&P 500 Equal Weight	-2.5%	-1.2%	27.3%	17.1%	14.6%	15.0%	10.4%
S&P 500 Revenue-Weighted	-2.0%	-0.1%	26.1%	15.8%	14.4%	15.0%	9.7%
S&P 500 Low Volatility High Dividend	-2.6%	-4.6%	18.4%	5.1%	6.3%	10.7%	9.7%
S&P 500 Minimum Volatility	-0.5%	0.2%	19.6%	15.1%	13.8%	14.5%	9.6%
S&P 500 Low Volatility	-1.3%	-1.7%	15.9%	10.2%	11.7%	12.4%	9.5%
S&P 500 Pure Value	-3.7%	-1.0%	31.5%	8.3%	8.8%	13.1%	8.4%
S&P 500 High Dividend	-2.5%	-1.8%	29.2%	6.7%	7.5%	12.0%	7.7%
S&P 500 High Beta	-2.6%	2.7%	46.0%	26.9%	18.4%	16.7%	7.7%
S&P 500 Enhanced Value	-4.0%	-0.8%	32.4%	9.4%	10.3%	13.5%	7.3%
S&P 500 Value	-3.3%	-2.1%	20.8%	12.2%	10.9%	12.7%	7.3%
S&P 500	-0.7%	1.3%	27.9%	20.4%	17.9%	16.2%	10.4%

VOLATILITY (ANN.)	12M	3Y	5Y	10Y	15Y
S&P 500 Pure Growth	14.3%	20.9%	17.8%	15.2%	17.7%
S&P 500 Growth	13.3%	18.5%	15.8%	13.5%	15.2%
S&P 500 Quality	9.5%	17.0%	14.4%	12.7%	14.3%
S&P 500 Buyback	12.0%	23.7%	19.4%	16.3%	18.3%
S&P 500 Dividend Aristocrats	12.2%	17.8%	14.9%	12.6%	14.4%
S&P 500 Momentum	13.1%	16.9%	14.9%	12.8%	15.1%
S&P 500 QVM Top 90%	10.8%	18.2%	15.2%	13.0%	15.1%
S&P 500 Equal Weight	11.0%	21.2%	17.3%	14.5%	17.7%
S&P 500 Revenue-Weighted	10.5%	19.8%	16.4%	13.8%	16.5%
S&P 500 Low Volatility High Dividend	11.6%	20.5%	16.6%	13.5%	14.9%
S&P 500 Minimum Volatility	11.1%	16.5%	13.7%	11.3%	12.7%
S&P 500 Low Volatility	10.9%	15.2%	12.6%	11.0%	11.7%
S&P 500 Pure Value	14.7%	28.7%	23.0%	19.2%	23.8%
S&P 500 High Dividend	12.8%	24.8%	19.7%	15.6%	19.0%
S&P 500 High Beta	20.3%	32.0%	26.4%	22.6%	27.5%
S&P 500 Enhanced Value	14.2%	27.1%	21.9%	18.4%	21.7%
S&P 500 Value	11.1%	19.4%	16.0%	13.6%	16.3%
S&P 500	10.5%	18.2%	15.2%	13.0%	15.3%

Performance figures for more than one year are annualized.

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of November 30, 2021.

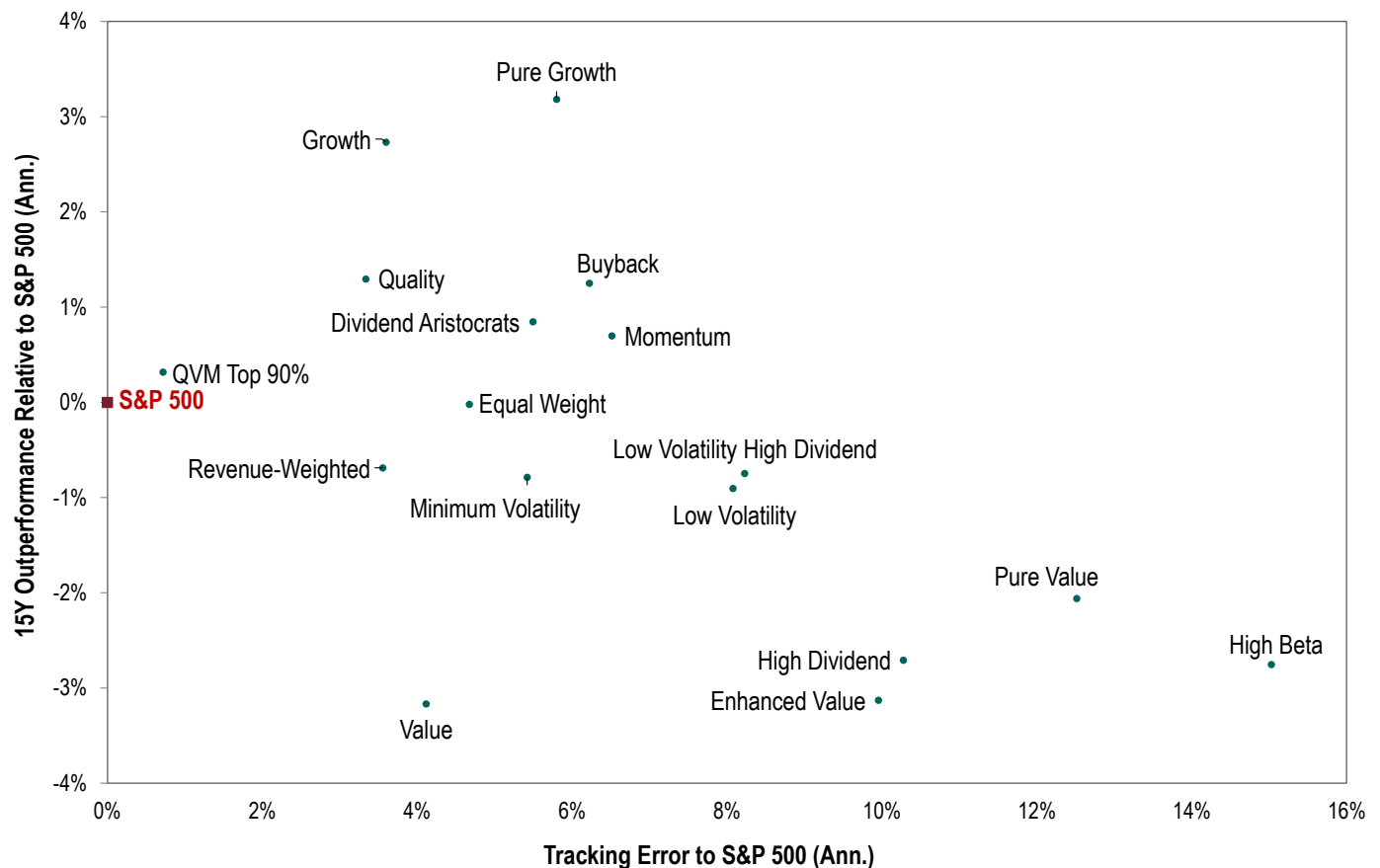
S&P Dow Jones Indices

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Index Dashboard: S&P 500® Factor Indices

November 2021

RELATIVE TO S&P 500



RELATIVE RETURN AND TRACKING ERROR

PERFORMANCE v S&P 500	1M	3M	1YR	3YR	5YR	10YR	15YR
S&P 500 Pure Growth	1.0%	3.2%	8.8%	5.3%	3.7%	2.0%	3.2%
S&P 500 Growth	2.1%	2.9%	6.2%	6.9%	5.9%	2.8%	2.7%
S&P 500 Quality	-0.5%	-1.0%	-1.1%	0.4%	-1.0%	-0.7%	1.3%
S&P 500 Buyback	-0.4%	-3.5%	7.0%	-3.1%	-2.5%	0.2%	1.2%
S&P 500 Dividend Aristocrats	-1.1%	-3.1%	-8.7%	-5.8%	-3.6%	-1.4%	0.8%
S&P 500 Momentum	-2.0%	-1.9%	-4.4%	0.5%	2.8%	0.7%	0.7%
S&P 500 QVM Top 90%	0.0%	0.4%	1.2%	0.2%	0.2%	0.1%	0.3%
S&P 500 Equal Weight	-1.8%	-2.6%	-0.6%	-3.3%	-3.3%	-1.2%	0.0%
S&P 500 Revenue-Weighted	-1.3%	-1.4%	-1.8%	-4.6%	-3.5%	-1.1%	-0.7%
S&P 500 Low Volatility High Dividend	-1.9%	-6.0%	-9.5%	-15.3%	-11.6%	-5.4%	-0.7%
S&P 500 Minimum Volatility	0.2%	-1.1%	-8.3%	-5.2%	-4.1%	-1.7%	-0.8%
S&P 500 Low Volatility	-0.6%	-3.0%	-12.1%	-10.2%	-6.2%	-3.7%	-0.9%
S&P 500 Pure Value	-3.0%	-2.3%	3.6%	-12.1%	-9.1%	-3.0%	-2.1%
S&P 500 High Dividend	-1.8%	-3.1%	1.3%	-13.7%	-10.4%	-4.2%	-2.7%
S&P 500 High Beta	-1.9%	1.4%	18.1%	6.5%	0.5%	0.5%	-2.8%
S&P 500 Enhanced Value	-3.3%	-2.2%	4.5%	-11.0%	-7.6%	-2.7%	-3.1%
S&P 500 Value	-2.6%	-3.5%	-7.2%	-8.2%	-7.0%	-3.4%	-3.2%

