

U.S. Size & Style Performance

Large Cap Blend (S&P 500) IVV



Large Growth Large Value (IVE) Large Cap (IVV) Mid Value (IJJ) Mid Growth (IJK) Small Value (IJS) Small Cap (IJR) Small Growth (IJT) Mid Cap (IJH) (IVW) 0.21% 0.12% 0.0% -0.14% -0.20% -0.32% -0.38% -0.5% -0.41% -0.61% -1.0% -0.97%

U.S. Size & Style 1-Day Performance

Mid Cap Blend (S&P 400) IJH



Small Cap Blend (S&P 600) IJR



Size & Style 1-Day Performance Leaders

Ticker	Fund	
SIXL	ETC 6 Meridian Low Beta Equity ETF	1.74%
TMFM	Motley Fool Mid-Cap Growth ETF	1.10%
ALTL	Pacer Lunt Large Cap Alternator ETF	0.90%
SPLV	Invesco S&P 500 Low Volatility ETF	0.86%
HUSV	First Trust Horizon Managed Volatility Domestic ETF	0.81%
XRLV	Invesco S&P 500 ex-Rate Sensitive Low Volatility ETF	0.77%
PEY	Invesco High Yield Equity Dividend Achievers ETF	0.71%
XMLV	Invesco S&P MidCap Low Volatility ETF	0.66%
UTRN	Vesper U.S. Large Cap Short-Term Reversal Strategy ETF	0.66%
REGL	ProShares S&P MidCap 400 Dividend Aristocrats ETF	0.64%

Size & Style 1-Day Performance Laggards

Ticker	Fund	
IPO	Renaissance IPO ETF	-2.52%
BUZZ	VanEck Social Sentiment ETF	-2.38%
WINN	Harbor Long-Term Growers ETF	-1.35%
CGGR	Capital Group Growth ETF	-1.30%
SCHG	Schwab U.S. Large-Cap Growth ETF	-1.24%
CSD	Invesco S&P Spin-Off ETF	-1.19%
AIEQ	AI Powered Equity ETF	-1.18%
SPHB	Invesco S&P 500 High Beta ETF	-1.14%
FFTY	Innovator IBD 50 ETF	-1.13%
QQQM	Invesco NASDAQ 100 ETF	-1.12%

200 Day Moving Average

Size & Style Most Overbought

	Ticker	Fund	
	PTLC	Pacer Trendpilot US Large Cap ETF	79.55
	USNZ	Xtrackers Net Zero Pathway Paris Aligned US Equity ETF	72.75
_	DJD	Invesco Dow Jones Industrial Average Dividend ETF	70.81
	DEIF	Sterling Capital Diverse Multi-Manager Active ETF	69.96
_	DURA	VanEck Durable High Dividend ETF	69.96
	SIXL	ETC 6 Meridian Low Beta Equity ETF	68.21
_	SIXS	ETC 6 Meridian Small Cap Equity ETF	68.16
	EDOW	First Trust Dow 30 Equal Weight ETF	67.83
	PWC	Invesco Dynamic Market ETF	67.19
	VFMV	Vanguard U.S. Minimum Volatility ETF	67.05

Size & Style Most Oversold

	Ticker	Fund	
%	GUSA	Goldman Sachs MarketBeta U.S. 1000 Equity ETF	27.74
%	IPO	Renaissance IPO ETF	41.91
%	FFTY	Innovator IBD 50 ETF	44.53
%	FPX	First Trust US Equity Opportunities ETF	46.84
%	WBIG	WBI BullBear Yield 3000 ETF	47.08
%	BUZZ	VanEck Social Sentiment ETF	47.29
%	LSAT	Leadershares Alphafactor Tactical Focused ETF	47.32
%	AIEQ	Al Powered Equity ETF	48.11
%	GVIP	Goldman Sachs Hedge Industry VIP ETF	49.95
%	WINN	Harbor Long-Term Growers ETF	50.12



U.S. Size & Style Flows

Large-Cap 30-Day Rolling Flows



Mid-Cap 30-Day Rolling Flows



Small-Cap 30-Day Rolling Flows



	Funds	AUM	1 Week	3 Month	6 Month	1 Year
Large Cap, Beta Growth, Beta	25	\$1,244B	(\$0.05B)	\$34.99B	\$75.09B	\$117.48B
Large Cap, Beta Growth, Beta: Growth	10	\$221B	\$0.75B	\$3.96B	\$13.88B	\$21.57B
Large Cap, Beta Growth, Beta: Value	11	\$226B	\$0.04B	\$4.03B	\$5.91B	\$22.85B
Mid Cap, Beta, Beta	10	\$182B	\$0.51B	\$4.10B	\$7.00B	\$13.91B
Mid Cap, Beta, Beta: Growth	6	\$33B	\$0.31B	\$0.08B	\$1.48B	\$0.81B
Mid Cap, Beta, Beta: Value	6	\$41B	\$0.20B	\$1.34B	\$1.91B	\$1.68B
Small Cap, Beta, Beta	13	\$196B	\$0.67B	\$4.59B	\$5.71B	\$3.93B
Small Cap, Beta, Beta: Growth	7	\$31B	\$0.02B	\$0.13B	\$0.70B	\$1.77B
Small Cap, Beta, Beta: Value	7	\$51B	(\$0.06B)	\$0.68B	(\$0.25B)	(\$2.40B)

