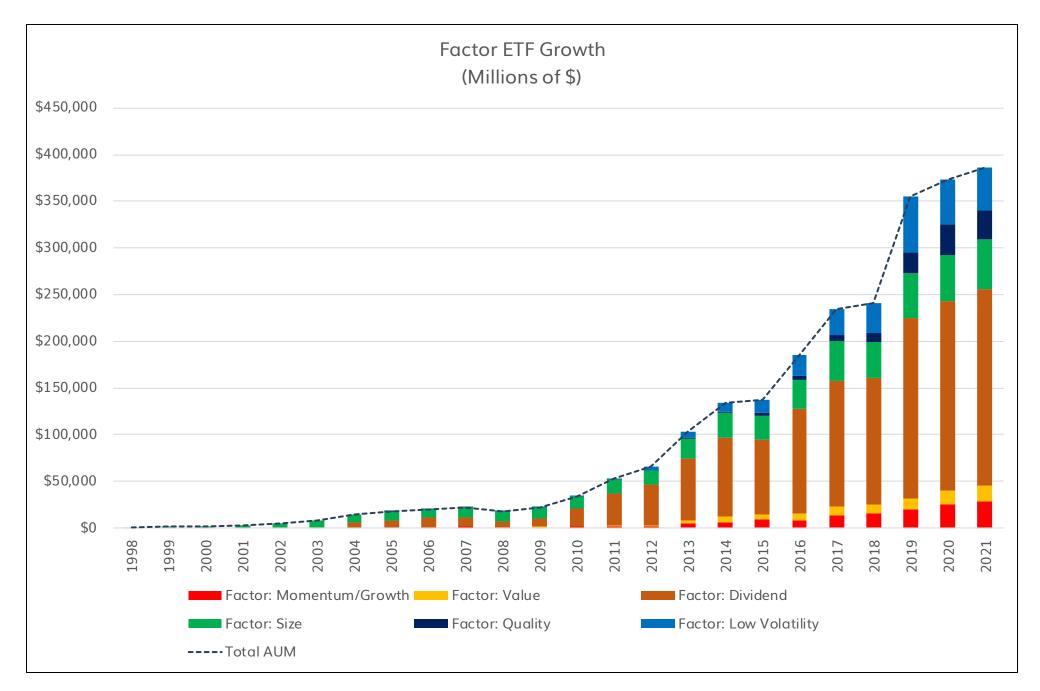
ETF Playbook **U.S.** Factors







U.S. Factor Landscape

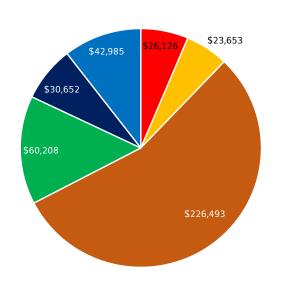


^{*}Factor landscape data is represented by Equity > Size & Style > U.S. > Factor ETFs according to the ETF Action Classification System. Excludes inverse funds.



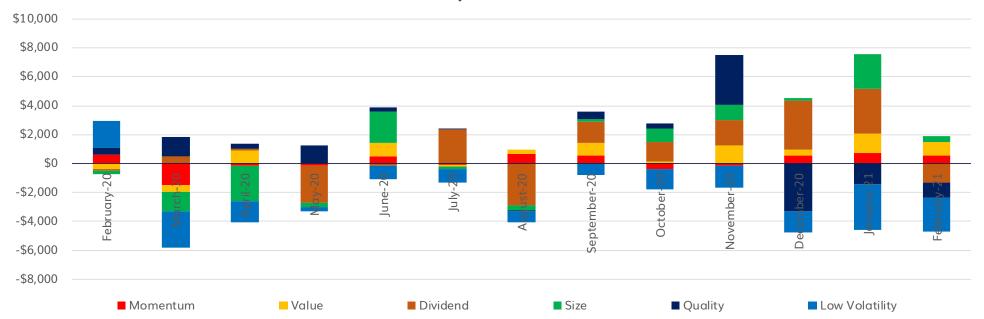
U.S. Factor Landscape

U.S. Factor AUM





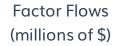
TTM Flows by Factor (millions of \$)