TRACKING ERROR v S&P 500 (ANN.)	1YR	3YR	5YR	10YR	15YR
S&P 500 Pure Growth	8.5%	6.6%	6.1%	5.5%	5.8%
S&P 500 Growth	6.2%	4.8%	4.3%	3.6%	3.6%
S&P 500 Quality	3.8%	3.8%	3.4%	2.8%	3.3%
S&P 500 Buyback	6.3%	8.7%	7.1%	6.0%	6.2%
S&P 500 Dividend Aristocrats	5.7%	5.3%	4.9%	4.5%	5.5%
S&P 500 Momentum	7.6%	7.2%	6.4%	5.6%	6.5%
S&P 500 QVM Top 90%	0.6%	0.8%	0.7%	0.6%	0.7%
S&P 500 Equal Weight	5.4%	5.8%	4.8%	3.9%	4.7%
S&P 500 Revenue-Weighted	5.6%	5.1%	4.3%	3.5%	3.6%
S&P 500 Low Volatility High Dividend	9.7%	9.2%	8.4%	8.2%	8.2%
S&P 500 Minimum Volatility	3.9%	4.3%	3.9%	4.5%	5.4%
S&P 500 Low Volatility	5.7%	8.7%	7.8%	7.6%	8.1%
S&P 500 Pure Value	13.4%	15.1%	12.1%	9.9%	12.5%
S&P 500 High Dividend	11.5%	12.9%	10.8%	9.4%	10.3%
S&P 500 High Beta	17.9%	18.0%	14.9%	13.0%	15.0%
S&P 500 Enhanced Value	11.5%	13.5%	11.1%	9.3%	10.0%
S&P 500 Value	6.9%	5.9%	5.2%	4.2%	4.1%

Performance figures for more than one year are annualized.

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of November 30, 2021.

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Index Dashboard: S&P 500® Factor Indices

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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 Momentum	100%	16%	17%	10%	6%	10%	20%	6%	0%	2%	18%	20%	19%	15%	18%	20%	15%	18%
S&P 500 Growth	16%	100%	25%	33%	13%	27%	62%	8%	3%	2%	34%	26%	31%	0%	9%	1%	16%	67%
S&P 500 Quality	17%	25%	100%	13%	14%	20%	33%	14%	5%	6%	22%	25%	19%	9%	17%	16%	12%	30%
S&P 500 Pure Growth	10%	33%	13%	100%	3%	15%	19%	4%	0%	0%	11%	0%	15%	0%	14%	0%	32%	23%
S&P 500 Low Volatility	6%	13%	14%	3%	100%	33%	22%	26%	20%	20%	19%	29%	20%	6%	12%	9%	0%	21%
S&P 500 Minimum Volatility	10%	27%	20%	15%	33%	100%	32%	16%	9%	10%	26%	28%	18%	5%	10%	8%	7%	34%
S&P 500 QVM Top 90%	20%	62%	33%	19%	22%	32%	100%	15%	9%	11%	56%	60%	48%	15%	18%	13%	15%	87%
S&P 500 Dividend Aristocrats	6%	8%	14%	4%	26%	16%	15%	100%	19%	19%	18%	21%	13%	13%	8%	10%	4%	14%
S&P 500 Low Volatility High Dividend	0%	3%	5%	0%	20%	9%	9%	19%	100%	52%	12%	16%	10%	11%	3%	11%	1%	8%
S&P 500 High Dividend	2%	2%	6%	0%	20%	10%	11%	19%	52%	100%	17%	20%	16%	29%	8%	18%	11%	10%
S&P 500 Revenue-Weighted	18%	34%	22%	11%	19%	26%	56%	18%	12%	17%	100%	58%	48%	34%	24%	35%	11%	60%
S&P 500 Value	20%	26%	25%	0%	29%	28%	60%	21%	16%	20%	58%	100%	55%	27%	19%	25%	10%	58%
S&P 500 Equal Weight	19%	31%	19%	15%	20%	18%	48%	13%	10%	16%	48%	55%	100%	23%	20%	19%	21%	50%
S&P 500 Pure Value	15%	0%	9%	0%	6%	5%	15%	13%	11%	29%	34%	27%	23%	100%	32%	53%	17%	13%
S&P 500 Buyback	18%	9%	17%	14%	12%	10%	18%	8%	3%	8%	24%	19%	20%	32%	100%	27%	18%	16%
S&P 500 Enhanced Value	20%	1%	16%	0%	9%	8%	13%	10%	11%	18%	35%	25%	19%	53%	27%	100%	6%	11%
S&P 500 High Beta	15%	16%	12%	32%	0%	7%	15%	4%	1%	11%	11%	10%	21%	17%	18%	6%	100%	16%

"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	0.71	0.30	0.48	0.10	0.07	-0.02	-0.55	-0.59	-0.66	-0.68	-0.71	-0.59	-0.64	-0.59	-0.68	-0.60
S&P 500 Growth	0.71	1.00	0.11	0.48	-0.25	-0.21	-0.26	-0.79	-0.82	-0.82	-0.87	-0.99	-0.81	-0.81	-0.70	-0.82	-0.62
S&P 500 Quality	0.30	0.11	1.00	-0.06	0.01	0.13	-0.15	-0.01	-0.31	-0.38	-0.16	-0.12	-0.30	-0.38	-0.35	-0.40	-0.38
S&P 500 Pure Growth	0.48	0.48	-0.06	1.00	-0.08	-0.12	0.17	-0.38	-0.33	-0.23	-0.40	-0.45	-0.03	-0.14	0.04	-0.17	0.02
S&P 500 Low Volatility	0.10	-0.25	0.01	-0.08	1.00	0.79	0.24	0.42	0.45	0.27	0.04	0.25	0.18	0.01	0.05	0.05	-0.28
S&P 500 Minimum Volatility	0.07	-0.21	0.13	-0.12	0.79	1.00	0.09	0.47	0.36	0.16	0.10	0.21	0.10	-0.07	-0.04	-0.04	-0.31
S&P 500 QVM Top 90%	-0.02	-0.26	-0.15	0.17	0.24	0.09	1.00	0.21	0.36	0.36	0.13	0.26	0.48	0.43	0.55	0.44	0.33
S&P 500 Dividend Aristocrats	-0.55	-0.79	-0.01	-0.38	0.42	0.47	0.21	1.00	0.75	0.66	0.72	0.80	0.69	0.57	0.54	0.59	0.39
S&P 500 Low Volatility High Dividend	-0.59	-0.82	-0.31	-0.33	0.45	0.36	0.36	0.75	1.00	0.93	0.74	0.84	0.83	0.77	0.72	0.79	0.56
S&P 500 High Dividend	-0.66	-0.82	-0.38	-0.23	0.27	0.16	0.36	0.66	0.93	1.00	0.76	0.84	0.89	0.89	0.81	0.89	0.74
S&P 500 Revenue-Weighted	-0.68	-0.87	-0.16	-0.40	0.04	0.10	0.13	0.72	0.74	0.76	1.00	0.88	0.77	0.81	0.69	0.83	0.65
S&P 500 Value	-0.71	-0.99	-0.12	-0.45	0.25	0.21	0.26	0.80	0.84	0.84	0.88	1.00	0.83	0.81	0.72	0.83	0.64
S&P 500 Equal Weight	-0.59	-0.81	-0.30	-0.03	0.18	0.10	0.48	0.69	0.83	0.89	0.77	0.83	1.00	0.92	0.92	0.90	0.84
S&P 500 Pure Value	-0.64	-0.81	-0.38	-0.14	0.01	-0.07	0.43	0.57	0.77	0.89	0.81	0.81	0.92	1.00	0.90	0.97	0.87
S&P 500 Buyback	-0.59	-0.70	-0.35	0.04	0.05	-0.04	0.55	0.54	0.72	0.81	0.69	0.72	0.92	0.90	1.00	0.91	0.83
S&P 500 Enhanced Value	-0.68	-0.82	-0.40	-0.17	0.05	-0.04	0.44	0.59	0.79	0.89	0.83	0.83	0.90	0.97	0.91	1.00	0.83
S&P 500 High Beta	-0.60	-0.62	-0.38	0.02	-0.28	-0.31	0.33	0.39	0.56	0.74	0.65	0.64	0.84	0.87	0.83	0.83	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 November 30, 2021.

