

MONTHLY PERFORMANCE UPDATE AS OF SEPTEMBER 30, 2021

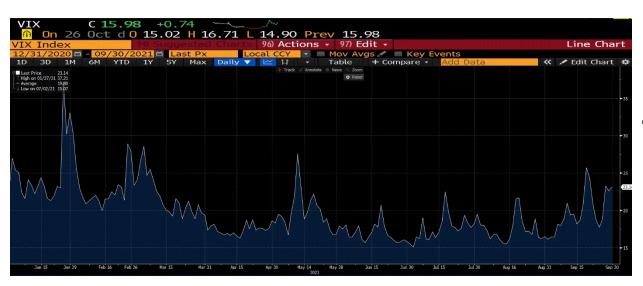
SEPTEMBER 2021 | THE SEPTEMBER EFFECT

"I would say our policy is well positioned to manage a range of plausible outcomes — I do think it's time to taper, and I don't think it's time to raise rates. It would be premature to do so at a time when we are far below the level of jobs we had in 2020." —Jerome H. Powell, the Federal Reserve Chair 10/22/2021

The September effect did not disappoint again in 2021 as history repeated with U.S. markets declining -4.65% and international stocks declining -3.20%. On the heels of the S&P 500 already gaining 21.58% YTD through August 31st, this September's disappointing performance woes were tied to unprecedented inflation

the end of 2Q 2020 evidenced by value and quality company factors outperforming momentum.

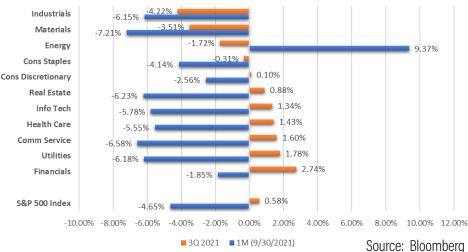
Growth stocks maintained a modest leadership over Value stocks during 3Q; nonetheless, the relative leadership albeit seesawing of key value sectors including Financials and smaller caps



Source: Bloomberg

concerns, supply-chain bottlenecks, uncertainty about how COVID-19 will slow down tremendous business and job market's recovery. Let's not forget Congress was playing hand grenade with the U.S. government's solvency, extending the national debt limit while President Biden faces gridlock with his Build Back Better stimulus plan. Hence the VIX index spiked in volatility exhibited by market uncertainty not seen since earlier in the year.

Deconstructing equities during September every S&P sector posted negative returns except for Energy. Flashback to the end of 2020, Technology stocks gained 43.9% while Energy stocks lost -33.7% for the year. Contrast that with YTD 2021 as Energy and Financial stocks gained 43.1% and 29.0%, respectively, while Technology stocks are lagging at a modest 15.3%. This is fundamentally an indication of a rotation that started to take place at stocks last month are important testimonials of the recovery market cycle and the likelihood of rising rates. That same validation, although nowhere to hide, was evidenced in bonds as well as long-dated Treasuries lost -2.86% while being defensive and short duration benefited the Barclays US Aggregate returns of -0.87%. September's market reversal across the board and nowhere to hide didn't favor any specific Sowell S&P 500 Sector Returns





strategies on a relative basis indicative of an intermittent risk-off environment. Sowell's TAP signals, a tactical market gauge, both remain in positive territory fundamentally and price-based technical.

However, with Apple, Microsoft, Amazon, Google, Tesla, and Facebook accounting for 24% of the S&P 500 weight and over 10 trillion in market-capitalization, valuations and construction asset allocation remain attractive. For instance, international stocks and small-cap stocks are trading at exceptional discounts relative to historical P/E ratios. The current Administration was proposing major increases in tax rates and significant increases in spending, while the Fed was signaling its willingness to reduce the rate of growth of the money supply. The combination of tighter money and higher tax rates may present uncertainty for economic stability and market valuations if it comes to pass. We may experience more market volatility to this challenge

depending on the Fed and Congress' aggressive response; hence, we remain diligent and constructive in our asset allocation and positioning but favorable towards expansionary markets.

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

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

COMPLETE PERFORMANCE DETAILS AS OF SEPTEMBER 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 M	MANAGEMEN	T PROGRA	AMS		
Strategic Allocation Models	Sep 2021 Net	L3M Net	L6M Net	YTD Net	L12M Net
AMP Income	-1.56	-0.44	2.25	0.40	4.10
Benchmark: Custom Blend*	-1.35	-0.08	2.68	0.70	4.01
AMP Total Return	-2.05	-0.25	3.58	3.11	9.09
Benchmark: Custom Blend	-1.84	-0.25	3.32	2.50	7.91
AMP Income and Growth	-2.75	-0.69	3.97	3.68	12.08
Benchmark: Custom Blend	-2.33	-0.41	3.96	4.31	11.91
AMP Conservative	-3.19	-0.75	4.78	6.11	15.95
Benchmark: Custom Blend	-2.66	-0.53	4.38	5.53	14.63
AMP Balanced	-3.61	-1.15	4.99	6.65	18.94
Benchmark: Custom Blend	-3.15	-0.70	5.01	7.38	18.80
AMP Growth	-4.03	-1.32	5.48	7.72	21.55
Benchmark: Custom Blend	-3.48	-0.82	5.43	8.62	21.63
AMP Global Growth	-4.12	-1.51	5.31	7.52	21.25
Benchmark: Custom Blend	-3.48	-0.82	5.43	8.62	21.63
AMP Aggressive Growth	-4.53	-1.53	6.20	9.37	25.35
Benchmark: Custom Blend	-3.97	-0.99	6.05	10.49	25.97
Classic Bond	-0.71	-0.08	1.32	-0.98	0.15
Benchmark: Barclays US Aggregate Bond Index	-0.87	0.05	1.88	-1.55	-0.90
Classic Total Return	-1.68	-0.56	1.98	1.77	4.75
Benchmark: Custom Blend	-1.52	-0.16	2.77	0.91	4.38
Classic Income and Growth	-2.15	-0.46	2.72	2.80	7.56
Benchmark: Custom Blend	-1.84	-0.25	3.32	2.50	7.91
Classic Conservative	-2.56	-0.51	3.34	4.23	10.25
Benchmark: Custom Blend	-2.16	-0.36	3.75	3.71	10.57
Classic Balanced	-3.65	-0.85	4.25	6.28	15.53
Benchmark: Custom Blend	-2.98	-0.64	4.80	6.76	17.40
Classic Growth	-4.41	-1.09	5.02	8.33	20.31
Benchmark: Custom Blend	-3.64	-0.87	5.64	9.24	23.07
Classic Aggressive Growth	-4.97	-1.20	5.78	10.14	24.13
Benchmark: Custom Blend	-4.13	-1.05	6.26	11.12	27.44
Global Macro Conservative	-2.97	-1.49	2.42	0.30	6.58
Benchmark: Custom Blend	-2.18	-0.38	3.74	3.74	10.64
Global Macro Core	-3.11	-1.81	2.80	2.36	10.78
Benchmark: Custom Blend	-2.84	-0.60	4.59	6.18	16.08
Global Macro Growth	-3.67	-2.17	2.88	3.78	13.96
Benchmark: Custom Blend	-3.49	-0.83	5.43	8.64	21.68

Chart continued on the following page.