U.S. Size & Style Landscape Flows

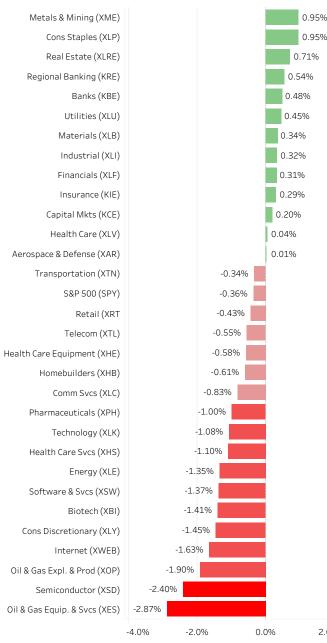
U.S. Size & Style Flow Leaders

Ticker	Fund	1 Week	3 Month	6 Month	1 Year	AUM
V00	Vanguard S&P 500 ETF	\$0.72B	\$10.10B	\$26.16B	\$41.34B	\$274.36B
IWM	iShares Russell 2000 ETF	\$0.57B	\$3.14B	\$2.00B	(\$2.73B)	\$55.98B
SCHD	Schwab US Dividend Equity ETF	\$0.45B	\$3.98B	\$7.34B	\$13.10B	\$43.32B
MDYG	SPDR S&P 400 Mid Cap Growth ETF	\$0.45B	(\$0.09B)	\$0.58B	\$0.06B	\$2.04B
VTI	Vanguard Total Stock Market ETF	\$0.41B	\$7.72B	\$13.22B	\$30.70B	\$268.87B
QQQ	Invesco QQQ Trust	\$0.36B	\$1.61B	\$5.40B	\$11.90B	\$161.23B
IJH	iShares Core S&P Mid-Cap ETF	\$0.34B	\$2.12B	\$3.43B	\$5.50B	\$65.12B
VUG	Vanguard Growth ETF	\$0.26B	\$1.51B	\$5.04B	\$9.27B	\$71.70B
IWF	iShares Russell 1000 Growth ETF	\$0.25B	\$0.94B	\$1.63B	\$2.49B	\$60.44B
PKW	Invesco Buyback Achievers ETF	\$0.24B	\$0.52B	\$0.45B	\$0.40B	\$1.82B

U.S. Size & Style Flow Laggards

Ticker	Fund	1 Week	3 Month	6 Month	1 Year	AUM
DIA	SPDR Dow Jones Industrial Average ETF Trust	(\$0.76B)	\$0.16B	\$0.73B	\$1.47B	\$29.85B
MTUM	iShares MSCI USA Momentum Factor ETF	(\$0.35B)	\$1.84B	\$1.52B	(\$1.01B)	\$12.33B
VTV	Vanguard Value ETF	(\$0.21B)	\$0.88B	\$3.15B	\$15.05B	\$103.88B
RSP	Invesco S&P 500 Equal Weight ETF	(\$0.16B)	\$1.51B	\$1.80B	\$5.35B	\$33.09B
OEF	iShares S&P 100 ETF	(\$0.14B)	(\$0.33B)	(\$0.11B)	\$0.20B	\$7.50B
MGK	Vanguard Mega Cap Growth ETF	(\$0.13B)	(\$0.53B)	(\$0.03B)	\$0.60B	\$10.14B
IWN	iShares Russell 2000 Value ETF	(\$0.10B)	\$0.17B	\$0.24B	(\$1.63B)	\$12.40B
VB	Vanguard Small-Cap ETF	(\$0.09B)	\$0.37B	(\$0.04B)	\$0.62B	\$42.10B
IWP	iShares Russell Mid-Cap Growth ETF	(\$0.08B)	(\$0.10B)	\$0.10B	(\$0.05B)	\$12.02B
DFUV	Dimensional US Marketwide Value ETF	(\$0.05B)	\$0.10B	\$0.25B	\$0.25B	\$8.15B

S&P Sector & Industry 1 Day Performance



Ticker	Fund Name	% From 52 W High	% From 52W Low	% ADV/Below 50 SMA	% ADV/Below 200 SMA	RSI (14D)
XLE	Energy Select Sector SPDR Fund	-3.92%	70.51%	8.09%	14.76%	54.34
XLV	Health Care Select Sector SPDR Fund	-5.74%	12.29%	5.44%	3.49%	63.05
XLP	Consumer Staples Select Sector SPDR Fund	-6.43%	13.37%	6.90%	2.44%	68.49
XLI	Industrial Select Sector SPDR Fund	-6.81%	20.42%	10.03%	6.01%	67.74
XLB	Materials Select Sector SPDR Fund	-11.42%	19.22%	9.67%	1.25%	64.55
XLU	Utilities Select Sector SPDR Fund	-11.47%	12.42%	2.37%	-2.67%	57.77
XLF	Financial Select Sector SPDR Fund	-14.34%	17.13%	8.21%	3.08%	63.22
SPY	SPDR S&P 500 ETF Trust	-17.40%	10.67%	4.46%	-2.39%	57.62
XLK	Technology Select Sector SPDR Fund	-26.03%	12.11%	4.34%	-5.25%	55.47
XLRE	Real Estate Select Sector SPDR Fund	-26.04%	13.47%	4.32%	-9.66%	59.10
XLY	Consumer Discretionary Select Sector SPDR Fund	-33.93%	5.23%	-3.76%	-11.73%	45.24
XLC	Communication Services Select Sector SPDR Fund	-37.72%	8.17%	-0.35%	-14.77%	50.59