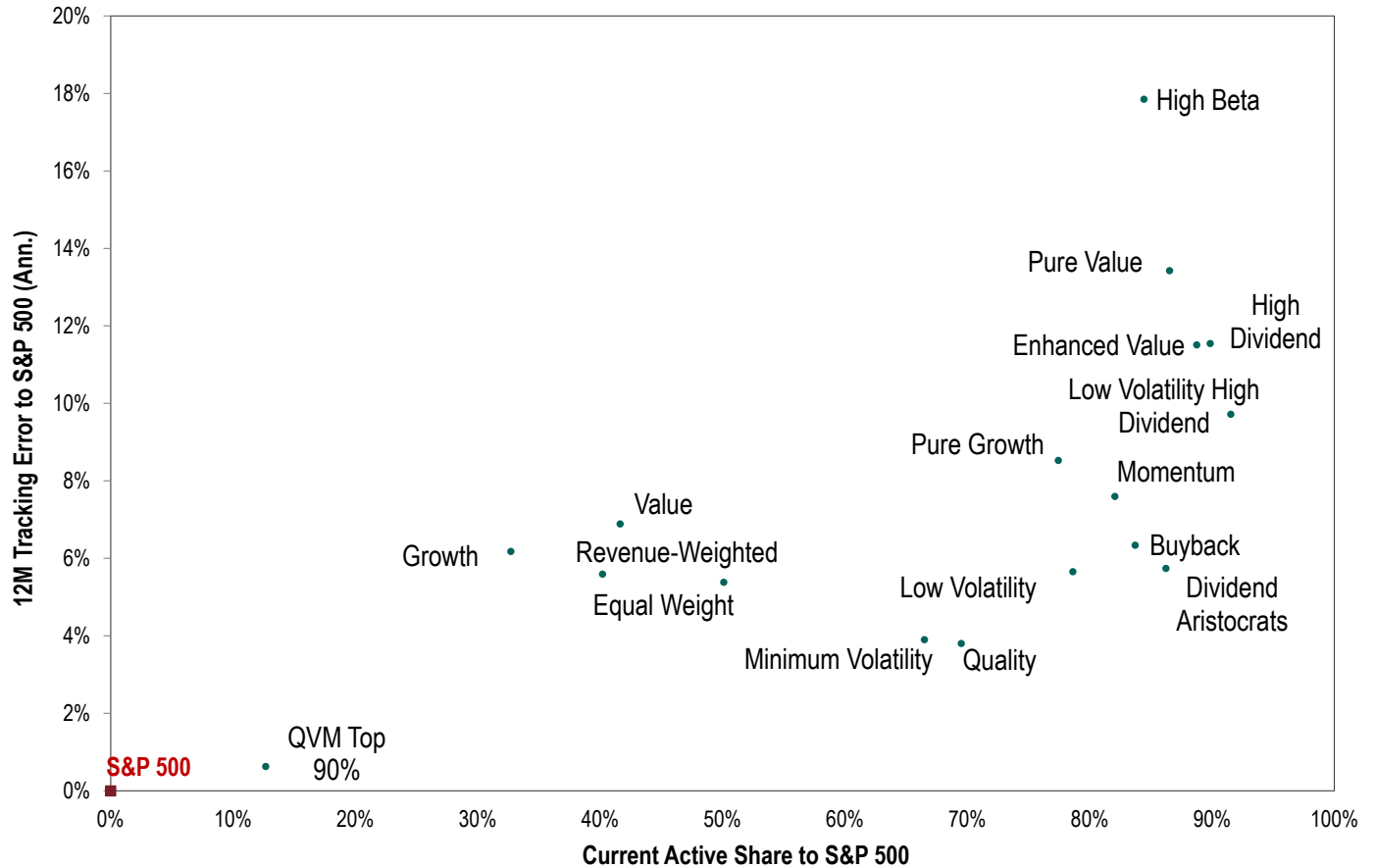
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Index Dashboard: S&P 500® Factor Indices

November 2021

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	69.6%	-30.4%	12.6%	-61.9%	50.6%	-11.6%	39.0%
S&P 500 Minimum Volatility	7	26.7%	-23.7%	-1.6%	-34.0%	20.3%	-1.9%	17.0%
S&P 500 Low Volatility High Dividend	8	20.9%	-38.5%	60.9%	-67.9%	89.3%	-30.8%	54.7%
S&P 500 High Dividend	8	-2.2%	-17.0%	65.8%	-47.8%	86.4%	-23.9%	63.6%
S&P 500 Quality	9	3.2%	2.3%	14.1%	-6.0%	11.6%	28.6%	6.7%
S&P 500 Dividend Aristocrats	9	20.8%	-23.7%	37.2%	-30.1%	51.2%	-4.1%	48.5%
S&P 500 Momentum	10	-26.7%	56.0%	37.2%	23.7%	-16.1%	1.9%	17.0%
S&P 500 Revenue-Weighted	10	3.2%	-9.8%	59.3%	-9.2%	30.7%	-12.4%	13.1%
S&P 500 QVM Top 90%	11	0.6%	5.8%	8.4%	-2.4%	9.8%	1.6%	6.7%
S&P 500 Growth	11	-9.1%	1.8%	-27.6%	20.2%	-23.9%	3.0%	-39.8%
S&P 500 Value	12	4.8%	-1.7%	48.8%	-22.4%	42.3%	-11.6%	29.1%
S&P 500 Pure Growth	12	-62.1%	2.6%	-36.5%	48.9%	-55.8%	-0.6%	19.4%
S&P 500 Pure Value	13	-38.5%	12.4%	88.2%	-9.2%	52.0%	-11.6%	58.4%
S&P 500 Buyback	13	-25.4%	2.3%	62.1%	-2.4%	3.8%	3.2%	42.8%
S&P 500 High Beta	14	-78.6%	11.2%	22.2%	58.1%	-8.6%	-2.1%	41.2%
S&P 500 Enhanced Value	14	-5.8%	4.8%	88.2%	-14.6%	50.6%	-23.9%	33.6%
S&P 500 Equal Weight	15	-25.4%	-9.8%	37.2%	-4.9%	20.6%	-11.6%	49.6%

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of November 30, 2021.

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S&P Dow Jones Indices

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Index Dashboard: S&P 500® Factor Indices
November 2021

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 November 30, 2021 the index comprised 100 constituents.

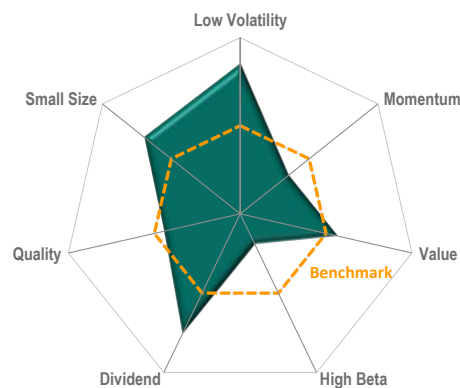
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-1.3%	-1.7%	13.4%	15.9%	10.2%	11.7%	12.4%	9.5%
Relative to Benchmark	-0.6%	-3.0%	-9.7%	-12.1%	-10.2%	-6.2%	-3.7%	-0.9%
Index Volatility				10.9%	15.2%	12.6%	11.0%	11.7%
Tracking Error				5.7%	8.7%	7.8%	7.6%	8.1%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.62

Portfolio Statistics	Index	Bmark
Active Share (Stock)	79%	0%
Active Share (Sector)	44%	0%
Concentration (HH Index)	101.2	152.7
Correlation (stock)	0.29	0.22
Ann. Turnover (last 10 yr)	0.62	0.04

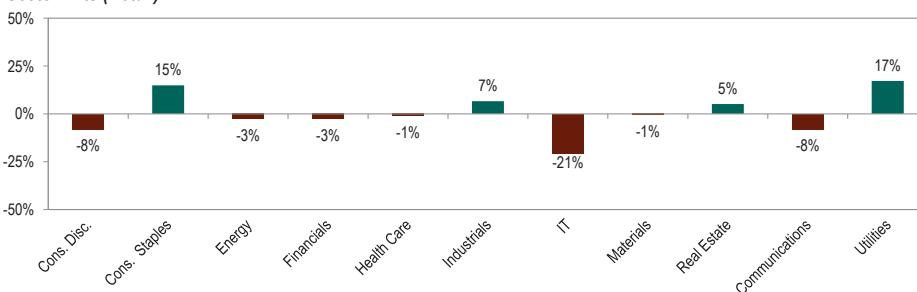
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Difference
Utilities	20%	3%	17%
Cons. Staples	21%	6%	15%
IT	7%	28%	21%
Communications	3%	11%	8%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	18%	26%
12M - 1M price return	25%	54%
Book/Price	0.24	0.20
Earnings/Price	0.04	0.04
Sales/Price	0.33	0.31
Stock Beta	0.59	1.04
Yield (12M trailing)	2.3%	1.3%
R.O.E.	29%	37%
Market Cap (U.S. \$ bn)	111.8	623.1

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 November 30, 2021 the index comprised 95 constituents.