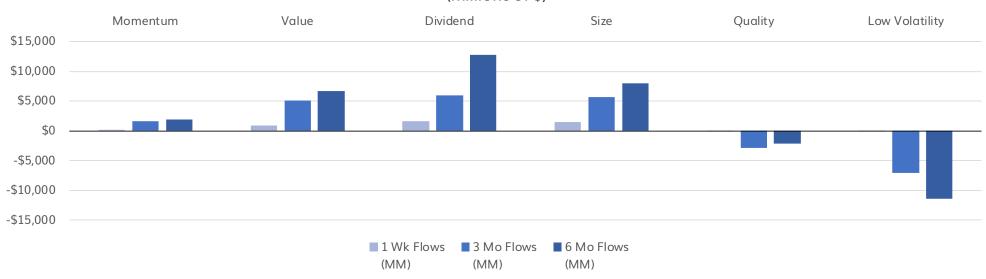


^{*}Factor landscape data is represented by Equity > Size & Style > U.S. Factor ETFs according to the ETF Action Classification System. Excludes inverse funds. **Flows delayed one day



U.S. Factor Flows Leaders/Laggards





Flows Leaders

Ticker	Fund	AUM (\$MM)	1 Wk
RSP	Invesco S&P 500 Equal Weight ETF	\$23,731	\$675
DIA	SPDR Dow Jones Industrial Average ETF Trust	\$27,934	\$526
JVAL	JPMorgan U.S. Value Factor ETF	\$665	\$456
SCHD	Schwab US Dividend Equity ETF	\$20,786	\$358
VIG	Vanguard Dividend Appreciation ETF	\$54,500	\$231
RPV	Invesco S&P 500 Pure Value ETF	\$2,030	\$206
VYM	Vanguard High Dividend Yield Index ETF	\$34,870	\$198
SPLV	Invesco S&P 500 Low Volatility ETF	\$7,620	\$194
DVY	iShares Select Dividend ETF	\$17,497	\$177
SDY	SPDR S&P Dividend ETF	\$18,413	\$176

Flows Laggards

Ticker	Fund	AUM (\$MM)	1 Wk
USMV	iShares MSCI USA Min Vol Factor ETF	\$27,928	-\$177
QUAL	iShares MSCI USA Quality Factor ETF	\$19,421	-\$139
XSLV	Invesco S&P SmallCap Low Volatility ETF	\$1,534	-\$24
XMLV	Invesco S&P MidCap Low Volatility ETF	\$1,677	-\$15
DGRW	WisdomTree US Quality Dividend Growth Fund	\$5,423	-\$11
LVHD	Legg Mason Low Volatility High Dividend ETF	\$690	-\$10
RFG	Invesco S&P Midcap 400 Pure Growth ETF	\$386	-\$9
PWB	Invesco Dynamic Large Cap Growth ETF	\$708	-\$7
RPG	Invesco S&P 500 Pure Growth ETF	\$2,604	-\$7
FNY	First Trust Mid Cap Growth AlphaDEX Fund	\$481	-\$7

^{*}Factor landscape data is represented by Equity > Size & Style > U.S. Factor ETFs according to the ETF Action Classification System. Excludes inverse funds. **Flows delayed one day