SOWELL MANA	GEMENT PI	ROGRAN	ЛS		
Tactical Allocation Models	Sep 2021 Net	L3M Net	L6M Net	YTD Net	L12M Net
TAP Conservative	-3.00	0.27	5.18	7.10	13.51
Benchmark: Custom Blend	-2.79	0.33	5.60	7.25	14.46
TAP 1x	-5.28	0.38	9.50	13.30	26.76
Benchmark: S&P 500	-4.65	0.58	9.18	15.92	30.00
Morningstar US Fund Tactical Allocation	-3.44	-1.43	3.79	8.12	19.09
TAP Complete	-4.42	-1.48	4.77	11.84	28.26
Benchmark: S&P 500	-4.65	0.58	9.18	15.92	30.00
Morningstar US Fund Tactical Allocation	-3.44	-1.43	3.79	8.12	19.09
TAP 2x	-10.43	0.44	19.14	25.76	40.20
Benchmark: S&P 500	-4.65	0.58	9.18	15.92	30.00
Morningstar US Fund Tactical Allocation	-3.44	-1.43	3.79	8.12	19.09
TAP Global Allocation	-4.27	-1.57	4.93	9.55	24.44
Benchmark: MSCI ACWI	-4.13	-1.05	6.26	11.12	27.44
US High Yield (1)	-0.38	0.81	4.12	7.30	16.19
Benchmark: Bloomberg Barclays US Corporate High Yield	-0.01	0.89	3.65	4.53	11.28
Equity Selection Models	Sep 2021 Net	L3M Net	L6M Net	YTD Net	L12M Net
Flagship Equity	-5.75	-1.35	6.55	13.74	29.49
Benchmark: S&P 500	-4.65	0.58	9.18	15.92	30.00
Flagship Dividend	-3.18	-1.21	2.55	11.96	25.00
Benchmark: MSCI USA High Dividend Yield Index	-4.89	-1.33	2.41	10.11	20.32
Liquid Alternative Models	Sep 2021 Net	L3M Net	L6M Net	YTD Net	L12M Net
Liquid Alt Conservative	-1.02	-1.26	1.16	0.91	9.11
Benchmark: Wilshire Liquid Alt Index	-0.89	-0.37	1.87	4.08	8.65
MPD™ Multi-Methodology Models	Sep 2021 Net	L3M Net	L6M Net	YTD Net	L12M Net
MPD™ Total Return	-1.71	-0.42	3.00	3.93	11.21
Benchmark: Custom Blend	-1.92	-0.10	3.63	3.15	8.63
MPD™ Conservative	-2.66	-0.78	3.72	5.28	13.93
Benchmark: Custom Blend	-2.61	-0.24	4.64	5.92	14.38
MPD™ Balanced	-3.81	-1.41	4.48	7.06	18.66
Benchmark: Custom Blend	-3.31	-0.33	5.75	8.91	20.53
MPD™ Growth	-4.69	-1.12	5.80	9.49	22.54
Benchmark: Custom Blend	-3.85	-0.36	6.66	11.36	25.47
MPD™ Aggressive Growth	-7.12	-0.70	10.54	15.94	31.48
Benchmark: Custom Blend	-4.40	-0.34	7.66	14.02	30.76
MPD™ Stratactical Conservative	-2.91	-0.78	4.29	6.81	17.60
Benchmark: Custom Blend	-2.61	-0.24	4.64	5.92	14.38
MPD™ Stratactical Balanced	-5.37	-0.89	7.87	9.53	19.97
Benchmark: Custom Blend	-3.31	-0.33	5.75	8.91	20.53
MPD™ Stratactical Growth	-6.50	-1.11	8.87	11.83	24.59
Benchmark: Custom Blend	-3.85	-0.36	6.66	11.36	25.47



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

>> NEXT PAGE >> S&P Dow Jones Indices S&P GLOBAL



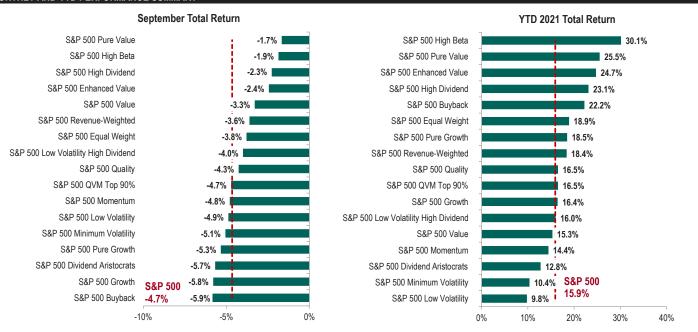
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Index Dashboard: S&P 500® Factor Indices

September 2021

A Division of S&P Global

MONTHLY AND YTD PERFORMANCE SUMMARY

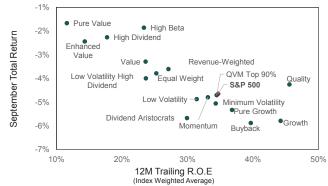


COMMENTARY

In September the U.S. Federal Reserve signalled that it would begin to tighten the monetary taps sooner rather later, sending longer-dated yields higher, steepening the yield curve and signalling a return of volatility to the equity markets. Meanwhile, as the world economy continued to reopen slowly, tight supply in oil and natural gas sent energy prices and related stocks soaring. **Every S&P 500 factor finished the month lower**, although large weights in the Energy and Financials sector helped High Beta and Pure Value, respectively, to limit their losses and finish top of the factor table.

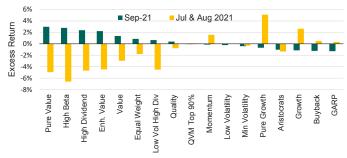
It was a month for reversals. Compared to the first two months of the quarter, the relative performance of almost every S&P 500 factor index changed sign in September, with Value, Dividends, High Beta, and Equal Weight factors in particular switching from major laggards to leaders. The excess return of only one of our reported factor indices had the same sign in both the July-August period as in September, as Dividend Aristocrats lagged modestly in both periods.

Profitable Companies Underperformed



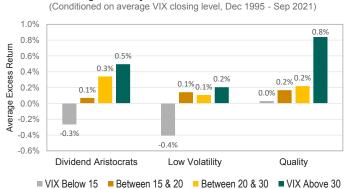
September's trend for underperformance by higher-quality stocks is surprising, at least compared to historical norms. Reflecting a tilt toward profitable companies with low leverage, the Quality factor has historically tended to outperform during periods of higher uncertainty, as measured by a higher VIX. With many investors anticipating a more volatile end to the year along with a tapering of U.S. monetary stimulus, our final chart illustrates the average monthly returns of three S&P 500 factor indices – Dividend Aristocrats, Low Volatility and Quality - that have proved useful tools to navigate choppier waters, based on their returns during months when the closing level of the "fear gauge" lay within its historically low, medium, high, and extreme bounds.

S&P 500 Factors Reversed Ranks in Final Month of Q3



Despite the broad-based S&P 500's decline, there was a "re-opening" feel to the month's returns, as well as something of a "junk rally". The highest correlation between September's performances and the various metrics that go into our factor scores was a negative association to 12-month trailing return on equity (R.O.E); those companies that have struggled to generate earnings in the past year performed best, while indices with higher weights in more profitable companies sold off the most.

Average Monthly ER, Selected S&P 500® Factors



Index Dashboard: S&P 500® Factor Indices

September 2021

ANNUAL PERFORMANCE

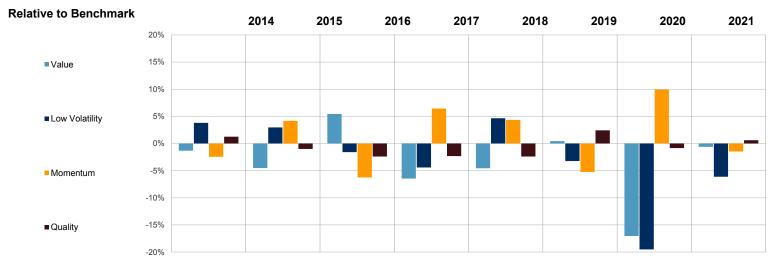
A Division of S&P Global

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%

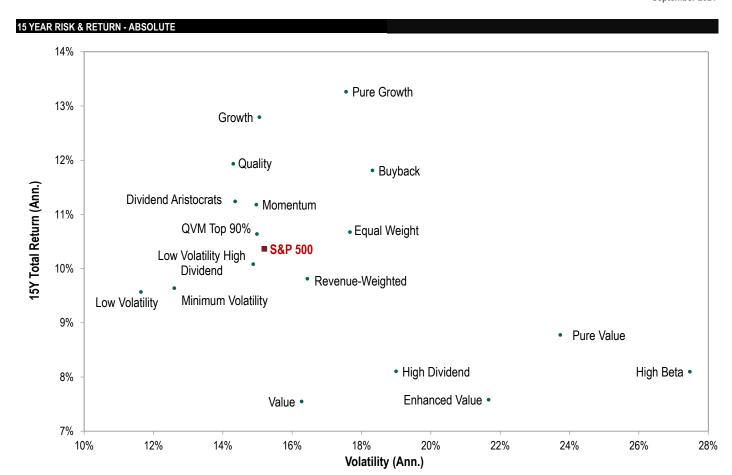
Relative to Benchmark 2006 2007 2008 2009 2010 2011 2012 2013 20% 15% ■ Value 10% 5% ■ Low Volatility 0% -5% ■ Momentum -10% -15% Quality -20%

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%	15.31%
Low Volatility	17.49%	4.34%	10.37%	17.41%	0.27%	28.26%	-1.11%	9.80%
Momentum	11.23%	5.56%	5.70%	28.27%	-0.04%	26.25%	28.32%	14.45%
Quality	14.95%	0.38%	9.56%	19.51%	-6.79%	33.91%	17.55%	16.52%
S&P 500	13.69%	1.38%	11.96%	21.83%	-4.38%	31.49%	18.40%	15.92%