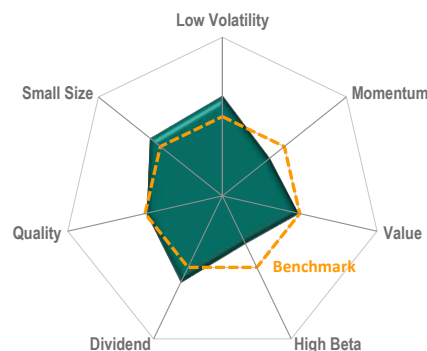
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-0.5%	0.2%	16.4%	19.6%	15.1%	13.8%	14.5%	9.6%
Relative to Benchmark	0.2%	-1.1%	-6.7%	-8.3%	-5.2%	-4.1%	-1.7%	-0.8%
Index Volatility				11.1%	16.5%	13.7%	11.3%	12.7%
Tracking Error				3.9%	4.3%	3.9%	4.5%	5.4%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.78

Portfolio Statistics	Index	Bmark
Active Share (Stock)	66%	0%
Active Share (Sector)	19%	0%
Concentration (HH Index)	155.5	152.7
Correlation (stock)	0.25	0.22
Ann. Turnover (last 10 yr)	0.39	0.04

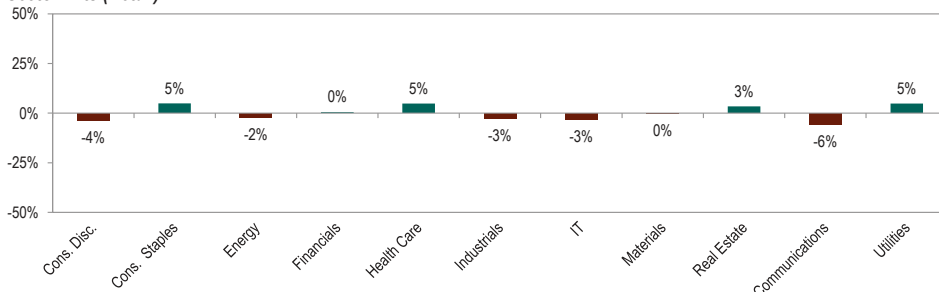
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Difference
Cons. Staples	11%	6%	5%
Health Care	19%	14%	5%
Communications	5%	11%	6%
Cons. Disc.	9%	13%	4%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	22%	26%
12M - 1M price return	32%	54%
Book/Price	0.20	0.20
Earnings/Price	0.04	0.04
Sales/Price	0.26	0.31
Stock Beta	0.78	1.04
Yield (12M trailing)	1.7%	1.3%
R.O.E.	34%	37%
Market Cap (U.S. \$ bn)	312.8	623.1

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of November 30, 2021.

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Index Dashboard: S&P 500® Factor Indices
November 2021

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 November 30, 2021 the index comprised 50 constituents.

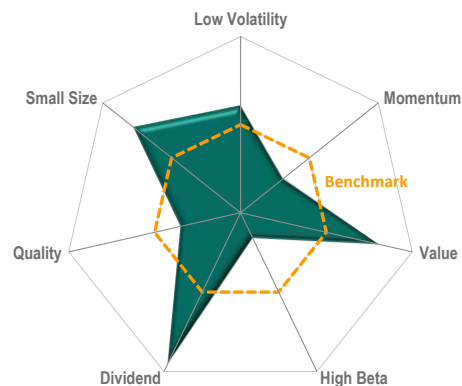
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-2.6%	-4.6%	15.2%	18.4%	5.1%	6.3%	10.7%	9.7%
Relative to Benchmark	-1.9%	-6.0%	-7.9%	-9.5%	-15.3%	-11.6%	-5.4%	-0.7%
Index Volatility				11.6%	20.5%	16.6%	13.5%	14.9%
Tracking Error				9.7%	9.2%	8.4%	8.2%	8.2%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.63

Portfolio Statistics	Index	Bmark
Active Share (Stock)	92%	0%
Active Share (Sector)	46%	0%
Concentration (HH Index)	213.9	152.7
Correlation (stock)	0.34	0.22
Ann. Turnover (last 10 yr)	0.60	0.04

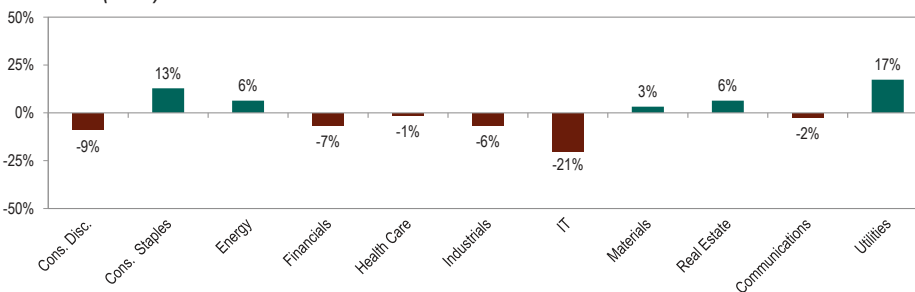
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Utilities	20%	3%	17%
Cons. Staples	19%	6%	13%
IT	7%	28%	21%
Cons. Disc.	4%	13%	9%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	22%	26%
12M - 1M price return	30%	54%
Book/Price	0.41	0.20
Earnings/Price	0.06	0.04
Sales/Price	0.59	0.31
Stock Beta	0.54	1.04
Yield (12M trailing)	4.5%	1.3%
R.O.E.	25%	37%
Market Cap (U.S. \$ bn)	70.5	623.1

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 November 30, 2021 the index comprised 79 constituents.

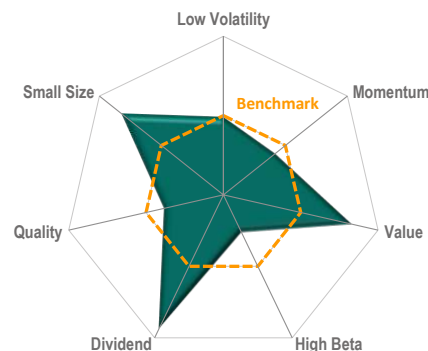
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-2.5%	-1.8%	23.7%	29.2%	6.7%	7.5%	12.0%	7.7%
Relative to Benchmark	-1.8%	-3.1%	0.6%	1.3%	-13.7%	-10.4%	-4.2%	-2.7%
Index Volatility				12.8%	24.8%	19.7%	15.6%	19.0%
Tracking Error				11.5%	12.9%	10.8%	9.4%	10.3%

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

Portfolio Statistics	Index	Bmark
Active Share (Stock)	90%	0%
Active Share (Sector)	52%	0%
Concentration (HH Index)	128.4	152.7
Correlation (stock)	0.43	0.22
Ann. Turnover (last 10 yr)	0.42	0.04

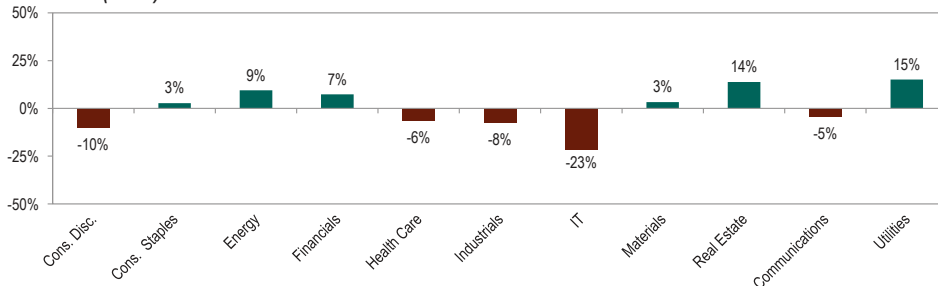
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Utilities	18%	3%	15%
Real Estate	16%	2%	14%
IT	5%	28%	23%
Cons. Disc.	3%	13%	10%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	26%	26%
12M - 1M price return	51%	54%
Book/Price	0.49	0.20
Earnings/Price	0.05	0.04
Sales/Price	0.63	0.31
Stock Beta	0.69	1.04
Yield (12M trailing)	4.2%	1.3%
R.O.E.	20%	37%
Market Cap (U.S. \$ bn)	51.8	623.1

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of November 30, 2021.

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Index Dashboard: S&P 500® Factor Indices
November 2021

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 November 30, 2021 the index comprised 98 constituents.

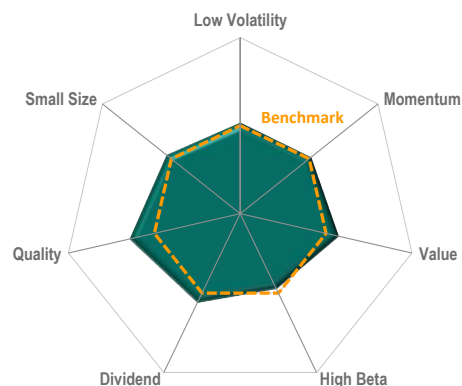
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-1.2%	0.3%	22.1%	26.8%	20.8%	16.9%	15.4%	11.7%
Relative to Benchmark	-0.5%	-1.0%	-1.1%	-1.1%	0.4%	-1.0%	-0.7%	1.3%
Index Volatility				9.5%	17.0%	14.4%	12.7%	14.3%
Tracking Error				3.8%	3.8%	3.4%	2.8%	3.3%

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

Portfolio Statistics	Index	Bmark
Active Share (Stock)	70%	0%
Active Share (Sector)	25%	0%
Concentration (HH Index)	270.9	152.7
Correlation (stock)	0.27	0.22
Ann. Turnover (last 10 yr)	0.63	0.04

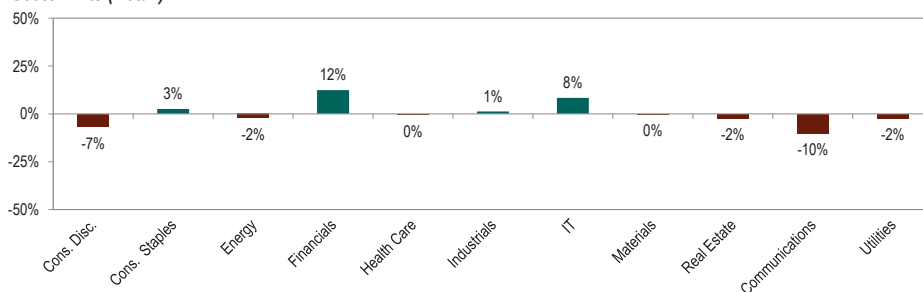
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Financials	23%	10%	12%
IT	36%	28%	8%
Communications	1%	11%	10%
Cons. Disc.	6%	13%	7%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	25%	26%
12M - 1M price return	54%	54%
Book/Price	0.20	0.20
Earnings/Price	0.05	0.04
Sales/Price	0.30	0.31
Stock Beta	0.96	1.04
Yield (12M trailing)	1.5%	1.3%
R.O.E.	48%	37%
Market Cap (U.S. \$ bn)	493.5	623.1

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 November 30, 2021 the index comprised 65 constituents.