Select Sector SPDRs Technicals

Sector & Industry 1 Day Performance Leaders

Ticker	Fund	
REM	iShares Mortgage Real Estate ETF	1.40%
FTXG	First Trust Nasdaq Food & Beverage ETF	1.40%
PBJ	Invesco Dynamic Food & Beverage ETF	1.35%
MORT	VanEck Mortgage REIT Income ETF	1.28%
IYK	iShares U.S. Consumer Staples ETF	1.22%
RHS	Invesco S&P 500 Equal Weight Consumer Staples	1.15%
FXG	First Trust Consumer Staples AlphaDEX Fund	1.06%
PSCC	Invesco S&P SmallCap Consumer Staples ETF	1.01%
FSTA	FIDELITY COVINGTON TRUST MSCI CONSUMER ST	1.00%
XME	SPDR S&P Metals & Mining ETF	0.95%

Sector & Industry 1 Day Performance Laggards

Ticker	Fund	
XES	SPDR S&P Oil & Gas Equipment & Services ETF	-2.87%
PSCE	Invesco S&P SmallCap Energy ETF	-2.61%
XSD	SPDR S&P Semiconductor ETF	-2.40%
IEZ	iShares U.S. Oil Equipment & Services ETF	-2.39%
PXE	Invesco Dynamic Energy Exploration & Production ETF	-2.07%
PXI	Invesco DWA Energy Momentum ETF	-1.94%
PXJ	Invesco Dynamic Oil & Gas Services ETF	-1.93%
FTXL	First Trust Nasdaq Semiconductor ETF	-1.91%
XOP	SPDR S&P Oil & Gas Exploration & Production ETF	-1.90%
XNTK	SPDR NYSE Technology ETF	-1.85%

Sector & Industry Most Overbought

Ticker	Fund	
XLP	Consumer Staples Select Sector SPDR Fund	68.49
IYK	iShares U.S. Consumer Staples ETF	68.04
VDC	Vanguard Consumer Staples ETF	67.84
XLI	Industrial Select Sector SPDR Fund	67.74
FSTA	FIDELITY COVINGTON TRUST MSCI CONSUMER STAPLES	67.62
PSL	Invesco DWA Consumer Staples Momentum ETF	67.18
RHS	Invesco S&P 500 Equal Weight Consumer Staples ETF	67.07
AIRR	First Trust RBA American Industrial Renaissance ETF	66.94
PSCC	Invesco S&P SmallCap Consumer Staples ETF	66.57
FXG	First Trust Consumer Staples AlphaDEX Fund	66.04

Sector & Industry Most Oversold

	Ticker	Fund	
6	XHS	SPDR S&P Health Care Services ETF	41.32
6	PTH	Invesco DWA Healthcare Momentum ETF	44.39
6	XLY	Consumer Discretionary Select Sector SPDR Fund	45.24
6	XSW	SPDR S&P Software & Services ETF	45.50
6	XBI	SPDR S&P BIOTECH ETF	46.75
6	FDN	First Trust Dow Jones Internet Index Fund	46.77
6	FDIS	Fidelity MSCI Consumer Discretionary Index ETF	47.02
6	VCR	Vanguard Consumer Discretionary ETF	47.03
6	IHF	iShares U.S. Healthcare Providers ETF	47.39
6	PSJ	Invesco Dynamic Software ETF	47.98

* ETF Landscape represented using the ETF Action classification system ** Leaders/Laggards/Overbought/Oversold ETFs must have \$50 million to qualify

2.0%

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U.S. Sector Landscape

U.S. Sector & Industry 1-Week Flows

Biotech					\$131M
Aerospace & Defense				\$7	'6M
Infrastructure				\$13M	
Insurance				\$9M	
Midstream				\$6M	
Food & Beverage				\$5M	
Oil & Gas Equipment & Services				\$5M	
Pharmaceuticals				\$2M	
Mortgage REITs				\$1M	
BDCs				\$1M	
Natural Gas				\$0M	
Media & Entertainment				\$0M	
MLPs: Note			(\$1M)		
Health Care Providers & Services			(\$2M)		
Leisure & Recreation			(\$2M)		
Construction & Engineering			(\$4M)		
MLPs: C-Corp			(\$6M)		
Health Care Equipment & Supplies			(\$10M)		
Transportation			(\$13M)		
Banks			(\$14M)		
Semiconductors		((\$46M)		
Retail		(\$60M)		
Metals & Mining		(9	\$63M)		
Homebuilding		(\$	71M)		
Software		(\$136M	VI)		
Oil & Gas Exploration & Production	(\$347N	1)			
Banks: Regional	(\$395M)				
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	Funds	AUM	1 Week	3 Month	6 Month	1 Year
Communication Services		\$12B	(\$206M)	(\$380M)	(\$175M)	(\$1,439M)
Consumer Discretionary	12	\$21B	(\$129M)	(\$272M)	(\$571M)	(\$5,454M)
Consumer Staples	10	\$29B	\$174M	\$876M	\$1,862M	\$8,396M
Energy	33	\$86B	(\$723M)	\$1,255M	(\$1,393M)	\$3,073M
Financials	26	\$62B	(\$139M)	(\$51M)	(\$2,162M)	(\$9,676M)
Health Care	23	\$96B	\$237M	\$1,516M	\$5,329M	\$12,919N
Industrial	13	\$30B	(\$41M)	\$393M	(\$569M)	(\$2,732M
Materials	9	\$13B	(\$100M)	(\$1,061M)	(\$2,637M)	(\$1,887M)
Multi-Sector	19	\$13B	(\$104M)	(\$620M)	(\$1,975M)	(\$5,966M
Real Estate	25	\$60B	\$71M	(\$454M)	(\$2,708M)	(\$2,837M)
Technology	23	\$118B	\$633M	\$1,228M	\$2,062M	\$2,567N
Utilities	9	\$25B	(\$168M)	\$51M	\$1,667M	\$5,150N