Index Dashboard: S&P 500® Factor Indices

September 2021

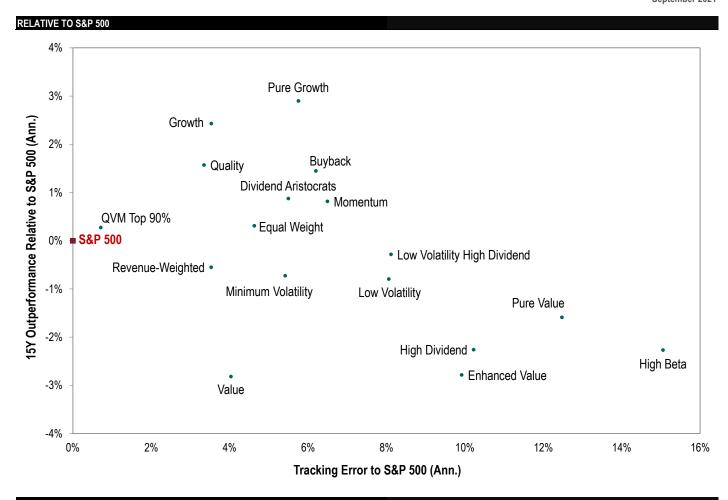


TOTAL RETURN	1M	3M	12M	3Y	5Y	10Y	15Y
S&P 500 Pure Growth	-5.3%	4.7%	36.5%	18.1%	19.0%	18.3%	13.3%
S&P 500 Growth	-5.8%	1.9%	28.9%	20.2%	21.1%	19.0%	12.8%
S&P 500 Quality	-4.3%	0.3%	27.4%	16.1%	16.3%	15.9%	11.9%
S&P 500 Buyback	-5.9%	-0.2%	49.7%	14.0%	15.7%	17.1%	11.8%
S&P 500 Dividend Aristocrats	-5.7%	-1.8%	25.8%	12.7%	13.1%	15.5%	11.2%
S&P 500 Momentum	-4.8%	1.9%	21.9%	15.8%	19.0%	17.6%	11.2%
S&P 500 Equal Weight	-3.8%	-0.2%	40.9%	14.3%	14.6%	16.0%	10.7%
S&P 500 QVM Top 90%	-4.7%	0.6%	30.3%	15.9%	17.0%	16.7%	10.6%
S&P 500 Low Volatility High Dividend	-4.0%	-3.1%	34.0%	5.7%	6.4%	11.7%	10.1%
S&P 500 Revenue-Weighted	-3.6%	-0.9%	37.5%	12.9%	14.4%	15.9%	9.8%
S&P 500 Minimum Volatility	-5.1%	-0.1%	18.9%	11.8%	12.3%	14.7%	9.6%
S&P 500 Low Volatility	-4.9%	0.4%	15.6%	9.7%	10.6%	12.8%	9.6%
S&P 500 Pure Value	-1.7%	-1.1%	58.0%	6.2%	10.2%	14.3%	8.8%
S&P 500 High Dividend	-2.3%	-1.5%	51.0%	6.7%	7.9%	12.7%	8.1%
S&P 500 High Beta	-1.9%	-2.9%	78.8%	20.2%	19.8%	18.3%	8.1%
S&P 500 Enhanced Value	-2.4%	-1.4%	55.4%	8.3%	12.4%	14.5%	7.6%
S&P 500 Value	-3.3%	-0.8%	32.0%	10.7%	11.7%	13.8%	7.5%
S&P 500	-4.7%	0.6%	30.0%	16.0%	16.9%	16.6%	10.4%
	Performa	ince figu	res for mo	ore than	one year	are annı	ıalized.

VOLATILITY (ANN.)	12M	3Y	5Y	10Y	15Y
S&P 500 Pure Growth	16.0%	21.5%	17.5%	15.4%	17.6%
S&P 500 Growth	14.6%	19.0%	15.5%	13.6%	15.1%
S&P 500 Quality	12.7%	17.4%	14.3%	12.8%	14.3%
S&P 500 Buyback	17.3%	24.0%	19.5%	16.5%	18.3%
S&P 500 Dividend Aristocrats	15.4%	18.1%	14.9%	12.7%	14.4%
S&P 500 Momentum	13.4%	17.6%	14.7%	12.9%	15.0%
S&P 500 Equal Weight	15.4%	21.6%	17.3%	14.9%	17.7%
S&P 500 QVM Top 90%	13.3%	18.5%	15.1%	13.2%	15.0%
S&P 500 Low Volatility High Dividend	16.1%	20.6%	16.6%	13.6%	14.9%
S&P 500 Revenue-Weighted	15.8%	20.0%	16.4%	14.1%	16.4%
S&P 500 Minimum Volatility	12.4%	16.7%	13.5%	11.4%	12.6%
S&P 500 Low Volatility	11.9%	15.3%	12.5%	11.0%	11.6%
S&P 500 Pure Value	20.4%	28.8%	23.2%	19.5%	23.7%
S&P 500 High Dividend	18.1%	24.8%	19.8%	15.7%	19.0%
S&P 500 High Beta	28.7%	32.9%	26.7%	23.4%	27.5%
S&P 500 Enhanced Value	20.8%	27.0%	22.1%	18.7%	21.7%
S&P 500 Value	14.9%	19.5%	16.0%	13.9%	16.3%
S&P 500	13.3%	18.6%	15.1%	13.2%	15.2%

Index Dashboard: S&P 500® Factor Indices

September 2021



PERFORMANCE v S&P 500	1M	3M	1YR	3YR	5YR	10YR	15YR
S&P 500 Pure Growth	-0.7%	4.1%	6.5%	2.1%	2.1%	1.6%	2.9%
S&P 500 Growth	-1.1%	1.3%	-1.1%	4.2%	4.3%	2.3%	2.4%
S&P 500 Quality	0.4%	-0.3%	-2.6%	0.1%	-0.6%	-0.7%	1.6%
S&P 500 Buyback	-1.2%	-0.8%	19.7%	-2.0%	-1.2%	0.5%	1.4%
S&P 500 Dividend Aristocrats	-1.0%	-2.4%	-4.2%	-3.3%	-3.8%	-1.1%	0.9%
S&P 500 Momentum	-0.1%	1.3%	-8.1%	-0.2%	2.1%	0.9%	0.8%
S&P 500 Equal Weight	0.9%	-0.8%	10.9%	-1.7%	-2.3%	-0.6%	0.3%
S&P 500 QVM Top 90%	-0.1%	0.0%	0.3%	-0.1%	0.1%	0.1%	0.3%
S&P 500 Low Volatility High Dividend	0.7%	-3.6%	3.9%	-10.3%	-10.5%	-5.0%	-0.3%
S&P 500 Revenue-Weighted	1.0%	-1.5%	7.4%	-3.1%	-2.5%	-0.8%	-0.6%
S&P 500 Minimum Volatility	-0.4%	-0.7%	-11.1%	-4.2%	-4.6%	-1.9%	-0.7%
S&P 500 Low Volatility	-0.2%	-0.2%	-14.4%	-6.3%	-6.3%	-3.8%	-0.8%
S&P 500 Pure Value	3.0%	-1.7%	28.0%	-9.8%	-6.7%	-2.3%	-1.6%
S&P 500 High Dividend	2.4%	-2.1%	21.0%	-9.3%	-9.0%	-3.9%	-2.3%
S&P 500 High Beta	2.8%	-3.5%	48.8%	4.2%	2.9%	1.7%	-2.3%
S&P 500 Enhanced Value	2.2%	-2.0%	25.4%	-7.7%	-4.5%	-2.1%	-2.8%
S&P 500 Value	1.4%	-1.4%	2.0%	-5.3%	-5.2%	-2.9%	-2.8%
F	Performa	ance figu	res for mo	ore than (one year	are annı	ualized.