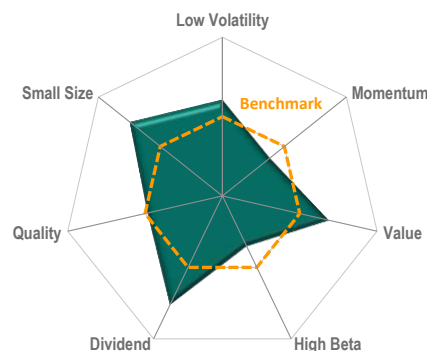
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-1.8%	-1.8%	17.4%	19.2%	14.5%	14.3%	14.8%	11.3%
Relative to Benchmark	-1.1%	-3.1%	-5.8%	-8.7%	-5.8%	-3.6%	-1.4%	0.8%
Index Volatility				12.2%	17.8%	14.9%	12.6%	14.4%
Tracking Error				5.7%	5.3%	4.9%	4.5%	5.5%

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

Portfolio Statistics	Index	Bmark
Active Share (Stock)	86%	0%
Active Share (Sector)	41%	0%
Concentration (HH Index)	154.4	152.7
Correlation (stock)	0.29	0.22
Ann. Turnover (last 10 yr)	0.19	0.04

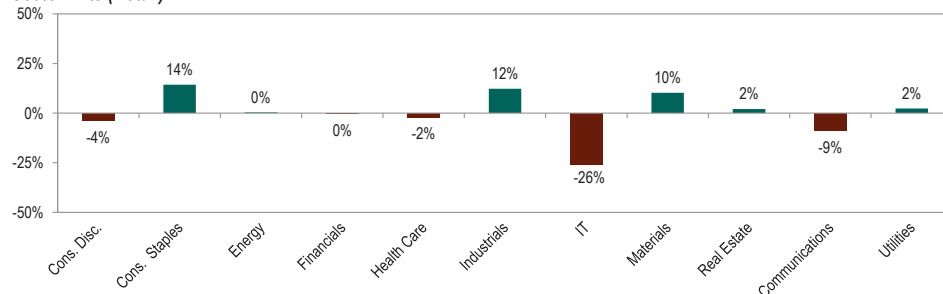
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Cons. Staples	21%	6%	14%
Industrials	20%	8%	12%
IT	2%	28%	26%
Communications	2%	11%	9%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	22%	26%
12M - 1M price return	38%	54%
Book/Price	0.26	0.20
Earnings/Price	0.04	0.04
Sales/Price	0.49	0.31
Stock Beta	0.80	1.04
Yield (12M trailing)	2.4%	1.3%
R.O.E.	31%	37%
Market Cap (U.S. \$ bn)	86.6	623.1

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November 2021

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 November 30, 2021 the index comprised 100 constituents.

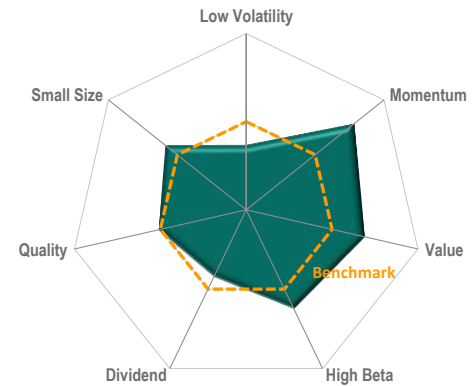
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-2.7%	-0.6%	19.5%	23.5%	20.9%	20.7%	16.9%	11.1%
Relative to Benchmark	-2.0%	-1.9%	-3.7%	-4.4%	0.5%	2.8%	0.7%	0.7%
Index Volatility				13.1%	16.9%	14.9%	12.8%	15.1%
Tracking Error				7.6%	7.2%	6.4%	5.6%	6.5%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.13

Portfolio Statistics	Index	Bmark
Active Share (Stock)	82%	0%
Active Share (Sector)	29%	0%
Concentration (HH Index)	306.3	152.7
Correlation (stock)	0.31	0.22
Ann. Turnover (last 10 yr)	1.15	0.04

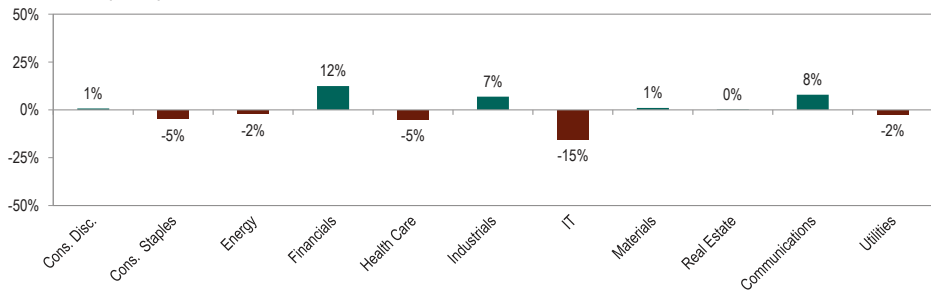
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Financials	23%	10%	12%
Communications	19%	11%	8%
IT	12%	28%	15%
Health Care	9%	14%	5%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	29%	26%
12M - 1M price return	94%	54%
Book/Price	0.24	0.20
Earnings/Price	0.06	0.04
Sales/Price	0.35	0.31
Stock Beta	1.22	1.04
Yield (12M trailing)	0.8%	1.3%
R.O.E.	34%	37%
Market Cap (U.S. \$ bn)	267.2	623.1

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 November 30, 2021 the index comprised 505 constituents.

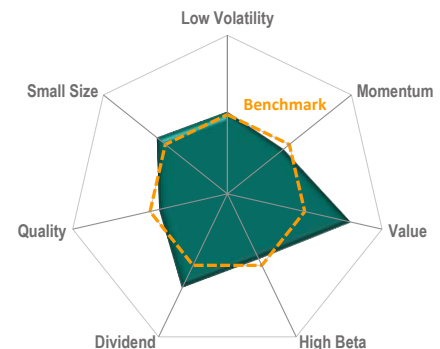
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-2.0%	-0.1%	22.7%	26.1%	15.8%	14.4%	15.0%	9.7%
Relative to Benchmark	-1.3%	-1.4%	-0.5%	-1.8%	-4.6%	-3.5%	-1.1%	-0.7%
Index Volatility				10.5%	19.8%	16.4%	13.8%	16.5%
Tracking Error				5.6%	5.1%	4.3%	3.5%	3.6%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.87

Portfolio Statistics	Index	Bmark
Active Share (Stock)	40%	0%
Active Share (Sector)	22%	0%
Concentration (HH Index)	99.0	152.7
Correlation (stock)	0.22	0.22
Ann. Turnover (last 10 yr)	0.20	0.04

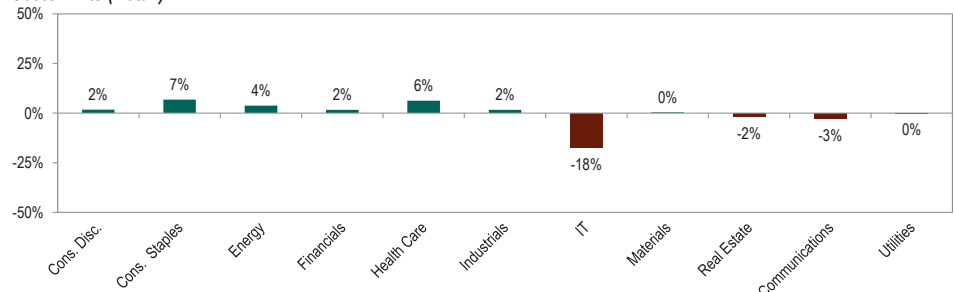
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Cons. Staples	13%	6%	7%
Health Care	20%	14%	6%
IT	10%	28%	18%
Communications	8%	11%	3%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	25%	26%
12M - 1M price return	49%	54%
Book/Price	0.31	0.20
Earnings/Price	0.05	0.04
Sales/Price	0.84	0.31
Stock Beta	0.93	1.04
Yield (12M trailing)	1.9%	1.3%
R.O.E.	30%	37%
Market Cap (U.S. \$ bn)	327.0	623.1

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of November 30, 2021.