U.S. Sector Landscape

U.S. Sector & Industry Flow Leaders

Ticker	Fund	1 Week	3 Month	6 Month	1 Year	AUM
XLK	Technology Select Sector SPDR Fund	\$624M	\$59M	\$1,105M	\$2,714M	\$40,639M
XLF	Financial Select Sector SPDR Fund	\$194M	(\$294M)	(\$1,007M)	(\$5,210M)	\$33,144M
VGT	Vanguard Information Technology ETF	\$170M	(\$297M)	\$754M	\$724M	\$41,945M
IBB	iShares Biotechnology ETF	\$121M	\$248M	\$265M	\$402M	\$8,920M
XLV	Health Care Select Sector SPDR Fund	\$113M	\$399M	\$2,446M	\$7,949M	\$41,106M
XLP	Consumer Staples Select Sector SPDR Fund	\$96M	\$781M	\$1,019M	\$4,922M	\$16,932M
VIS	Vanguard Industrials ETF	\$52M	\$34M	(\$35M)	(\$1,041M)	\$3,723M
ITA	iShares U.S. Aerospace & Defense ETF	\$49M	\$237M	\$272M	\$1,608M	\$4,311M
VFH	Vanguard Financials ETF	\$47M	(\$67M)	(\$419M)	(\$1,027M)	\$9,157M
XLRE	Real Estate Select Sector SPDR Fund	\$36M	\$390M	\$167M	\$1,227M	\$5,094M

U.S. Sector & Industry Flow Laggards

Ticker	Fund	1 Week	3 Month	6 Month	1 Year	AUM
XLE	Energy Select Sector SPDR Fund	(\$395M)	\$615M	(\$414M)	\$517M	\$43,511M
KRE	SPDR S&P Regional Banking ETF	(\$393M)	(\$195M)	(\$578M)	(\$1,180M)	\$3,145M
ХОР	SPDR S&P Oil & Gas Exploration & Production E	(\$342M)	(\$299M)	(\$385M)	(\$325M)	\$4,950M
XLC	Communication Services Select Sector SPDR Fu	(\$177M)	(\$418M)	(\$74M)	(\$1,099M)	\$8,320M
XLI	Industrial Select Sector SPDR Fund	(\$172M)	\$152M	(\$241M)	(\$2,698M)	\$14,032M
XLU	Utilities Select Sector SPDR Fund	(\$148M)	\$146M	\$1,201M	\$3,343M	\$15,839M
IGV	iShares Expanded Tech-Software Sector ETF	(\$131M)	\$596M	\$476M	\$967M	\$4,530M
XLY	Consumer Discretionary Select Sector SPDR Fu	(\$92M)	(\$342M)	(\$421M)	(\$2,120M)	\$13,999M
ХНВ	SPDR S&P Homebuilders ETF	(\$76M)	(\$6M)	(\$123M)	(\$608M)	\$966M
XME	SPDR S&P Metals & Mining ETF	(\$63M)	(\$73M)	(\$469M)	(\$41M)	\$1,940M



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U.S. Sector Rolling 30-Day Flows

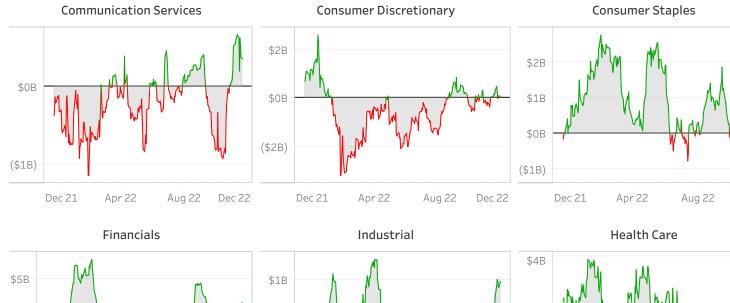
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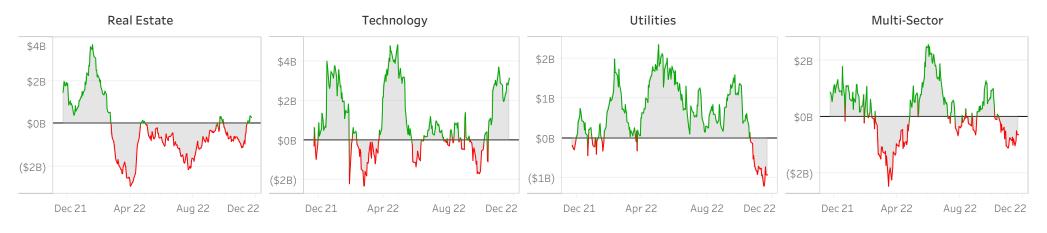
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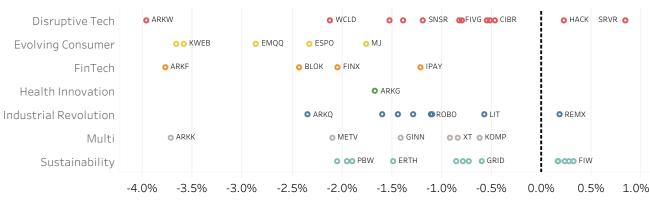
* ETF Landscape represented using the ETF Action classification system**Leaders/Laggards/Overbought/Oversold ETFs must have \$50 million to qualify ***Flows delayed one day