TRACKING ERROR v S&P 500 (ANN.)	1YR	3YR	5YR	10YR	15YR
S&P 500 Pure Growth	8.2%	6.7%	6.1%	5.5%	5.8%
S&P 500 Growth	5.8%	4.8%	4.3%	3.5%	3.5%
S&P 500 Quality	4.1%	3.9%	3.4%	2.9%	3.3%
S&P 500 Buyback	7.0%	8.7%	7.2%	5.9%	6.2%
S&P 500 Dividend Aristocrats	6.0%	5.7%	5.0%	4.6%	5.5%
S&P 500 Momentum	8.2%	7.4%	6.6%	5.6%	6.5%
S&P 500 Equal Weight	5.7%	5.7%	4.8%	3.8%	4.6%
S&P 500 QVM Top 90%	0.6%	0.8%	0.7%	0.6%	0.7%
S&P 500 Low Volatility High Dividend	8.9%	9.5%	8.1%	8.2%	8.1%
S&P 500 Revenue-Weighted	6.4%	5.1%	4.4%	3.5%	3.5%
S&P 500 Minimum Volatility	4.6%	4.4%	4.0%	4.7%	5.4%
S&P 500 Low Volatility	6.7%	9.3%	7.8%	7.7%	8.1%
S&P 500 Pure Value	14.5%	15.0%	12.3%	9.9%	12.5%
S&P 500 High Dividend	11.7%	13.1%	10.7%	9.3%	10.2%
S&P 500 High Beta	21.7%	18.4%	15.4%	13.4%	15.1%
S&P 500 Enhanced Value	13.2%	13.6%	11.6%	9.3%	9.9%
S&P 500 Value	6.5%	5.8%	5.2%	4.1%	4.0%

Index Dashboard: S&P 500® Factor Indices

September 2021

DEGREE OF PORTFOLIO OVERLAP AND RELATIVE RETURN CORRELATIONS

PORTFOLIO OVERLAP																		
	,	S&p SON	Sepson	S&P 500 B	100 South	S&P 500 11	S&P 500 C.	580 500 P.	S&P 500 ,	Sop Son Line	S&P SON E	S&P 500 1.	Julie 105 0450	S&D SON S	S&P SON E	100 miles	S&p SON !!	S&p. 500
S&P 500 Momentum	100%	17%	17%	10%	7%	9%	20%	5%	1%	2%	17%	20%	19%	15%	15%	20%	15%	18%
S&P 500 Growth	17%	100%	25%	32%	13%	27%	60%	9%	3%	2%	33%	26%	31%	0%	14%	1%	21%	66%
S&P 500 Quality	17%	25%	100%	12%	12%	20%	32%	14%	5%	6%	21%	25%	19%	9%	14%	16%	13%	30%
S&P 500 Pure Growth	10%	32%	12%	100%	2%	14%	17%	4%	0%	0%	11%	0%	14%	0%	18%	0%	37%	21%
S&P 500 Low Volatility	7%	13%	12%	2%	100%	33%	22%	27%	22%	21%	20%	29%	20%	6%	13%	9%	0%	22%
S&P 500 Minimum Volatility	9%	27%	20%	14%	33%	100%	32%	17%	10%	10%	26%	28%	18%	5%	14%	8%	10%	33%
S&P 500 QVM Top 90%	20%	60%	32%	17%	22%	32%	100%	15%	10%	12%	57%	62%	49%	16%	18%	14%	18%	87%
S&P 500 Dividend Aristocrats	5%	9%	14%	4%	27%	17%	15%	100%	20%	19%	18%	20%	13%	13%	11%	10%	2%	14%
S&P 500 Low Volatility High Dividend	1%	3%	5%	0%	22%	10%	10%	20%	100%	53%	13%	16%	10%	11%	3%	12%	1%	9%
S&P 500 High Dividend	2%	2%	6%	0%	21%	10%	12%	19%	53%	100%	18%	20%	16%	29%	4%	19%	7%	11%
S&P 500 Revenue-Weighted	17%	33%	21%	11%	20%	26%	57%	18%	13%	18%	100%	59%	49%	34%	22%	35%	14%	60%
S&P 500 Value	20%	26%	25%	0%	29%	28%	62%	20%	16%	20%	59%	100%	55%	27%	16%	25%	10%	60%
S&P 500 Equal Weight	19%	31%	19%	14%	20%	18%	49%	13%	10%	16%	49%	55%	100%	24%	19%	20%	20%	50%
S&P 500 Pure Value	15%	0%	9%	0%	6%	5%	16%	13%	11%	29%	34%	27%	24%	100%	20%	53%	13%	14%
S&P 500 Buyback	15%	14%	14%	18%	13%	14%	18%	11%	3%	4%	22%	16%	19%	20%	100%	18%	16%	17%
S&P 500 Enhanced Value	20%	1%	16%	0%	9%	8%	14%	10%	12%	19%	35%	25%	20%	53%	18%	100%	5%	12%
S&P 500 High Beta	15%	21%	13%	37%	0%	10%	18%	2%	1%	7%	14%	10%	20%	13%	16%	5%	100%	20%

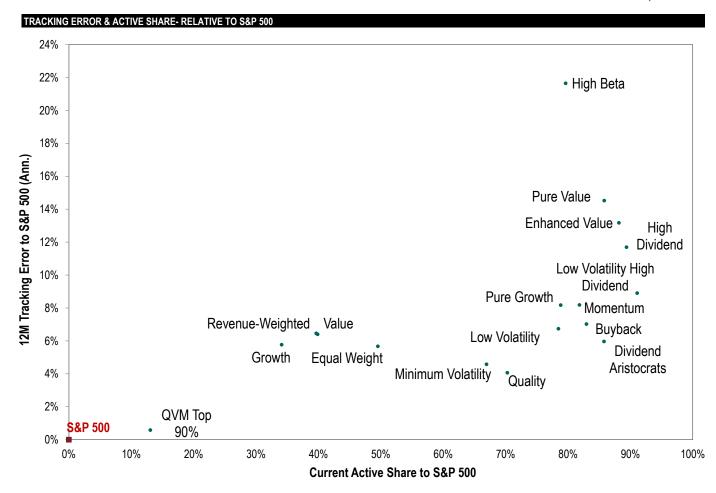
[&]quot;Portfolio Overlap" is percentage of index weights held in common between any two indices.

	7,005,d86	38.500 (10)	4mos 280 005 d85	Sk 200 p	280 500 / October 1	Ow Voletility	Sep 500 cu	360 500 C.	SRP 500 1.	Sep 500 H.	Skp. Stop.	S&p. 500 L.)	SRP 500 B	342 500 B	\$000/in	28P 500 High Bolg
	860	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	86,05	86.50	86.50	86.55	86.05	86,05	86,05	86.50	86.50	86.05	86,05	86,05	86,05	86.50	Sep. 5.
S&P 500 Momentum	1.00	0.78	0.31	0.52	0.07	0.04	-0.02	-0.57	-0.63	-0.68	-0.73	-0.77	-0.60	-0.66	-0.61	-0.71	-0.58
S&P 500 Growth	0.78	1.00	0.23	0.46	-0.23	-0.21	-0.24	-0.79	-0.81	-0.82	-0.86	-0.99	-0.80	-0.80	-0.71	-0.82	-0.63
S&P 500 Quality	0.31	0.23	1.00	0.00	-0.05	0.09	-0.17	-0.06	-0.38	-0.45	-0.27	-0.23	-0.37	-0.47	-0.41	-0.49	-0.40
S&P 500 Pure Growth	0.52	0.46	0.00	1.00	-0.08	-0.15	0.19	-0.38	-0.31	-0.20	-0.37	-0.43	0.01	-0.10	0.05	-0.15	0.04
S&P 500 Low Volatility	0.07	-0.23	-0.05	-0.08	1.00	0.79	0.22	0.42	0.46	0.27	0.02	0.24	0.16	-0.01	0.04	0.03	-0.29
S&P 500 Minimum Volatility	0.04	-0.21	0.09	-0.15	0.79	1.00	0.07	0.47	0.37	0.17	0.10	0.22	0.10	-0.08	-0.06	-0.05	-0.31
S&P 500 QVM Top 90%	-0.02	-0.24	-0.17	0.19	0.22	0.07	1.00	0.20	0.35	0.35	0.11	0.25	0.48	0.42	0.56	0.43	0.34
S&P 500 Dividend Aristocrats	-0.57	-0.79	-0.06	-0.38	0.42	0.47	0.20	1.00	0.75	0.66	0.73	0.81	0.69	0.57	0.53	0.59	0.39
S&P 500 Low Volatility High Dividend	-0.63	-0.81	-0.38	-0.31	0.46	0.37	0.35	0.75	1.00	0.93	0.73	0.83	0.82	0.76	0.72	0.78	0.56
S&P 500 High Dividend	-0.68	-0.82	-0.45	-0.20	0.27	0.17	0.35	0.66	0.93	1.00	0.75	0.83	0.88	0.89	0.81	0.89	0.73
S&P 500 Revenue-Weighted	-0.73	-0.86	-0.27	-0.37	0.02	0.10	0.11	0.73	0.73	0.75	1.00	0.88	0.76	0.80	0.69	0.83	0.66
S&P 500 Value	-0.77	-0.99	-0.23	-0.43	0.24	0.22	0.25	0.81	0.83	0.83	0.88	1.00	0.82	0.80	0.73	0.83	0.65
S&P 500 Equal Weight	-0.60	-0.80	-0.37	0.01	0.16	0.10	0.48	0.69	0.82	0.88	0.76	0.82	1.00	0.92	0.92	0.90	0.85
S&P 500 Pure Value	-0.66	-0.80	-0.47	-0.10	-0.01	-0.08	0.42	0.57	0.76	0.89	0.80	0.80	0.92	1.00	0.90	0.97	0.89
S&P 500 Buyback	-0.61	-0.71	-0.41	0.05	0.04	-0.06	0.56	0.53	0.72	0.81	0.69	0.73	0.92	0.90	1.00	0.91	0.84
S&P 500 Enhanced Value	-0.71	-0.82	-0.49	-0.15	0.03	-0.05	0.43	0.59	0.78	0.89	0.83	0.83	0.90	0.97	0.91	1.00	0.84
S&P 500 High Beta	-0.58	-0.63	-0.40	0.04	-0.29	-0.31	0.34	0.39	0.56	0.73	0.66	0.65	0.85	0.89	0.84	0.84	1.00