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November 2021

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 November 30, 2021 the index comprised 450 constituents.

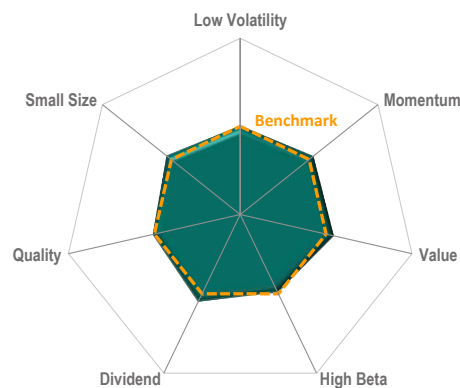
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-0.7%	1.7%	24.3%	29.1%	20.6%	18.1%	16.2%	10.8%
Relative to Benchmark	0.0%	0.4%	1.2%	1.2%	0.2%	0.2%	0.1%	0.3%
Index Volatility				10.8%	18.2%	15.2%	13.0%	15.1%
Tracking Error				0.6%	0.8%	0.7%	0.6%	0.7%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.99

Portfolio Statistics	Index	Bmark
Active Share (Stock)	13%	0%
Active Share (Sector)	5%	0%
Concentration (HH Index)	176.8	152.7
Correlation (stock)	0.22	0.22
Ann. Turnover (last 10 yr)	0.20	0.04

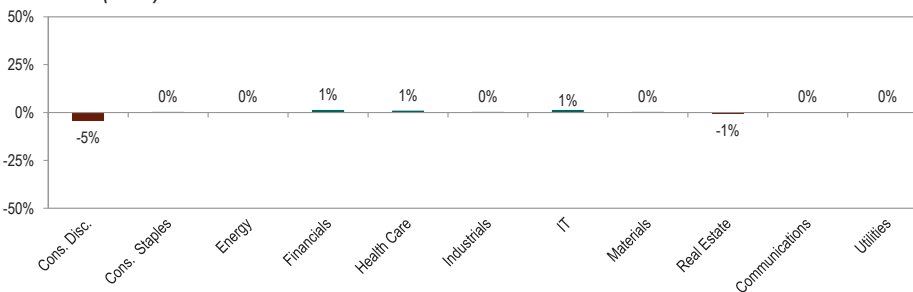
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Financials	12%	10%	1%
IT	29%	28%	1%
Cons. Disc.	8%	13%	5%
Real Estate	2%	2%	1%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	26%	26%
12M - 1M price return	57%	54%
Book/Price	0.22	0.20
Earnings/Price	0.04	0.04
Sales/Price	0.32	0.31
Stock Beta	1.04	1.04
Yield (12M trailing)	1.4%	1.3%
R.O.E.	37%	37%
Market Cap (U.S. \$ bn)	603.9	623.1

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 November 30, 2021 the index comprised 242 constituents.

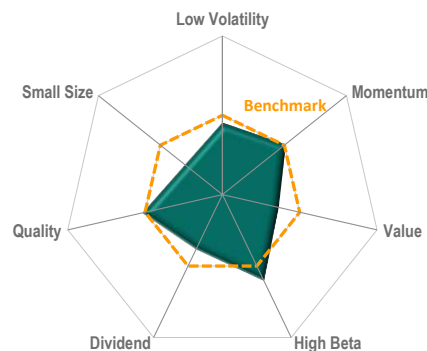
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	1.4%	4.2%	28.8%	34.1%	27.2%	23.9%	19.0%	13.2%
Relative to Benchmark	2.1%	2.9%	5.6%	6.2%	6.9%	5.9%	2.8%	2.7%
Index Volatility				13.3%	18.5%	15.8%	13.5%	15.2%
Tracking Error				6.2%	4.8%	4.3%	3.6%	3.6%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.14

Portfolio Statistics	Index	Bmark
Active Share (Stock)	33%	0%
Active Share (Sector)	22%	0%
Concentration (HH Index)	424.4	152.7
Correlation (stock)	0.35	0.22
Ann. Turnover (last 10 yr)	0.25	0.04

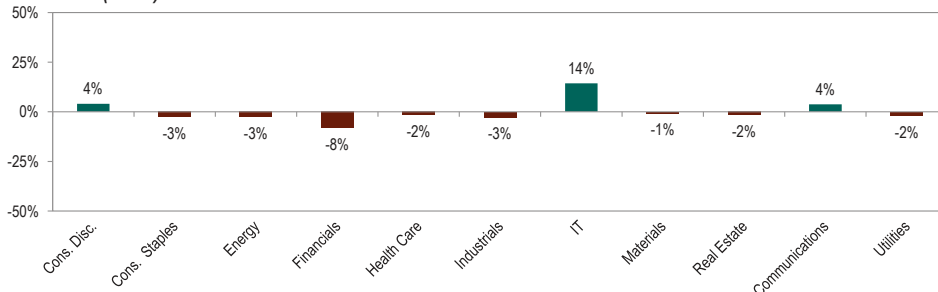
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
IT	42%	28%	14%
Cons. Disc.	17%	13%	4%
Financials	2%	10%	8%
Industrials	5%	8%	3%



Factor Exposure Chart

Sector Tilts (Detail)



Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of November 30, 2021.

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November 2021

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 November 30, 2021 the index comprised 431 constituents.

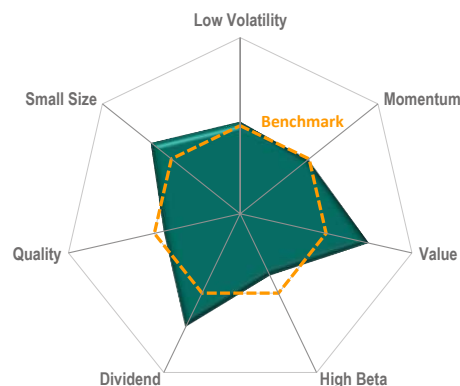
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-3.3%	-2.1%	16.7%	20.8%	12.2%	10.9%	12.7%	7.3%
Relative to Benchmark	-2.6%	-3.5%	-6.5%	-7.2%	-8.2%	-7.0%	-3.4%	-3.2%
Index Volatility				11.1%	19.4%	16.0%	13.6%	16.3%
Tracking Error				6.9%	5.9%	5.2%	4.2%	4.1%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.85

Portfolio Statistics	Index	Bmark
Active Share (Stock)	42%	0%
Active Share (Sector)	28%	0%
Concentration (HH Index)	69.0	152.7
Correlation (stock)	0.28	0.22
Ann. Turnover (last 10 yr)	0.26	0.04

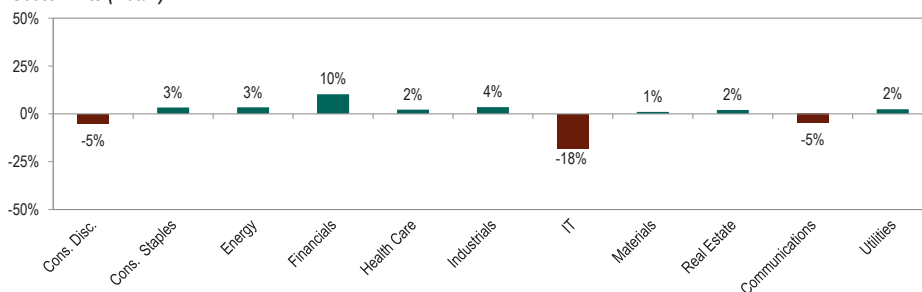
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Financials	21%	10%	10%
Industrials	12%	8%	4%
IT	9%	28%	18%
Cons. Disc.	8%	13%	5%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	25%	26%
12M - 1M price return	52%	54%
Book/Price	0.35	0.20
Earnings/Price	0.05	0.04
Sales/Price	0.49	0.31
Stock Beta	0.84	1.04
Yield (12M trailing)	2.2%	1.3%
R.O.E.	25%	37%
Market Cap (U.S. \$ bn)	154.0	623.1

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 November 30, 2021 the index comprised 74 constituents.