Aug 22



Global Thematic Performance

November 21, 2022



Global Thematic 1-Day Performance Landscape

Global Thematic 1-Day Performance Leaders

Ticker	Fund	
SRVR	Pacer Data & Infrastructure Real Estate ETF	0.84%
FIW	First Trust Water ETF	0.32%
PIO	Invesco Global Water ETF	0.27%
PHO	Invesco Water Resources ETF	0.23%
НАСК	ETFMG Prime Cyber Security ETFMG Prime Cyber Securit	0.22%
REMX	VanEck Rare Earth/Strategic Metals ETF	0.18%
CGW	Invesco S&P Global Water Index ETF	0.17%
CNRG	SPDR S&P Kensho Clean Power ETF	0.16%
SAMT	Strategas Macro Thematic Opportunities ETF	0.09%
PAWZ	ProShares Pet Care ETF	0.04%

Global Thematic 1-Day Performance Laggards

Ticker	Fund	
ARKW	ARK Next Generation Internet ETF	-3.97%
ARKF	ARK Fintech Innovation ETF	-3.77%
ARKK	ARK Innovation ETF	-3.72%
MSOS	AdvisorShares Pure US Cannabis ETF	-3.67%
KWEB	KraneShares CSI China Internet ETF	-3.59%
EMQQ	EMQQ The Emerging Markets Internet & Ecommerce E	-2.87%
YOLO	AdvisorShares Pure Cannabis ETF	-2.75%
SOCL	Global X Social Media ETF	-2.62%
HERO	Global X Video Games & Esports ETF	-2.56%
GAMR	Wedbush ETFMG Video Game Tech ETF Wedbush ETF	-2.50%

Thematic Most Overbought

Ticker	Fund	
GRID	First Trust Nasdaq Clean Edge Smart GRID Infrastructure	68.98
CGW	Invesco S&P Global Water Index ETF	64.22
EBLU	Ecofin Global Water ESG Fund	63.15
PIO	Invesco Global Water ETF	63.07
SNSR	Global X Internet of Things ETF	62.37
KLDW	Knowledge Leaders Developed World ETF	61.94
LEGR	First Trust Indxx Innovative Transaction & Process ETF	61.86
TAN	Invesco Solar ETF	61.80
CTEC	Global X CleanTech ETF	61.21
CNRG	SPDR S&P Kensho Clean Power ETF	61.15

Thematic Most Oversold

	Ticker	Fund	
6	BLOK	Amplify Transformational Data Sharing ETF	36.22
6	ARKW	ARK Next Generation Internet ETF	42.21
6	FINX	Global X FinTech ETF	42.27
6	WCLD	WisdomTree Cloud Computing Fund	43.07
6	ARKF	ARK Fintech Innovation ETF	43.56
6	ARKK	ARK Innovation ETF	43.79
6	ARKQ	ARK Autonomous Technology & Robotics ETF	43.84
6	LIT	Global X Lithium & Battery Tech ETF	43.84
6	ARKG	ARK Genomic Revolution ETF	44.27
6	BTEC	Principal Healthcare Innovators ETF	45.13

Global Thematic Segment 1-Day Performance

0.84%

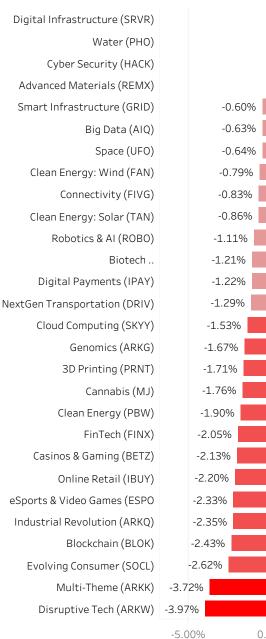
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* ETF Landscape represented using the ETF Action classification system**Leaders/Laggards/Overbought/Oversold ETFs must have \$50 million to qualify



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Global Thematic Flows

Thematic 1 Week Flow Leaders

Ticker	Fund	
TAN	Invesco Solar ETF	\$150M
KWEB	KraneShares CSI China Internet ETF	\$34M
ICLN	iShares Global Clean Energy ETF	\$33M
ARKG	ARK Genomic Revolution ETF	\$24M
MSOS	AdvisorShares Pure US Cannabis ETF	\$22M
ARKW	ARK Next Generation Internet ETF	\$9M
SBIO	ALPS Medical Breakthroughs ETF	\$7M
KOMP	SPDR S&P Kensho New Economies Composite ETF	\$5M
ARKF	ARK Fintech Innovation ETF	\$3M
CNRG	SPDR S&P Kensho Clean Power ETF	\$3M