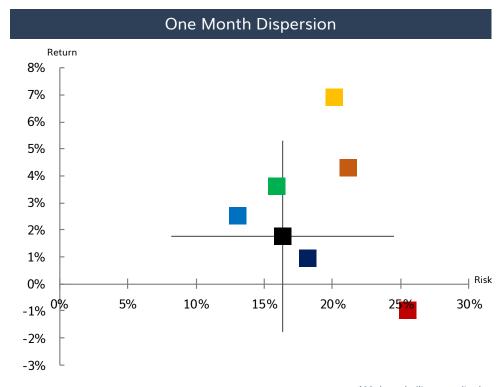


U.S. Factor Dynamics

Performance Heatmap

Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
SPVU 14.62%	SPMO 6.79%	SPMO 2.57%	SPMO 7.66%	SPMO 8.49%	SPMO -1.67%	SPYD 0.72%	SPVU 20.16%	SPVU 4.54%	SPYD 1.97%	SPYD 9.61%	SPVU 8.04%
RSP 14.42%	SPHQ 5.2%	SPY 1.77%	SPLV 7.44%	SPHQ 7.87%	SPLV -1.76%	RSP -0.55%	SPYD 16.59%	SPYD 4.26%	SPVU 1.6%	SPVU 9%	SPYD 5.33%
SPYD 13.17%	SPY 4.76%	RSP 1.46%	SPY 5.88%	SPY 6.97%	RSP -2.5%	SPVU -1.03%	RSP 14.29%	RSP 4.15%	SPMO 0.17%	RSP 6.08%	SPLV 4.96%
SPY 12.69%	RSP 4.75%	SPHQ 0.62%	RSP 4.99%	RSP 4.26%	SPHQ -2.61%	SPY -2.49%	SPY 10.87%	SPHQ 3.85%	SPHQ -0.59%	SPY 2.78%	RSP 4.87%
SPHQ 12.26%	SPVU 3.09%	SPYD 0.45%	SPHQ 4.32%	SPVU 3.41%	SPYD -2.89%	SPLV -2.87%	SPHQ 9.72%	SPY 3.7%	RSP -0.81%	SPHQ 2%	SPY 3.55%
SPMO 11.1%	SPYD 0.86%	SPVU 0.44%	SPYD 0.64%	SPLV 2.84%	SPY -3.73%	SPHQ -4%	SPMO 7.69%	SPMO 3.02%	SPY -1.01%	SPLV -1.16%	SPHQ 2.56%
SPLV 6.68%	SPLV 0.32%	SPLV -0.38%	SPVU -0.35%	SPYD 1.6%	SPVU -4.35%	SPMO -4.28%	SPLV 6.19%	SPLV 2.03%	SPLV -1.82%	SPMO -1.44%	SPMO 1.15%

Performance													
	Beta Tracker	1 Wk	1 Mo	3 Мо	6 Мо	YTD	1 Yr						
S&P 500	SPY	-0.64%	1.77%	7.25%	19.76%	5.35%	78.93%						
Momentum/Growth	SPMO	0.71%	-1.00%	0.41%	8.60%	-0.12%	71.95%						
Value	SPVU	-1.95%	6.90%	23.27%	50.03%	19.67%	105.98%						
Dividend	SPYD	-2.85%	4.28%	20.63%	44.86%	17.74%	92.12%						
Size	RSP	-1.44%	3.62%	12.50%	31.93%	10.35%	98.84%						
Quality	SPHQ	-0.13%	0.98%	5.86%	15.98%	4.00%	72.36%						
Low Volatility	SPLV	0.60%	2.54%	3.25%	8.44%	1.86%	47.94%						

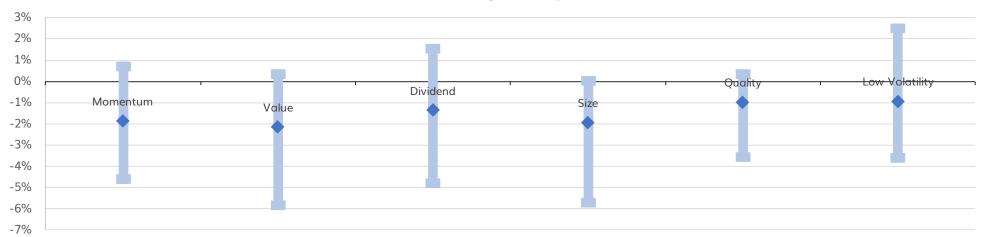


*30 day volatility annualized



U.S. Factor Performance Leaders/Laggards

Factor ETF Performance Ranges Trailing Five Days



Average

Performance Leaders

Ticker	Fund	1 Wk	YTD
USLB	Invesco Russell 1000 Low Beta Equal Weight ETF	2.49%	4.47%
DFND	Siren DIVCON Dividend Defender ETF	1.53%	-2.82%
RNDV	US Equity Dividend Select ETF	0.72%	16.51%
SPMO	Invesco S&P 500 Momentum ETF	0.71%	-0.12%
SPLV	Invesco S&P 500 Low Volatility ETF	0.60%	1.86%
DURA	VanEck Vectors Morningstar Durable Dividend ETF	0.48%	3.73%
GBLO	Global Beta Low Beta ETF	0.47%	2.25%
DTN	WisdomTree U.S. Dividend ex-Financials Fund	0.38%	13.21%
DSTL	Distillate US Fundamental Stability & Value ETF	0.36%	6.80%
QVAL	Alpha Architect U.S. Quantitative Value ETF	0.33%	15.49%