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

Index Dashboard: S&P 500® Factor Indices

September 2021



FACTOR EXPOSURE SUMMARY (See following pages for factor details)								
INDEX	PAGE No.	LOW VOLATILITY	MOMENTUM	VALUE	HIGH BETA	DIVIDEND	QUALITY	SMALL SIZE
S&P 500 Low Volatility	7	71.8%	-11.1%	16.4%	-66.0%	50.2%	-8.7%	44.2%
S&P 500 Minimum Volatility	7	34.6%	-17.8%	0.1%	-40.4%	20.3%	-2.5%	15.8%
S&P 500 Low Volatility High Dividend	8	19.2%	-20.4%	56.3%	-64.1%	88.5%	-30.9%	53.1%
S&P 500 High Dividend	8	-27.6%	-1.8%	62.5%	-50.5%	85.6%	-24.7%	62.7%
S&P 500 Quality	9	2.8%	10.0%	13.2%	-2.0%	9.6%	27.9%	6.1%
S&P 500 Dividend Aristocrats	9	15.3%	-5.9%	36.4%	-33.5%	50.2%	-8.7%	45.8%
S&P 500 Momentum	10	-27.6%	80.2%	28.8%	16.3%	-19.0%	2.0%	15.8%
S&P 500 Revenue-Weighted	10	-1.2%	-1.8%	57.5%	-2.0%	28.4%	0.3%	15.8%
S&P 500 QVM Top 90%	11	0.8%	10.0%	9.0%	-0.3%	9.6%	2.5%	6.1%
S&P 500 Growth	11	-4.8%	-3.7%	-26.4%	13.1%	-23.8%	3.0%	-40.7%
S&P 500 Value	12	2.8%	10.0%	45.8%	-14.7%	40.7%	-8.7%	25.4%
S&P 500 Pure Growth	12	-56.9%	15.9%	-34.4%	49.5%	-55.6%	-1.8%	20.1%
S&P 500 Pure Value	13	-54.7%	27.6%	87.4%	-2.0%	50.2%	-1.1%	57.0%
S&P 500 Buyback	13	-12.1%	14.8%	47.2%	-2.0%	-4.9%	10.9%	40.7%
S&P 500 High Beta	14	-81.9%	14.8%	-7.0%	73.4%	-16.8%	-15.1%	28.1%
S&P 500 Enhanced Value	14	-14.3%	15.9%	88.7%	-2.9%	44.1%	-8.7%	30.9%
S&P 500 Equal Weight	15	-27.6%	4.3%	36.4%	-3.0%	16.9%	-8.7%	50.2%

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

S&P 500 Low Volatility

Description

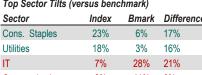
The S&P 500 Low Volatility is designed to measure the performance of the 100 stocks in the S&P 500 with the lowest volatility, measured on a 1-year trailing basis. The weighting of each stock is in inverse proportion to its volatility. As of September 30, 2021 the index comprised 100 constituents.

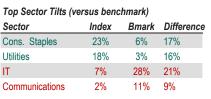
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-4.9%	0.4%	9.8%	15.6%	9.7%	10.6%	12.8%	9.6%
Relative to Benchmark	-0.2%	-0.2%	-6.1%	-14.4%	-6.3%	-6.3%	-3.8%	-0.8%
Index Volatility				11.9%	15.3%	12.5%	11.0%	11.6%
Tracking Error				6.7%	9.3%	7.8%	7.7%	8.1%

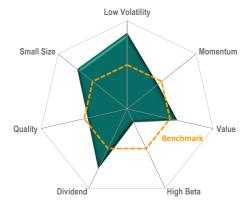
Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.62

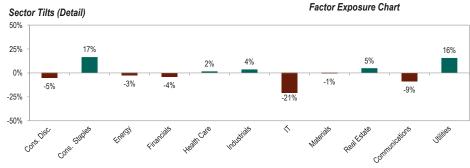
Portfolio Statistics	Index	Bmark
Active Share (Stock)	78%	0%
Active Share (Sector)	42%	0%
Concentration (HH Index)	101.6	134.7
Correlation (stock)	0.32	0.26
Ann. Turnover (last 10 yr)	0.62	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	19%	27%
12M - 1M price return	22%	39%
Book/Price	0.24	0.21
Earnings/Price	0.04	0.04
Sales/Price	0.35	0.32
Stock Beta	0.67	1.02
Yield (12M trailing)	2.3%	1.4%
R.O.E.	31%	35%
Market Cap (U.S. \$ bn)	89.0	518.2









S&P 500 Minimum Volatility

Description

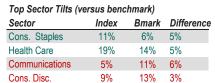
The S&P 500 Minimum Volatility uses an optimization process to find the portfolio of S&P 500 stocks, and weights, that would have demonstrated the lowest volatility on a historical basis, subject to constraints maintaining limiting sector and factor exposures. As of September 30, 2021 the index comprised 95 constituents.

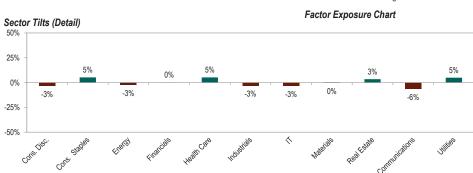
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-5.1%	-0.1%	10.4%	18.9%	11.8%	12.3%	14.7%	9.6%
Relative to Benchmark	-0.4%	-0.7%	-5.6%	-11.1%	-4.2%	-4.6%	-1.9%	-0.7%
Index Volatility				12.4%	16.7%	13.5%	11.4%	12.6%
Tracking Error				4.6%	4.4%	4.0%	4.7%	5.4%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.77

Portfolio Statistics	Index	Bmark
Active Share (Stock)	67%	0%
Active Share (Sector)	19%	0%
Concentration (HH Index)	152.0	134.7
Correlation (stock)	0.23	0.26
Ann. Turnover (last 10 vr)	0.39	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	23%	27%
12M - 1M price return	23%	39%
Book/Price	0.21	0.21
Earnings/Price	0.04	0.04
Sales/Price	0.27	0.32
Stock Beta	0.83	1.02
Yield (12M trailing)	1.7%	1.4%
R.O.E.	34%	35%
Market Cap (U.S. \$ bn)	270.8	518.2







S&P Dow Jones Indices

A Division of S&P Global

Index Dashboard: S&P 500® Factor Indices

September 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 September 30, 2021 the index comprised 50 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-4.0%	-3.1%	16.0%	34.0%	5.7%	6.4%	11.7%	10.1%
Relative to Benchmark	0.7%	-3.6%	0.1%	3.9%	-10.3%	-10.5%	-5.0%	-0.3%
Index Volatility				16.1%	20.6%	16.6%	13.6%	14.9%
Tracking Error				8.9%	9.5%	8.1%	8.2%	8.1%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.73

Portfolio Statistics	Index	Bmark
Active Share (Stock)	91%	0%
Active Share (Sector)	46%	0%
Concentration (HH Index)	211.9	134.7
Correlation (stock)	0.49	0.26
Ann. Turnover (last 10 yr)	0.60	0.04

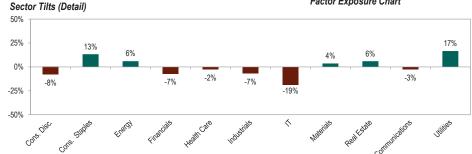
Index-Weighted Avg.	Index	Bmark
Stock Volatility	24%	27%
12M - 1M price return	26%	39%
Book/Price	0.40	0.21
Earnings/Price	0.05	0.04
Sales/Price	0.57	0.32
Stock Beta	0.68	1.02
Yield (12M trailing)	4.4%	1.4%
R.O.E.	24%	35%
Market Cap (U.S. \$ bn)	68.6	518.2

Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.	
Utilities	19%	3%	17%	
Cons. Staples	19%	6%	13%	
IT	9%	28%	19%	
Cons. Disc.	5%	13%	8%	



Factor Exposure Chart



S&P 500 High Dividend

Description

The S&P 500 High Dividend is constructed from the 80 constituents of the S&P 500 with the highest indicated dividend yield. The index is equal weighted. As of September 30, 2021 the index comprised 79 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-2.3%	-1.5%	23.1%	51.0%	6.7%	7.9%	12.7%	8.1%
Relative to Benchmark	2.4%	-2.1%	7.2%	21.0%	-9.3%	-9.0%	-3.9%	-2.3%
Index Volatility				18.1%	24.8%	19.8%	15.7%	19.0%
Tracking Error				11.7%	13.1%	10.7%	9.3%	10.2%

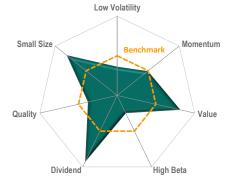
Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.94

Portfolio Statistics	Index	Bmark
Active Share (Stock)	89%	0%
Active Share (Sector)	51%	0%
Concentration (HH Index)	127.3	134.7
Correlation (stock)	0.54	0.26
Ann. Turnover (last 10 yr)	0.42	0.04

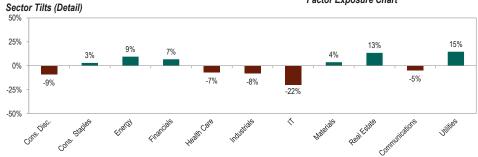
Index-Weighted Avg.	Index	Bmark
Stock Volatility	30%	27%
12M - 1M price return	42%	39%
Book/Price	0.48	0.21
Earnings/Price	0.04	0.04
Sales/Price	0.60	0.32
Stock Beta	0.77	1.02
Yield (12M trailing)	4.1%	1.4%
R.O.E.	18%	35%
Market Cap (U.S. \$ bn)	50.0	518.2

Top Sector Tilts (versus benchmark)

Sector	Index	Bmark	Diff.	
Utilities	17%	3%	15%	
Real Estate	16%	2%	13%	
IT	6%	28%	22%	
Cone Diec	4%	13%	9%	



Factor Exposure Chart



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

S&P 500 Quality

Description

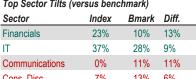
The S&P 500 Quality is designed to track the 100 stocks in the S&P 500 with the highest quality score, which is calculated based on return on equity, accruals ratio and financial leverage ratio. The weighting is proportional to both the quality score, and the market capitalization, of each component, subject to single stock and sector constraints. As of September 30, 2021 the index comprised 98 constituents.

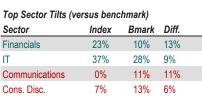
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-4.3%	0.3%	16.5%	27.4%	16.1%	16.3%	15.9%	11.9%
Relative to Benchmark	0.4%	-0.3%	0.6%	-2.6%	0.1%	-0.6%	-0.7%	1.6%
Index Volatility				12.7%	17.4%	14.3%	12.8%	14.3%
Tracking Error				4.1%	3.9%	3.4%	2.9%	3.3%

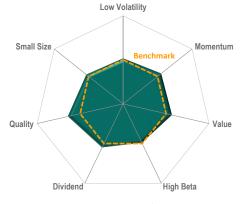
Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.99

Portfolio Statistics	Index	Bmark
Active Share (Stock)	70%	0%
Active Share (Sector)	26%	0%
Concentration (HH Index)	264.5	134.7
Correlation (stock)	0.27	0.26
Ann. Turnover (last 10 yr)	0.63	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	27%	27%
12M - 1M price return	42%	39%
Book/Price	0.21	0.21
Earnings/Price	0.05	0.04
Sales/Price	0.30	0.32
Stock Beta	1.02	1.02
Yield (12M trailing)	1.5%	1.4%
R.O.E.	46%	35%
Market Cap (U.S. \$ bn)	417.7	518.2







Factor Exposure Chart Sector Tilts (Detail) 25% 13% 9% 3% 1% 0% -1% -2% -6% -25% -50%

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 September 30, 2021 the index comprised 65 constituents.

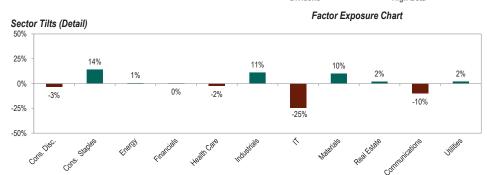
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-5.7%	-1.8%	12.8%	25.8%	12.7%	13.1%	15.5%	11.2%
Relative to Benchmark	-1.0%	-2.4%	-3.2%	-4.2%	-3.3%	-3.8%	-1.1%	0.9%
Index Volatility				15.4%	18.1%	14.9%	12.7%	14.4%
Tracking Error				6.0%	5.7%	5.0%	4.6%	5.5%

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

Portfolio Statistics	Index	Bmark
Active Share (Stock)	86%	0%
Active Share (Sector)	40%	0%
Concentration (HH Index)	154.6	134.7
Correlation (stock)	0.32	0.26
Ann. Turnover (last 10 vr)	0.19	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	25%	27%
12M - 1M price return	33%	39%
Book/Price	0.27	0.21
Earnings/Price	0.04	0.04
Sales/Price	0.49	0.32
Stock Beta	0.87	1.02
Yield (12M trailing)	2.5%	1.4%
R.O.E.	30%	35%
Market Cap (U.S. \$ bn)	84.9	518.2

Top Sector Tilts (versus benchmark) Sector Index Bmark Diff. Cons. Staples 20% 6% 14% Industrials 19% 8% 11% IT 3% 28% 25% Communications 1% 11% 10%





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

S&P 500 Momentum

Description

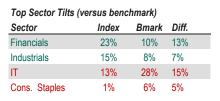
The S&P 500 Momentum comprises the top 100 stocks in the S&P 500 based on 12M prior risk-adjusted performance (excluding the most recent month at the rebalance). The weighting is inversely proportional to the trailing volatility of each component, subject to single stock and sector constraints. As of September 30, 2021 the index comprised 100 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-4.8%	1.9%	14.4%	21.9%	15.8%	19.0%	17.6%	11.2%
Relative to Benchmark	-0.1%	1.3%	-1.5%	-8.1%	-0.2%	2.1%	0.9%	0.8%
Index Volatility				13.4%	17.6%	14.7%	12.9%	15.0%
Tracking Error				8.2%	7.4%	6.6%	5.6%	6.5%

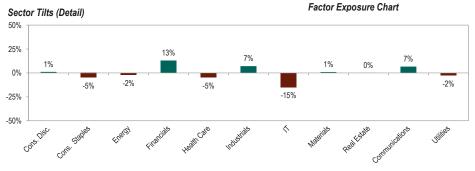
Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.09

Portfolio Statistics	Index	Bmark
Active Share (Stock)	82%	0%
Active Share (Sector)	29%	0%
Concentration (HH Index)	303.9	134.7
Correlation (stock)	0.36	0.26
Ann. Turnover (last 10 yr)	1.15	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	30%	27%
12M - 1M price return	96%	39%
Book/Price	0.25	0.21
Earnings/Price	0.05	0.04
Sales/Price	0.35	0.32
Stock Beta	1.12	1.02
Yield (12M trailing)	0.8%	1.4%
R.O.E.	33%	35%
Market Cap (U.S. \$ bn)	252.6	518.2







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 September 30, 2021 the index comprised 505 constituents.

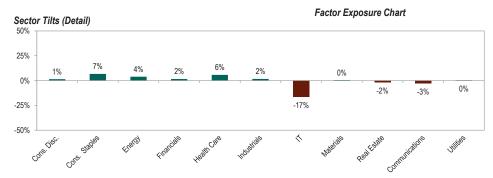
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-3.6%	-0.9%	18.4%	37.5%	12.9%	14.4%	15.9%	9.8%
Relative to Benchmark	1.0%	-1.5%	2.5%	7.4%	-3.1%	-2.5%	-0.8%	-0.6%
Index Volatility				15.8%	20.0%	16.4%	14.1%	16.4%
Tracking Error				6.4%	5.1%	4.4%	3.5%	3.5%

Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.91

Portfolio Statistics	Index	Bmark
Active Share (Stock)	40%	0%
Active Share (Sector)	21%	0%
Concentration (HH Index)	95.4	134.7
Correlation (stock)	0.26	0.26
Ann. Turnover (last 10 vr)	0.20	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	28%	27%
12M - 1M price return	37%	39%
Book/Price	0.32	0.21
Earnings/Price	0.04	0.04
Sales/Price	0.82	0.32
Stock Beta	1.00	1.02
Yield (12M trailing)	1.9%	1.4%
R.O.E.	27%	35%
Market Cap (U.S. \$ bn)	285.1	518.2

Top Sector Tilts (versus benchmark) Sector Index Bmark Diff. Cons. Staples 13% 6% Health Care 20% 6% 14% IT 11% 28% 17% Communications 8% 11% 3%





Index Dashboard: S&P 500® Factor Indices September 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 September 30, 2021 the index comprised 450 constituents.