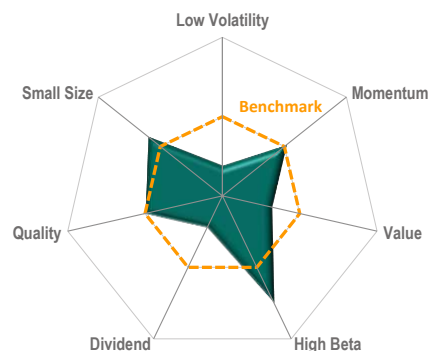
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	0.3%	4.5%	30.8%	36.7%	25.7%	21.6%	18.2%	13.6%
Relative to Benchmark	1.0%	3.2%	7.6%	8.8%	5.3%	3.7%	2.0%	3.2%
Index Volatility				14.3%	20.9%	17.8%	15.2%	17.7%
Tracking Error				8.5%	6.6%	6.1%	5.5%	5.8%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.3

Portfolio Statistics	Index	Bmark
Active Share (Stock)	77%	0%
Active Share (Sector)	22%	0%
Concentration (HH Index)	161.5	152.7
Correlation (stock)	0.36	0.22
Ann. Turnover (last 10 yr)	0.65	0.04

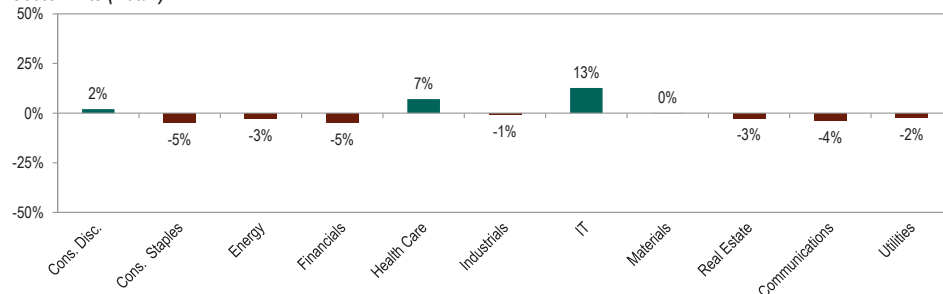
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
IT	40%	28%	13%
Health Care	21%	14%	7%
Cons. Staples	1%	6%	5%
Financials	6%	10%	5%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	34%	26%
12M - 1M price return	70%	54%
Book/Price	0.08	0.20
Earnings/Price	0.03	0.04
Sales/Price	0.14	0.31
Stock Beta	1.39	1.04
Yield (12M trailing)	0.2%	1.3%
R.O.E.	39%	37%
Market Cap (U.S. \$ bn)	251.1	623.1

S&P Dow Jones Indices

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Index Dashboard: S&P 500® Factor Indices
November 2021

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 November 30, 2021 the index comprised 117 constituents.

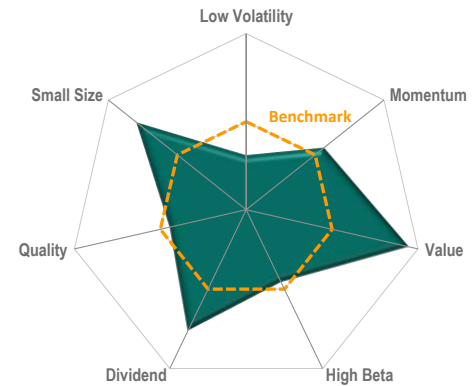
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-3.7%	-1.0%	26.4%	31.5%	8.3%	8.8%	13.1%	8.4%
Relative to Benchmark	-3.0%	-2.3%	3.2%	3.6%	-12.1%	-9.1%	-3.0%	-2.1%
Index Volatility				14.7%	28.7%	23.0%	19.2%	23.8%
Tracking Error				13.4%	15.1%	12.1%	9.9%	12.5%

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

Portfolio Statistics	Index	Bmark
Active Share (Stock)	87%	0%
Active Share (Sector)	42%	0%
Concentration (HH Index)	113.9	152.7
Correlation (stock)	0.40	0.22
Ann. Turnover (last 10 yr)	0.47	0.04

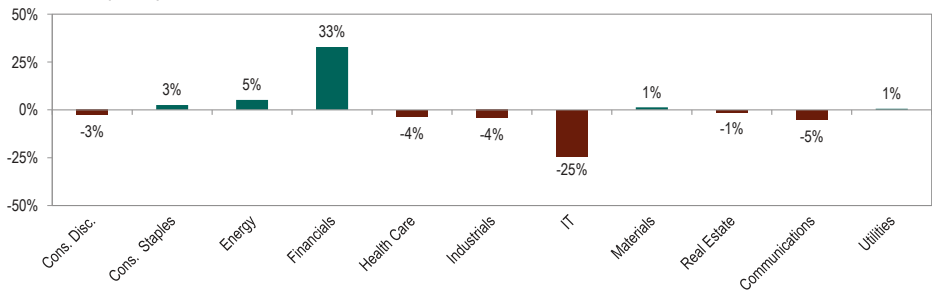
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Financials	43%	10%	33%
Energy	8%	2%	5%
IT	2%	28%	25%
Communications	6%	11%	5%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	30%	26%
12M - 1M price return	71%	54%
Book/Price	0.68	0.20
Earnings/Price	0.08	0.04
Sales/Price	1.06	0.31
Stock Beta	0.93	1.04
Yield (12M trailing)	2.5%	1.3%
R.O.E.	13%	37%
Market Cap (U.S. \$ bn)	62.0	623.1

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 November 30, 2021 the index comprised 100 constituents.

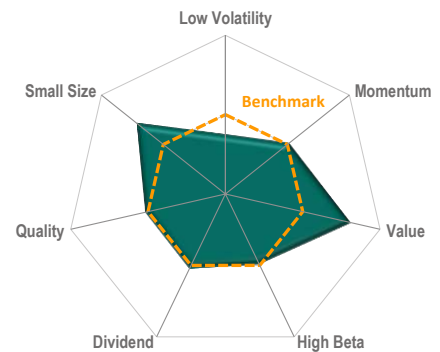
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-1.1%	-2.2%	27.1%	34.9%	17.3%	15.4%	16.3%	11.7%
Relative to Benchmark	-0.4%	-3.5%	3.9%	7.0%	-3.1%	-2.5%	0.2%	1.2%
Index Volatility				12.0%	23.7%	19.4%	16.3%	18.3%
Tracking Error				6.3%	8.7%	7.1%	6.0%	6.2%

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

Portfolio Statistics	Index	Bmark
Active Share (Stock)	84%	0%
Active Share (Sector)	29%	0%
Concentration (HH Index)	101.5	152.7
Correlation (stock)	0.24	0.22
Ann. Turnover (last 10 yr)	0.94	0.04

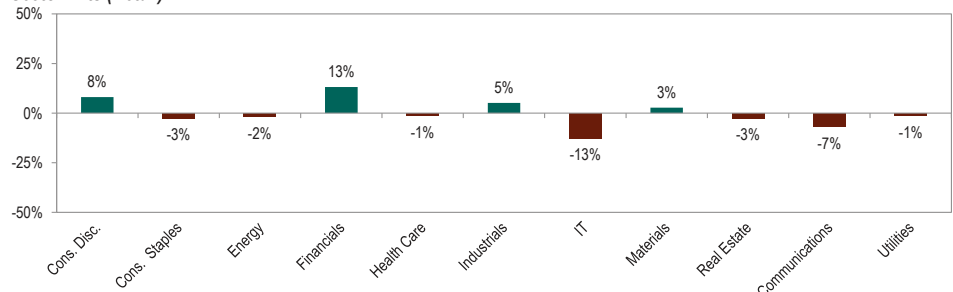
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Financials	23%	10%	13%
Cons. Disc.	21%	13%	8%
IT	15%	28%	13%
Communications	4%	11%	7%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	28%	26%
12M - 1M price return	60%	54%
Book/Price	0.33	0.20
Earnings/Price	0.07	0.04
Sales/Price	0.62	0.31
Stock Beta	1.03	1.04
Yield (12M trailing)	1.4%	1.3%
R.O.E.	35%	37%
Market Cap (U.S. \$ bn)	100.9	623.1

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of November 30, 2021.

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Index Dashboard: S&P 500® Factor Indices
November 2021

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 November 30, 2021 the index comprised 100 constituents.

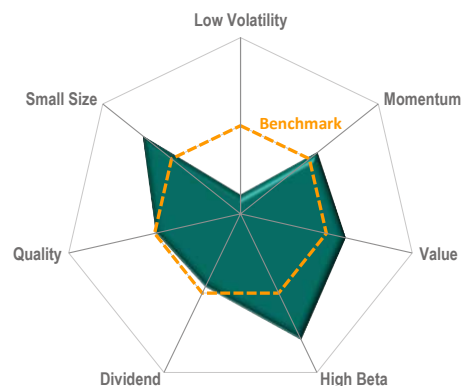
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-2.6%	2.7%	36.2%	46.0%	26.9%	18.4%	16.7%	7.7%
Relative to Benchmark	-1.9%	1.4%	13.0%	18.1%	6.5%	0.5%	0.5%	-2.8%
Index Volatility				20.3%	32.0%	26.4%	22.6%	27.5%
Tracking Error				17.9%	18.0%	14.9%	13.0%	15.0%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.33

Portfolio Statistics	Index	Bmark
Active Share (Stock)	84%	0%
Active Share (Sector)	26%	0%
Concentration (HH Index)	103.2	152.7
Correlation (stock)	0.39	0.22
Ann. Turnover (last 10 yr)	0.90	0.04

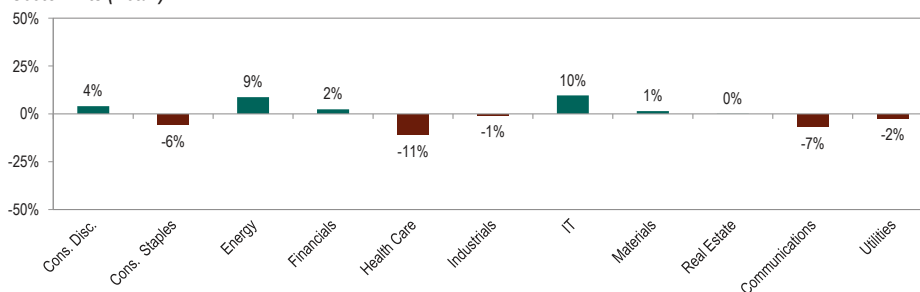
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
IT	37%	28%	10%
Energy	11%	2%	9%
Health Care	3%	14%	11%
Communications	4%	11%	7%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	38%	26%
12M - 1M price return	89%	54%
Book/Price	27%	20%
Earnings/Price	3%	4%
Sales/Price	40%	31%
Stock Beta	147%	104%
Yield (12M trailing)	1.0%	1.3%
R.O.E.	27%	37%
Market Cap (U.S. \$ bn)	105.6	623.1

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 November 30, 2021 the index comprised 98 constituents.