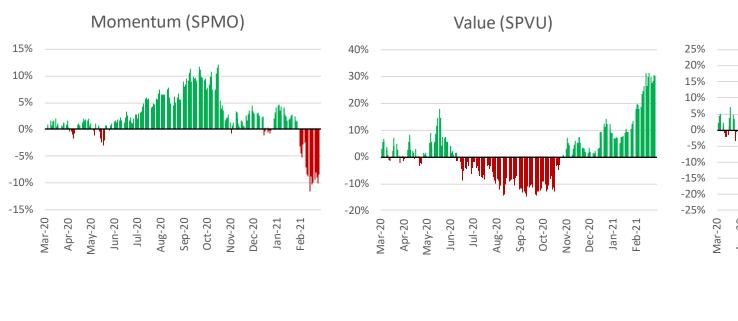
Performance Laggards

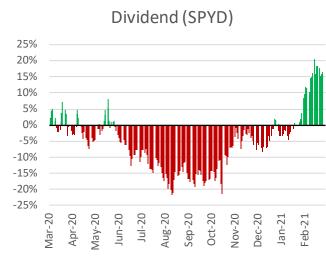
Ticker	Fund	1 Wk	YTD
RZV	Invesco S&P Smallcap 600 Pure Value ETF	-5.82%	33.06%
RWJ	Invesco S&P SmallCap 600 Revenue ETF	-5.72%	41.16%
EWSC	Invesco S&P Smallcap 600 Equal Weight ETF	-5.29%	26.39%
CSB	VictoryShares US Small Cap High Dividend Volatil	-4.80%	17.75%
XSVM	Invesco S&P SmallCap Value with Momentum ETF	-4.68%	39.49%
XSHD	Invesco S&P SmallCap High Dividend Low Volatili	-4.63%	15.83%
ALTL	Pacer Lunt Large Cap Alternator ETF	-4.59%	21.73%
MFMS	Motley Fool Small-Cap Growth ETF	-4.36%	1.22%
AVUV	Avantis U.S. Small Cap Value ETF	-4.28%	27.99%
SSLY	Syntax Stratified SmallCap ETF	-4.11%	21.38%

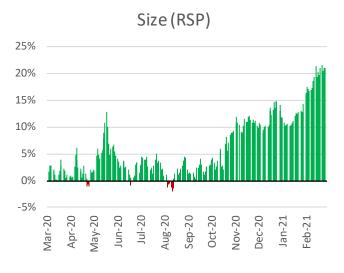
^{*}Factor landscape data is represented by Equity > Size & Style > U.S. Factor ETFs according to the ETF Action Classification System. Excludes inverse/leverage.

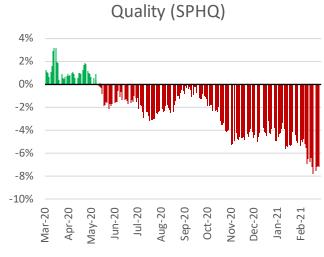


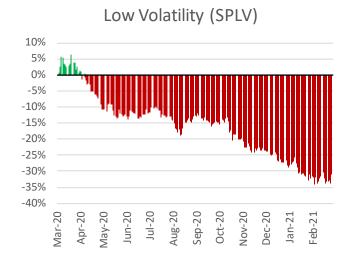
U.S. Factor 12-Month Relative Performance to SPY









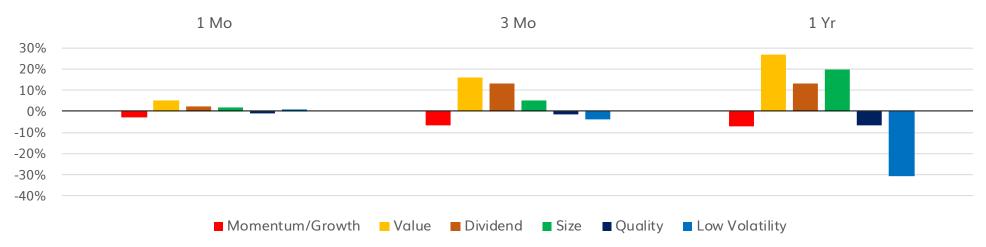


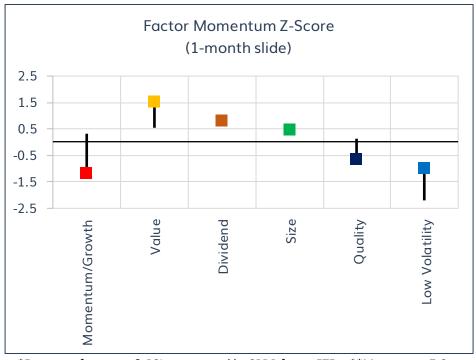
Charts represent each factor's over/underperformance to the S&P 500 using daily returns.