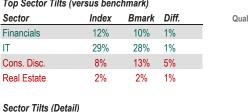
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-4.7%	0.6%	16.5%	30.3%	15.9%	17.0%	16.7%	10.6%
Relative to Benchmark	-0.1%	0.0%	0.6%	0.3%	-0.1%	0.1%	0.1%	0.3%
Index Volatility				13.3%	18.5%	15.1%	13.2%	15.0%
Tracking Error				0.6%	0.8%	0.7%	0.6%	0.7%

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

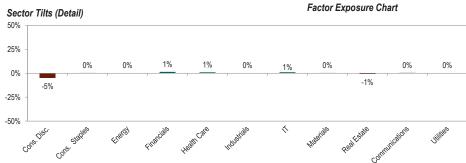
Portfolio Statistics	Index	Bmark
Active Share (Stock)	13%	0%
Active Share (Sector)	5%	0%
Concentration (HH Index)	155.9	134.7
Correlation (stock)	0.27	0.26
Ann. Turnover (last 10 yr)	0.20	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	27%	27%
12M - 1M price return	42%	39%
Book/Price	0.23	0.21
Earnings/Price	0.04	0.04
Sales/Price	0.33	0.32
Stock Beta	1.02	1.02
Yield (12M trailing)	1.5%	1.4%
R.O.E.	34%	35%
Market Cap (U.S. \$ bn)	494.8	518.2









S&P 500 Growth

Description

The S&P 500 Growth is comprises S&P 500 stocks with above-average combinations of the ratio of earnings growth to price, sales growth, and momentum. The weighting is by capitalization, although the weight of some stocks is divided between the Value and Growth indices. As of September 30, 2021 the index comprised 242 constituents.

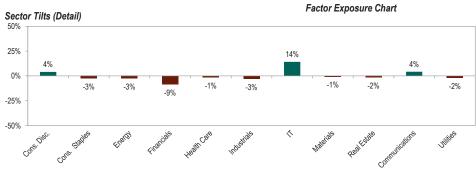
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-5.8%	1.9%	16.4%	28.9%	20.2%	21.1%	19.0%	12.8%
Relative to Benchmark	-1.1%	1.3%	0.5%	-1.1%	4.2%	4.3%	2.3%	2.4%
Index Volatility				14.6%	19.0%	15.5%	13.6%	15.1%
Tracking Error				5.8%	4.8%	4.3%	3.5%	3.5%

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

Portfolio Statistics	Index	Bmark
Active Share (Stock)	34%	0%
Active Share (Sector)	22%	0%
Concentration (HH Index)	391.8	134.7
Correlation (stock)	0.37	0.26
Ann. Turnover (last 10 yr)	0.25	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	28%	27%
12M - 1M price return	37%	39%
Book/Price	0.09	0.21
Earnings/Price	0.03	0.04
Sales/Price	0.18	0.32
Stock Beta	1.10	1.02
Yield (12M trailing)	0.7%	1.4%
R.O.E.	44%	35%
Market Cap (U.S. \$ bn)	832.5	518.2

Top Sector Tilts (versus benchmark)							
Sector	Index	Bmark	Diff.				
IT	42%	28%	14%				
Communications	15%	11%	4%				
Financials	2%	10%	9%				
Industrials	5%	8%	3%				





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

S&P 500 Value

Description

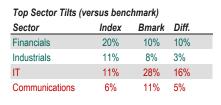
The S&P 500 Value comprises S&P 500 stocks with above-average combinations of book value-to-price, earnings-to-price, and sales-to-price. The weighting is by capitalization, although the weight of some stocks is divided between the Value and Growth indices. As of September 30, 2021 the index comprised 431 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-3.3%	-0.8%	15.3%	32.0%	10.7%	11.7%	13.8%	7.5%
Relative to Benchmark	1.4%	-1.4%	-0.6%	2.0%	-5.3%	-5.2%	-2.9%	-2.8%
Index Volatility				14.9%	19.5%	16.0%	13.9%	16.3%
Tracking Error				6.5%	5.8%	5.2%	4.1%	4.0%

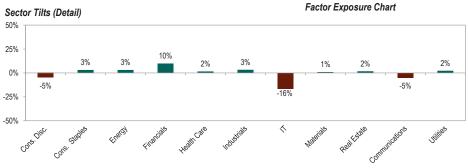
Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.86

Portfolio Statistics	Index	Bmark
Active Share (Stock)	40%	0%
Active Share (Sector)	26%	0%
Concentration (HH Index)	70.1	134.7
Correlation (stock)	0.27	0.26
Ann. Turnover (last 10 yr)	0.26	0.04









S&P 500 Pure Growth

Description

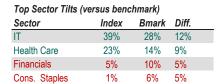
The S&P 500 Pure Growth comprises those S&P 500 stocks with 100% of their market cap in the S&P 500 Growth index and a growth score in the highest quartile. The weighting is proportional to the growth score. As of September 30, 2021 the index comprised 74 constituents.

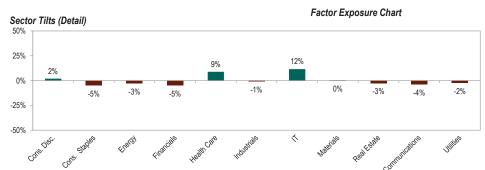
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-5.3%	4.7%	18.5%	36.5%	18.1%	19.0%	18.3%	13.3%
Relative to Benchmark	-0.7%	4.1%	2.6%	6.5%	2.1%	2.1%	1.6%	2.9%
Index Volatility				16.0%	21.5%	17.5%	15.4%	17.6%
Tracking Error				8.2%	6.7%	6.1%	5.5%	5.8%

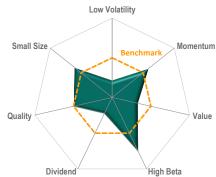
Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.21

Portfolio Statistics	Index	Bmark
Active Share (Stock)	79%	0%
Active Share (Sector)	22%	0%
Concentration (HH Index)	152.9	134.7
Correlation (stock)	0.34	0.26
Ann. Turnover (last 10 vr)	0.65	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	34%	27%
12M - 1M price return	56%	39%
Book/Price	0.09	0.21
Earnings/Price	0.03	0.04
Sales/Price	0.14	0.32
Stock Beta	1.26	1.02
Yield (12M trailing)	0.2%	1.4%
R.O.E.	37%	35%
Market Cap (U.S. \$ bn)	200.8	518.2







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

Momentum

Low Volatility

S&P 500 Pure Value

Description

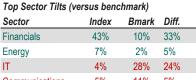
The S&P 500 Pure Value comprises S&P 500 stocks with 100% of their market cap in the S&P 500 Value index and a value score in the highest quartile. The weighting is proportional to the value score. As of September 30, 2021 the index comprised 117 constituents.

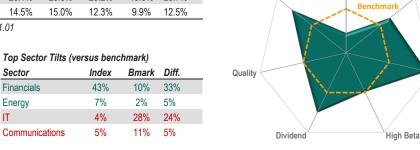
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-1.7%	-1.1%	25.5%	58.0%	6.2%	10.2%	14.3%	8.8%
Relative to Benchmark	3.0%	-1.7%	9.6%	28.0%	-9.8%	-6.7%	-2.3%	-1.6%
Index Volatility				20.4%	28.8%	23.2%	19.5%	23.7%
Tracking Error				14.5%	15.0%	12.3%	9.9%	12.5%

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

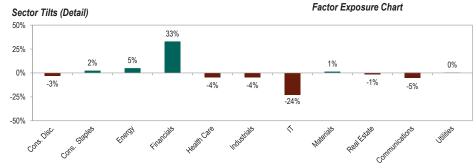
Portfolio Statistics	Index	Bmark
Active Share (Stock)	86%	0%
Active Share (Sector)	42%	0%
Concentration (HH Index)	111.4	134.7
Correlation (stock)	0.47	0.26
Ann. Turnover (last 10 yr)	0.47	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	34%	27%
12M - 1M price return	59%	39%
Book/Price	0.67	0.21
Earnings/Price	0.06	0.04
Sales/Price	1.01	0.32
Stock Beta	1.00	1.02
Yield (12M trailing)	2.4%	1.4%
R.O.E.	12%	35%
Market Cap (U.S. \$ bn)	60.7	518.2





Small Size



S&P 500 Buyback

Description

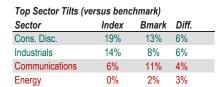
The S&P 500 Buyback is designed to measure the performance of the top 100 stocks in the S&P 500 by buyback ratio. The components are equally weighted. As of September 30, 2021 the index comprised 100 constituents.