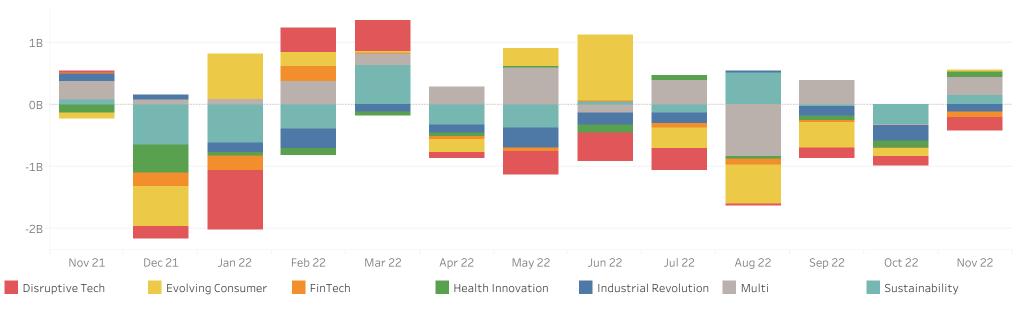
Segment	Funds	AUM	1 Week	3 Month	6 Month	1 Year
Disruptive Tech	35	\$16B	(\$100M)	(\$618M)	(\$1,420M)	(\$2,077M)
Evolving Consumer	46	\$9B	\$12M	(\$514M)	(\$619M)	(\$74M)
FinTech	23	\$3B	(\$16M)	(\$176M)	(\$299M)	(\$594M)
Health Innovation	19	\$3B	\$32M	(\$134M)	(\$259M)	(\$1,037M)
Industrial Revolution	32	\$11B	(\$38M)	(\$555M)	(\$905M)	(\$1,732M)
Multi	41	\$14B	(\$99M)	\$823M	\$200M	\$1,967M
Sustainability	40	\$19B	\$158M	(\$179M)	\$227M	(\$1,479M)
Grand Total	236	\$75B	(\$52M)	(\$1,353M)	(\$3,075M)	(\$5,025M)

Thematic Landscape Assets & Flows

Thematic 1 Week Flow Laggards

Ticker	Fund	In
SKYY	First Trust Cloud Computing ETF (\$57M)	
ARKK	ARK Innovation ETF (\$35M)	
BOTZ	Global X Robotics & Artificial Intelligence ETF (\$19M)	N
WCLD	WisdomTree Cloud Computing Fund (\$19M)	
CIBR	First Trust NASDAQ Cybersecurity ETF (\$14M)	
SRVR	Pacer Data & Infrastructure Real Estate ETF (\$13M)	S
FINX	Global X FinTech ETF (\$12M)	
MJUS	ETFMG U.S. Alternative Harvest ETF (\$10M)	
PHO	Invesco Water Resources ETF (\$7M)	G
PBW	Invesco WilderHill Clean Energy ETF (\$7M)	

Thematic Monthly Flows





Developed Markets ex-U.S. Performance

November 21, 2022

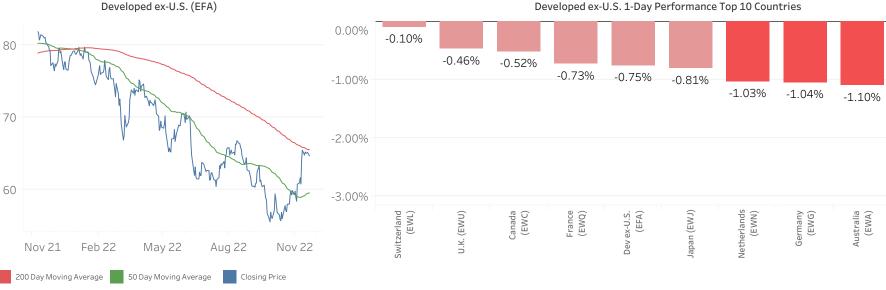
-1.23%

Hong Kong (EWH)

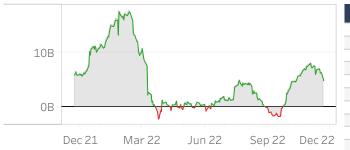
-2.74%

South Korea (EWY)

Developed ex-U.S. (EFA)



Developed ex-U.S. 30-Day Rolling Flows



Developed ex-U.S. 1-Day Performance Leaders

Ticker	Fund	
DXJ	WisdomTree Japan Hedged Equity Fund	0.58%
LVHI	Franklin International Low Volatility High Dividend Index ETF	0.49%
HEWJ	iShares Currency Hedged MSCI Japan ETF	0.48%
IHDG	WisdomTree International Hedged Quality Dividend Growth	0.35%
HEDJ	WisdomTree Europe Hedged Equity Fund	0.32%
DBJP	Xtrackers MSCI Japan Hedged Equity ETF	0.26%
DBEU	Xtrackers MSCI Europe Hedged Equity ETF	0.17%
EWP	iShares MSCI Spain ETF	0.17%
HSCZ	iShares Currency Hedged MSCI EAFE Small-Cap ETF	0.09%
DBEF	Xtrackers MSCI EAFE Hedged Equity ETF	0.08%