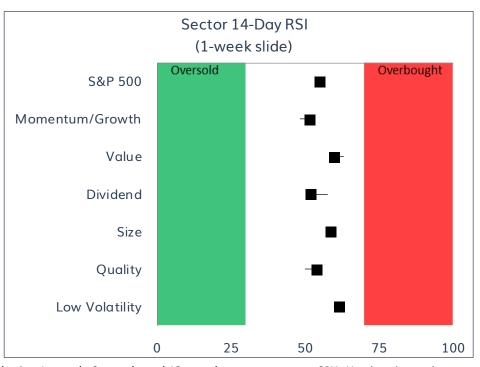


U.S. Factor Momentum & Timing

Factor Relative Performance to SPY



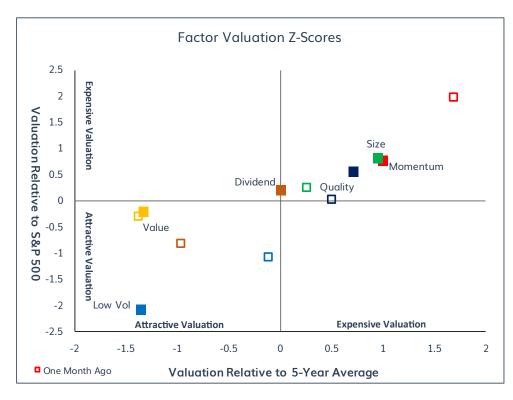


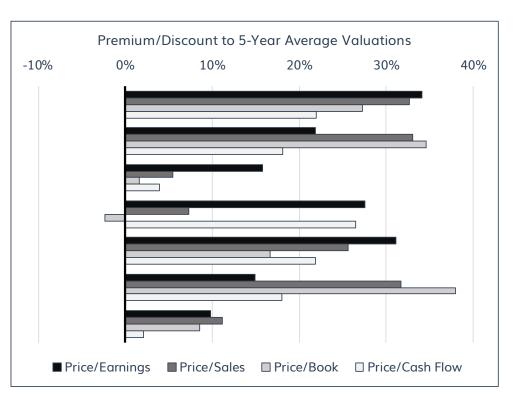


^{*}Factor performance & RSI represented by SPDR factor ETFs. **Momentum Z-Score calculated using 1-month, 3-month, and 12-month excess returns to SPY. Y-axis units are in standard deviations.