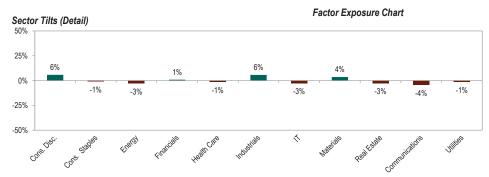
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-5.9%	-0.2%	22.2%	49.7%	14.0%	15.7%	17.1%	11.8%
Relative to Benchmark	-1.2%	-0.8%	6.3%	19.7%	-2.0%	-1.2%	0.5%	1.4%
Index Volatility				17.3%	24.0%	19.5%	16.5%	18.3%
Tracking Error				7.0%	8.7%	7.2%	5.9%	6.2%

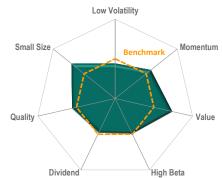
Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.98

Portfolio Statistics	Index	Bmark
Active Share (Stock)	83%	0%
Active Share (Sector)	16%	0%
Concentration (HH Index)	100.6	134.7
Correlation (stock)	0.35	0.26
Ann. Turnover (last 10 vr)	0.94	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	29%	27%
12M - 1M price return	46%	39%
Book/Price	0.25	0.21
Earnings/Price	0.06	0.04
Sales/Price	0.56	0.32
Stock Beta	1.02	1.02
Yield (12M trailing)	1.2%	1.4%
R.O.E.	40%	35%
Market Cap (U.S. \$ bn)	96.9	518.2







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

Momentum

Value

High Beta

Low Volatility

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 September 30, 2021 the index comprised 98 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-1.9%	-2.9%	30.1%	78.8%	20.2%	19.8%	18.3%	8.1%
Relative to Benchmark	2.8%	-3.5%	14.2%	48.8%	4.2%	2.9%	1.7%	-2.3%
Index Volatility				28.7%	32.9%	26.7%	23.4%	27.5%
Tracking Error				21.7%	18.4%	15.4%	13.4%	15.1%

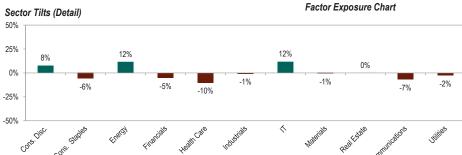
Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 1.35

Portfolio Statistics	Index	Bmark
Active Share (Stock)	80%	0%
Active Share (Sector)	31%	0%
Concentration (HH Index)	104.8	134.7
Correlation (stock)	0.49	0.26
Ann. Turnover (last 10 yr)	0.90	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	42%	27%
12M - 1M price return	66%	39%
Book/Price	24%	21%
Earnings/Price	2%	4%
Sales/Price	35%	32%
Stock Beta	141%	102%
Yield (12M trailing)	0.9%	1.4%
R.O.E.	23%	35%
Market Cap (U.S. \$ bn)	142.7	518.2







Small Size

Quality

S&P 500 Enhanced Value

Description

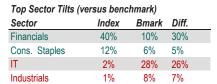
The S&P 500 Enhanced Value is designed to measure the performance of the 100 stocks in the S&P 500 with the highest average book value-to-price, earnings-to-price, and sales-to-price. The weighting is proportional to both the value score and the market capitalization of each component. As of September 30, 2021 the index comprised 98 constituents.

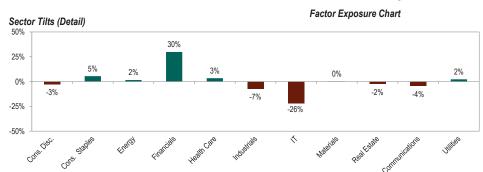
Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-2.4%	-1.4%	24.7%	55.4%	8.3%	12.4%	14.5%	7.6%
Relative to Benchmark	2.2%	-2.0%	8.8%	25.4%	-7.7%	-4.5%	-2.1%	-2.8%
Index Volatility				20.8%	27.0%	22.1%	18.7%	21.7%
Tracking Error				13.2%	13.6%	11.6%	9.3%	9.9%

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

Portfolio Statistics	Index	Bmark
Active Share (Stock)	88%	0%
Active Share (Sector)	43%	0%
Concentration (HH Index)	233.2	134.7
Correlation (stock)	0.52	0.26
Ann. Turnover (last 10 yr)	0.43	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	29%	27%
12M - 1M price return	48%	39%
Book/Price	0.63	0.21
Earnings/Price	0.08	0.04
Sales/Price	1.06	0.32
Stock Beta	1.00	1.02
Yield (12M trailing)	2.3%	1.4%
R.O.E.	14%	35%
Market Cap (U.S. \$ bn)	128.1	518.2







Index Dashboard: S&P 500® Factor Indices September 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 September 30, 2021 the index comprised 505 constituents.

Index Statistics	1M	3M	YTD	12M	3Y	5Y	10Y	15Y
Total Return (Ann)	-3.8%	-0.2%	18.9%	40.9%	14.3%	14.6%	16.0%	10.7%
Relative to Benchmark	0.9%	-0.8%	3.0%	10.9%	-1.7%	-2.3%	-0.6%	0.3%
Index Volatility				15.4%	21.6%	17.3%	14.9%	17.7%
Tracking Error				5.7%	5.7%	4.8%	3.8%	4.6%

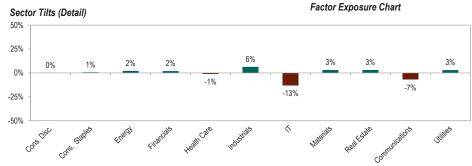
Benchmark: S&P 500. 1 Yr trailing beta to benchmark = 0.96

Portfolio Statistics	Index	Bmark
Active Share (Stock)	50%	0%
Active Share (Sector)	20%	0%
Concentration (HH Index)	20.0	134.7
Correlation (stock)	0.25	0.26
Ann. Turnover (last 10 yr)	0.22	0.04

Index-Weighted Avg.	Index	Bmark
Stock Volatility	30%	27%
12M - 1M price return	44%	39%
Book/Price	0.30	0.21
Earnings/Price	0.04	0.04
Sales/Price	0.46	0.32
Stock Beta	0.99	1.02
Yield (12M trailing)	1.7%	1.4%
R.O.E.	25%	35%
Market Cap (U.S. \$ bn)	74.5	518.2

Top Sector Tilts (versus benchmark)							
Sector	Index	Bmark	Diff.				
Industrials	14%	8%	6%				
Real Estate	6%	2%	3%				
IT	15%	28%	13%				
Communications	4%	11%	7%				





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.



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



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Index Dashboard: S&P 500® Factor Indices

September 2021

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.



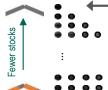
Factor	Measurement at single-stock level
Volatility	Trailing 12-month daily volatility.
Momentum	Twelve-month total return change as of one month ago ("13 minus 1 momentum"), divided by the daily volatility during the twelve-month period that ended one month prior. For more details, see the S&P Momentum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



Single-stock portfolio with the highest possible factor score

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



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

0 0

0 0

Benchmark Portfolio has a factor rank defined by that of a capweighted average score among all stocks

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

Single-stock portfolio with the lowest possible factor score

Notes On Additional Index Statistics

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

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

	VALUE			QUALITY			MOMENTUM	
	Earnings to Price	Book to Price	Sales to Price	Accrual Ratio	Return on Equity	Leverage Ratio	13M - 1M Return	Daily Price Volatility
S&P 500 index-weighted average	0.037	0.209	0.315	10.29%	34.69%	1.60	39.08%	1.81%
S&P 500 index-weighted standard deviation	0.033	0.228	0.358	22.70%	30.22%	1.09	39.80%	0.60%

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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 17, 2015. The S&P 500 Low Volatility High was launched April 4, 2011. All information presented prior to an index's Launch Date is hypothetical (loack-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 dad selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively enformance, 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. Plea

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