Developed ex-U.S. 1-Day Performance Laggards

	Ticker	Fund	
	FLKR	Franklin FTSE South Korea ETF	-2.75%
	EWY	iShares MSCI South Korea ETF	-2.74%
	AIA	iShares Asia 50 ETF	-1.99%
	EWS	iShares MSCI Singapore ETF	-1.68%
	AAXJ	iShares MSCI All Country Asia ex Japan ETF	-1.58%
-]	EWI	iShares MSCI Italy ETF	-1.32%
	VPL	Vanguard FTSE Pacific ETF	-1.27%
	BBAX	JPMorgan BetaBuilders Developed Asia Pacific-ex Japan E	-1.25%
	EWH	iShares MSCI Hong Kong ETF	-1.23%
	EPP	iShares MSCI Pacific ex-Japan ETF	-1.22%

Developed ex-U.S. Most Overbought

Ticker	Fund	
LVHI	Franklin International Low Volatility High Dividend Index	72.90
DBEU	Xtrackers MSCI Europe Hedged Equity ETF	71.42
HEZU	iShares Currency Hedged MSCI Eurozone ETF	70.75
DXJ	WisdomTree Japan Hedged Equity Fund	70.38
HEDJ	WisdomTree Europe Hedged Equity Fund	70.19
DBEF	Xtrackers MSCI EAFE Hedged Equity ETF	70.09
HDEF	Xtrackers MSCI EAFE High Dividend Yield Equity ETF	70.06
GSID	Goldman Sachs MarketBeta International Equity ETF	69.92
IHDG	WisdomTree International Hedged Quality Dividend Grow	69.65
HEFA	iShares Currency Hedged MSCI EAFE ETF	69.54

Developed ex-U.S. Most Oversold

	Ticker	Fund	
)	PTIN	Pacer Trendpilot International ETF	24.02
)	EIS	iShares MSCI Israel ETF	48.99
)	NORW	Global X MSCI Norway ETF	50.13
)	ISRA	VanEck Israel ETF	50.68
)	FLKR	Franklin FTSE South Korea ETF	55.05
)	EWY	iShares MSCI South Korea ETF	55.45
)	IVAL	Alpha Architect International Quantitative Value ETF	55.75
)	FDT	First Trust Developed Markets ex-US AlphaDEX Fund	57.93
)	AAXJ	iShares MSCI All Country Asia ex Japan ETF	57.99
)	EWC	iShares MSCI Canada ETF	58.43

Developed ex-U.S. Monthly Flows

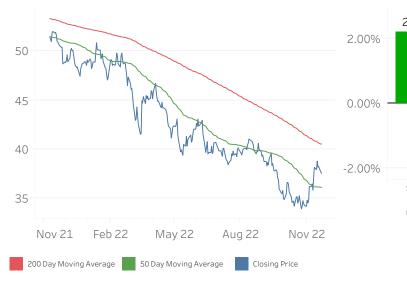


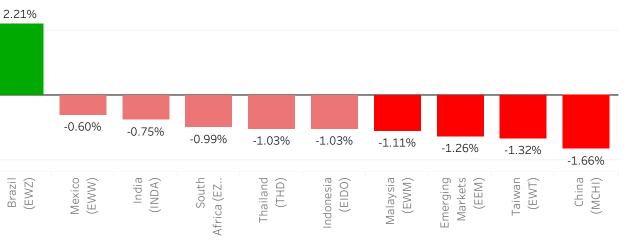


Emerging Markets Performance

November 21, 2022







Emerging 1-Day Performance Top 10 Countries

Emerging 30-Day Rolling Flows



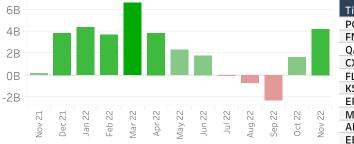
Emerging 1-Day Performance Leaders

Ticker	Fund	
EWZS	iShares MSCI Brazil Small-Cap ETF	4.36%
ECH	iShares MSCI Chile ETF	2.98%
FLBR	Franklin FTSE Brazil ETF	2.22%
EWZ	iShares MSCI Brazil ETF	2.21%
TUR	iShares MSCI Turkey ETF	1.82%
FLLA	Franklin FTSE Latin America ETF	1.43%
ILF	iShares Latin America 40 ETF	1.02%
DVYE	iShares Emerging Markets Dividend ETF	0.71%
FEM	First Trust Emerging Markets AlphaDEX Fund	0.55%
UEVM	VictoryShares Emerging Markets Value Momentum ETF	0.21%

Emerging Most Overbought

	Ticker	Fund	
Ś	EWW	iShares MSCI Mexico ETF	67.19
5	TUR	iShares MSCI Turkey ETF	66.88
Ś	EPOL	iShares MSCI Poland ETF	65.94
ó	EWT	iShares MSCI Taiwan ETF	65.01
5	EPHE	iShares MSCI Philippines ETF	63.80
Ś	EZA	iShares MSCI South Africa ETF	63.51
Ś	DGRE	WisdomTree Emerging Markets Quality Dividend Gro	60.64
Ś	DGS	WisdomTree Emerging Markets SmallCap Dividend F	60.60
5	EYLD	Cambria Emerging Shareholder Yield ETF	60.55
5	EWX	SPDR S&P Emerging Markets Small Cap ETF	60.34