U.S. Factor Valuation



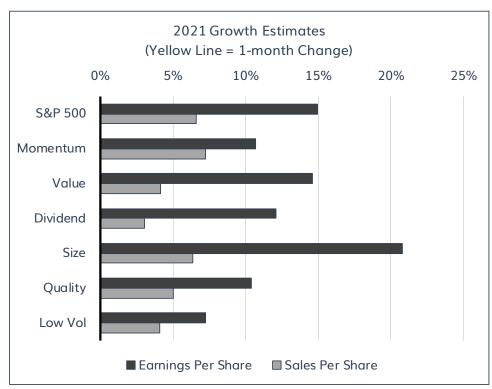


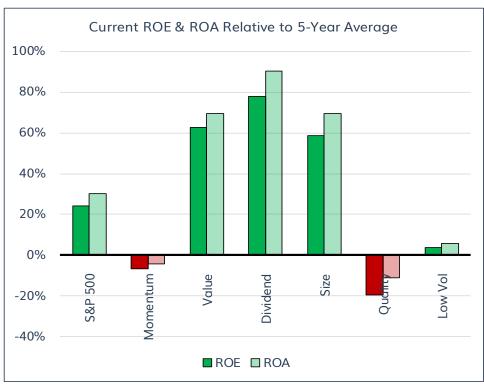
	· · · · · · · · · · · · · · · · · · ·	Ak	osolute Val	uation Rat	ios	Ave	rage 5Yr P	rem/Disc to	SPY	Current Prem/Disc. Above or Below 5Yr Avg				
		P/E	P/S	P/B	P/CF	P/E	P/S	P/B	P/CF	P/E	P/S	P/B	P/CF	
Momentum	SPMO	33.59	4.62	8.82	21.32	36.3%	58.8%	110.0%	45.8%	-12.5%	0.5%	12.2%	-4.7%	
Value	SPVU	15.00	0.79	1.34	6.72	-35.9%	-65.7%	-57.7%	-47.8%	-8.8%	-7.0%	-8.5%	-7.7%	
Dividend	SPYD	17.46	1.52	1.58	10.08	-32.3%	-35.2%	-48.1%	-35.6%	-3.3%	-12.4%	-12.1%	2.4%	
Size	RSP	22.83	1.94	2.79	12.44	-13.9%	-29.4%	-23.3%	-17.5%	-1.9%	-3.7%	-6.4%	-0.1%	
Quality	SPHQ	25.63	3.50	6.60	18.68	10.4%	21.5%	53.3%	27.9%	-15.9%	-0.8%	12.9%	-4.2%	
Low Vol	SPLV	22.71	2.25	4.54	14.35	2.3%	-7.4%	34.1%	13.6%	-18.5%	-15.0%	-19.7%	-18.5%	

^{*}Factor valuation z-scores based on average scores of price to earnings, price to sales, price to book, and price to cash flow ratios. Valuation relative to S&P 500 uses current premium/discount spread of funds vs S&P 500 relative to historical fund premium/discount spread vs S&P 500. Table: Red coloring indicates above average (more expensive) spread while green indicates below average spread (cheaper). Axis values are measured in standard deviations.



U.S. Factor Fundamentals & Growth





		Absolute Values								Change from 1-Month Ago								
		Yield	Gross Margin	Net Margin	ROE	ROA	Interest Coverag	LT D/E	Payout Ratio	Yield	Gross Margin	Net Margin	ROE	ROA	Int. Coverage	LT D/E	Payout Ratio	
S&P 500	SPY	1.46%	26.86%	9.08%	15.12%	3.20%	5.57	88.30%	40.45%	- 0.21%	3 0.06%	3 0.02%	→ -0.01%	→ 0.00%	0.02	• 0.26%	→ -0.01%	
Momentum	SPMO	0.88%	39.77%	11.19%	23.80%	8.28%	9.45	92.76%	31.80%	♣ 0.21%	0.14%	→ 0.03%	1 0.26%	→ 0.04%	♠ 0.02	1 .13%	₩ 0.28%	
Value	SPVU	2.39%	11.72%	4.98%	9.67%	1.56%	2.60	87.01%	36.72%	- 0.70%	∳ -0.13%	→ 0.05%	₩ 0.11%	→ 0.02%	- 0.05	• 0.16%	1 0.21%	
Dividend	SPYD	4.20%	19.68%	6.55%	10.19%	1.81%	3.52	85.78%	62.59%	- 0.45%	1 0.51%	∳ -0.12%	→0.01%	1 0.11%	♠ 0.19	1 2.60%	1 3.81%	
Size	RSP	1.66%	22.90%	5.67%	12.18%	2.68%	4.63	89.44%	42.36%	- 0.53%	→ 0.09%	0 .28%	0.19%	→ 0.03%	0.04	• 0.95%	₩ 0.40%	
Quality	SPHQ	1.40%	33.74%	9.96%	20.33%	6.12%	10.95	66.97%	41.15%	→ 0.09%	♣ 0.11%	→ 0.03%	→0.04%	→ 0.03%	♠ 0.01	→ 0.09%	♣ 0.20%	
Low Vol	SPLV	2.01%	31.64%	8.99%	21.38%	6.80%	7.90	96.18%	42.54%	1 0.13%	↓ -0.65%	→ 0.02%	1 0.92%	→ 0.02%	⊎ -0.06	\$ 5.18%	1 0.20%	

^{*}Changes for factor fundamental and growth estimate data (arrows in table) are green when change is greater than 0.10%, yellow when change is between 0.10% and –0.10%, and red when change is below –0.10%.



U.S. Factor Technicals & Internals



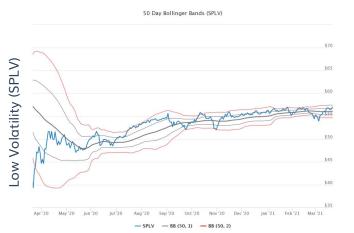


U.S. Factor Technicals & Internals





U.S. Factor Technicals & Internals









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