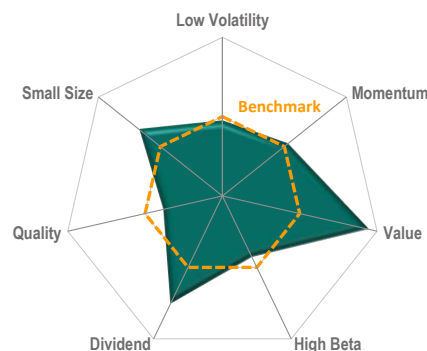
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-4.0%	-0.8%	26.8%	32.4%	9.4%	10.3%	13.5%	7.3%
Relative to Benchmark	-3.3%	-2.2%	3.6%	4.5%	-11.0%	-7.6%	-2.7%	-3.1%
Index Volatility				14.2%	27.1%	21.9%	18.4%	21.7%
Tracking Error				11.5%	13.5%	11.1%	9.3%	10.0%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.85

Portfolio Statistics	Index	Bmark
Active Share (Stock)	89%	0%
Active Share (Sector)	43%	0%
Concentration (HH Index)	233.1	152.7
Correlation (stock)	0.41	0.22
Ann. Turnover (last 10 yr)	0.43	0.04

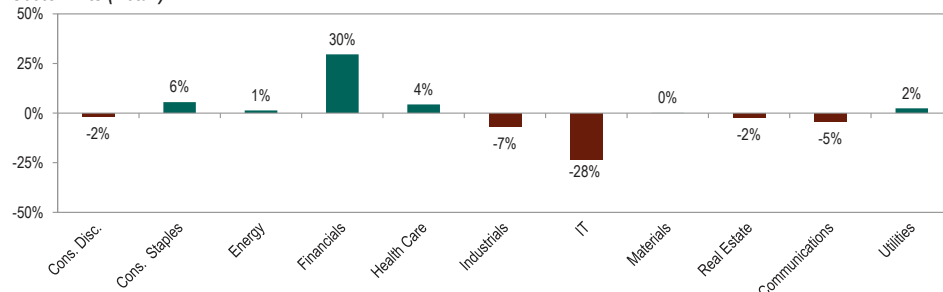
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Financials	40%	10%	30%
Cons. Staples	12%	6%	6%
IT	0%	28%	28%
Industrials	1%	8%	7%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	26%	26%
12M - 1M price return	60%	54%
Book/Price	0.62	0.20
Earnings/Price	0.08	0.04
Sales/Price	1.10	0.31
Stock Beta	0.89	1.04
Yield (12M trailing)	2.3%	1.3%
R.O.E.	15%	37%
Market Cap (U.S. \$ bn)	128.9	623.1

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of November 30, 2021.

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November 2021

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 November 30, 2021 the index comprised 505 constituents.

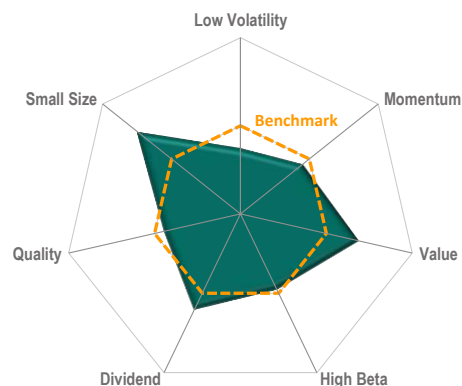
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-2.5%	-1.2%	22.1%	27.3%	17.1%	14.6%	15.0%	10.4%
Relative to Benchmark	-1.8%	-2.6%	-1.1%	-0.6%	-3.3%	-3.3%	-1.2%	0.0%
Index Volatility				11.0%	21.2%	17.3%	14.5%	17.7%
Tracking Error				5.4%	5.8%	4.8%	3.9%	4.7%

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

Portfolio Statistics	Index	Bmark
Active Share (Stock)	50%	0%
Active Share (Sector)	21%	0%
Concentration (HH Index)	20.2	152.7
Correlation (stock)	0.22	0.22
Ann. Turnover (last 10 yr)	0.22	0.04

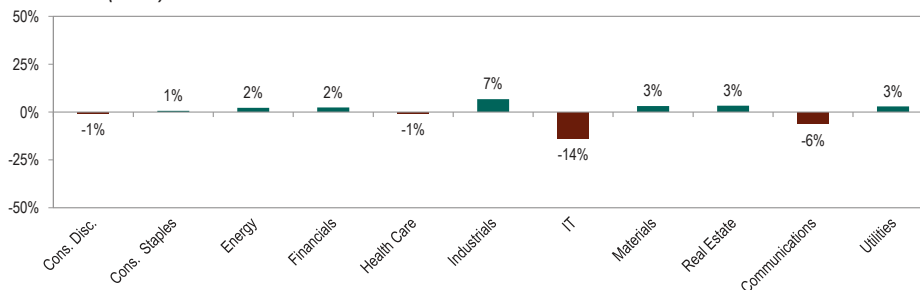
Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.
Industrials	15%	8%	7%
Real Estate	6%	2%	3%
IT	14%	28%	14%
Communications	4%	11%	6%



Factor Exposure Chart

Sector Tilts (Detail)



Index-Weighted Avg.	Index	Bmark
Stock Volatility	28%	26%
12M - 1M price return	54%	54%
Book/Price	0.29	0.20
Earnings/Price	0.04	0.04
Sales/Price	0.47	0.31
Stock Beta	0.97	1.04
Yield (12M trailing)	1.7%	1.3%
R.O.E.	27%	37%
Market Cap (U.S. \$ bn)	83.3	623.1

More Factor Resources



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. Visit factorallocator.com/spdji.



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Hear directly from thought leader on the latest developments at indexologyblog.com/category/factors

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.



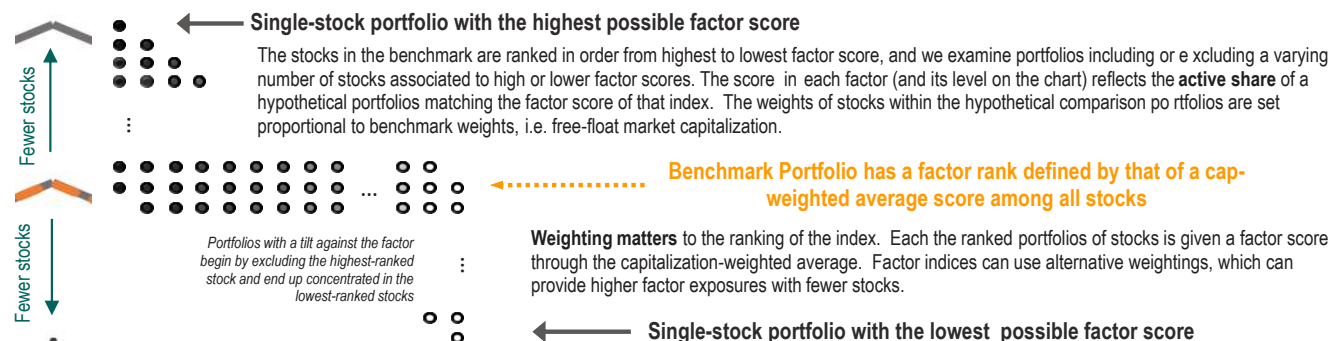
Factor	Measurement at single-stock level
Volatility	Trailing 12-month daily volatility.
Momentum	Twelve-month total return change as of one month ago ("13 minus 1 momentum"), divided by the daily volatility during the twelve-month period that ended one month prior. For more details, see the S&P Momentum 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	13M - 1M Return	Daily Price Volatility
S&P 500 index-weighted average	0.039	0.198	0.311	11.88%	36.52%	1.62	54.01%	1.69%
S&P 500 index-weighted standard deviation	0.032	0.229	0.369	23.26%	29.69%	1.09	45.78%	0.55%

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of November 30, 2021.

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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. The back-test calculations are based on the same methodology that was 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. Complete index methodology details are available at www.spglobal.com/spdji. Past performance of the Index is not an indication of future results. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results. Please refer to the methodology for the Index for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations. Back-tested performance is for use with institutions only; not for use with retail investors.

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

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

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