Emerging Monthly Flows



Emerging 1-Day Performance Laggards

Ticker	Fund	_
PGJ	Invesco Golden Dragon China ETF	-3.54%
FNI	First Trust Chindia ETF	-2.20%
QAT	iShares MSCI Qatar ETF	-2.19%
CXSE	WisdomTree China ex-State-Owned Enterprises Fund	-2.13%
FLCH	Franklin FTSE China ETF	-1.83%
KSA	iShares MSCI Saudi Arabia ETF	-1.75%
EPU	iShares MSCI Peru ETF	-1.70%
мсні	iShares MSCI China ETF	-1.66%
ADRE	Invesco BLDRS Emerging Markets 50 ADR Index Fund	-1.65%
EEMA	iShares MSCI Emerging Markets Asia ETF	-1.63%

Emerging Most Oversold

Ticker	Fund	
KSA	iShares MSCI Saudi Arabia ETF	34.99
QAT	iShares MSCI Qatar ETF	35.93
VNM	VanEck Vietnam ETF	39.99
EIDO	iShares MSCI Indonesia ETF	43.02
EWZS	iShares MSCI Brazil Small-Cap ETF	43.57
FLBR	Franklin FTSE Brazil ETF	43.98
EWZ	iShares MSCI Brazil ETF	44.30
SMIN	iShares MSCI India Small Cap ETF	44.31
ILF	iShares Latin America 40 ETF	45.53
GLIN	VanEck India Growth Leaders ETF	47.66

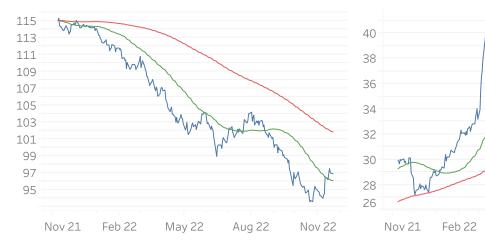


Fixed Income, Commodities & Currencies

Commodities (DJP)

November 21, 2022







Currencies Performance

Fixed Income Performance

200 Day Moving Average 50 Day Moving Average

Commodities Performance

May 22

Aug 22

Nov 22

Ticker Name 1 Month YTD Ticker Name 1 Day 1 Month YTD Ticker Name 1 Month 1 Day 1 Day 0.41% 4.18% 19.76% DJP **Broad Commodities** -13.46% -0.06% 3.62% AGG U.S. Aggregate 0.19% -0.83% 39.64% 0.87% -3.49% 13.38% DBE Energy UUP Long Dollar 0.00% -2.18% 26.99% US0 WTI Crude Oil SHY 1-3 Year Treasury Bonds -0.02% 0.31% -4.43% -0.52% -3.83% 37.06% BNO Brent Crude Oil IEF 7-10 Year Treasury Bonds -0.06% 3.37% -15.23% UNG Natural Gas 5.98% 22.28% 74.46% -0.78% 3.90% -11.71% UDN Short Dollar 0.44% -1.95% 39.62% UGA Gasoline -31.22% 20+ Year Treasury Bonds 0.42% 7.66% TLT 5.46% -7.67% DBP Precious Metals -0.67% -0.56% 5.01% GLD Gold -5.31% -0.86% 3.85% -10.67% FXE Euro -12.54% TIP **TIPS Bonds** 0.53% 1.16% 8.11% -10.74% -0.26% SLV Silver PPLT abrdn Physical Platin. 0.54% 5.67% 1.71% -0.02% 0.28% 0.40% FLOT Floating Rate Bonds PALL abrdn Physical Palla. -3.79% -7.27% -1.60% FXB British Pound Sterling -0.33% 4.68% -12.37% -0.15% 6.52% -18.27% DBB Base Metals -1.84% 4.81% -13.79% LQD Investment Grade Corporate CPER -1.64% 2.96% -20.62% Copper HYG High Yield Corporate -0.04% 2.75% -11.15% LD -4.07% 3.80% -6.86% Lead -0.55% 4.01% -5.75% FXF Swiss Franc -2.21% 13.67% 21.89% JJN Nickel -0.46% -2.68% 1.42% BKLN Senior Loan JJU -1.56% 7.00% -15.28% Aluminum JJT Tin -6.52% 14.70% -43.10% -0.13% 5.69% -16.56% PFF Preferred & Income Securities -1.20% 3.78% -19.38% FXY Japanese Yen 0.20% -0.60% 0.91% DBA Agriculture -0.79% -3.41% 22.28% CORN Corn 0.10% 2.99% -8.20% MUB Municipal Bonds 0.59% 2.10% 19.43% SOYB Soybeans Canadian Dollar -0.48% 1.50% -5.98% 0.00% 4.60% -12.18% -0.48% -5.18% 11.37% FXC WEAT Wheat MBB MBS 0.11% 5.79% 3.26% CANE Sugar 0.01% -20.22% EMB Dollar Denominated EM Bonds 7.77% -4.92% 2.36% -12.01% BAL Cotton -0.85% 7.70% -9.98% FXA Australian Dollar -0.98% 3.50% -9.31% NIB Cocoa -0.56% 4.44% -13.97% LEMB Local Currency EM Bond JO 3.18% -13.30% -25.17% Coffee

* ETF Landscape represented using the ETF Action classification system**Leaders/Laggards/Overbought/Oversold ETFs must have \$50 million to qualify

Closing Price

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