



GLOBAL X ETFs RESEARCH

The Next Big Theme: June 2022

The Next Big Theme A Regular Pulse on Disruptive Trends by Global X ETFs

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Date: June 23, 2022 Topic: Disruptive Technology, Physical Environment, People & Demographics





Permissionless 2022 Conference: A Recap of the Major Takeaways

The Case for Digital Assets in a Portfolio

Four Companies Sustaining Water Supplies

Cybersecurity in Israel: Fortifying Digital Defenses Amid Elevated Risks

Lithium & Renewable Energy

U.S. Ramps Up Investments in Battery Tech

The U.S. Department of Energy (DOE) released notices of intent to provide \$2.91 billion to help ramp up production of advanced batteries. The DOE views batteries for electric vehicles (EVs) and clean energy storage as critical to establish clean energy industries in the near future. As EV demand rises while macro events such as the Russia-Ukraine war increase commodity prices and thus battery prices, funding from government and private sector entities may help facilitate battery recycling efforts. With securing lithium supply a priority for EV manufacturers, Stellantis may have gained an upper hand through its agreement with Controlled Thermal Resources Ltd. In California for up to 25,000 metric tons of lithium hydroxide per year over the next 10 years.²

Internet of Things & Renewable Energy

Tax Credits to Boost Semiconductor Output

The New York State Legislature approved tax credits for up to \$10 billion in hopes of attracting semiconductor chip manufacturers to the state.³ The tax credits would be available for up to 20 years and qualify for any green semiconductor chip plant.⁴ Similarly, U.S. Senate Finance Committee members want a semiconductor tax credit as part of a bill to increase the U.S.' competitiveness against China. The bill would dedicate more than \$50 billion for semiconductor manufacturing and research and development.⁵ The U.S. and EU announced a joint effort to avoid a "subsidy race" as the two countries try to boost semiconductor chip production. This transatlantic approach is aimed at securing supply and jointly encouraging chip investment.

Metaverse

The Virtual Realm May Become a Key to Economic Stability

The metaverse shows more potential than ever. Meta Platforms, via joint research with the Analysis Group, estimates that the metaverse can contribute \$3 trillion, or 2.8%, to global GDP by 2031.⁶ Notably, the metaverse could contribute \$40 billion to sub-Saharan Africa's emerging economy.⁷ Increasingly, sectors





recognize that the metaverse is akin to the shift to mobile devices and social media with regards to brand exposure. Examples of retailers working to integrate the metaverse in their business include high-end brands such as Gucci's virtual handbag on Roblox, Louis Vuitton's virtual game, and Dior's virtual Atelier of Dreams using mixed reality. Elsewhere, Meta partnered with the Tribeca Film Festival to screen 20 short films for free on the Quest VR Headset.⁸ Also, Apple is working to update its iOS in preparation for mixed reality features, including their new Al-enhanced lock screen, widgets, subtle notifications, focus filters, 3D sounds, and Siri updates.

Cybersecurity

M&A Activity Secures Cybersecurity Market

Cybersecurity mergers and acquisitions (M&A) are at an all-time high as companies seek to integrate technologies in new security verticals and move away from being niche solution providers. M&A increased a robust 26.3% year-over-year (YoY) in Q1 2022, driven by digital shifts catalyzed by the COVID-19 pandemic, high-profile breaches that garnered investments from the government and enterprise level, and overall talent acquisition. While deal values were more impressive in Q1 2021, the number of deals increased in Q1 2022. A prime example of M&A activity comes from IBM's recent acquisition of Randori, an offensive security startup. Randori specializes in attack surface management (ASM), which became a necessity following the pandemic as organizations of all sizes transitioned to hybrid cloud environments and exposed themselves to increased attacks.

Fintech

BNPL Goes Mainstream

Apple made headlines with their in-house buy now, pay later (BNPL) service, Apple Pay Later. The new feature in the company's payment platform will mimic other BNPL services by allowing users to split purchases into separate payments. As an add-on to Apply Pay, Apply Pay Later will be supported in different apps and services. Though initially posing as a threat to traditional BNPL companies such as Affirm, the exposure from Apple can help drive mass consumer adoption of BNPL without detracting from merchant-led business practices of companies like Affirm. Affirm relies on direct integration with merchant systems, giving consumers fraud prevention and online store integration. This model can also create brand loyalty among consumers. Additionally, like credit cards, we expect users will be inclined to use more than one BNPL company.

Electric Vehicles

EV Adoption Takes Root Globally

Electric vehicle (EV) producers continue to exceed expectations. Through May, Ford's EV sales were up 222% from the same time last year. ¹⁰ Much of this increase can be attributed to the success of the Mustang Mach E, whose May sales increased 166% from last year, a monthly record despite facing production setbacks. Notable is that the Mach E's main competitor is the Tesla Model Y. ¹¹ In the U.K., Fiat announced their lineup would consist of only EVs and hybrids starting July 2022. This commitment is in line with the company's goal of offering only EVs globally by the end of the decade. In Asia, Chinese officials are in talks with automakers to extend subsidies for EVs that were set to expire this year. Specifically, Beijing





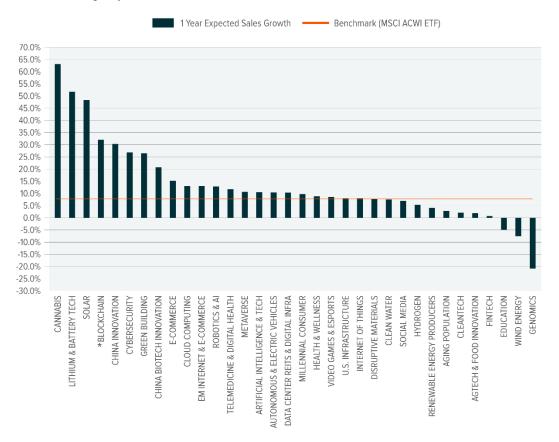
announced plans to offer subsidies up to 10,000 yuan (USD \$1,499) to consumers purchasing new energy vehicles to replace older cars by the end of 2022.¹²

THE NUMBERS

The following charts examine returns and sales growth expectations by theme, based on their corresponding ETFs.

THEMATIC SALES GROWTH

Source: Bloomberg, May 31, 2022, Global X ETFs.



Note: Forward looking based on data and analysis from 5/31/2022.

1 year annualized forward sales growth is the consensus analyst expectations for total sales growth in the next 12 months.

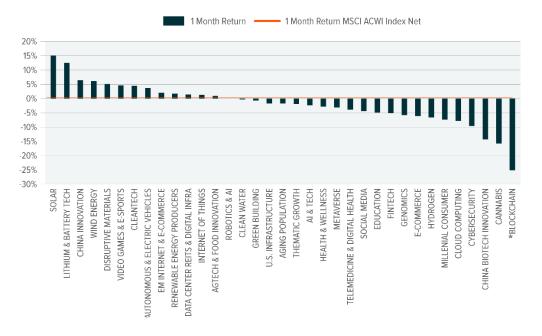
*Blockchain reflects figures according to BKCH ETF





MAY 2022 THEMATIC ETF RETURNS

Source: Bloomberg, May 31, 2022, Global X ETFs.



Note: The performance data quoted represents past performance and does not guarantee future results.

Performance data quoted represents past performance and does not guarantee future results. Investment return and principal value of an investment will fluctuate so that an investors' shares, when sold or redeemed, may be worth more or less than their original cost. Current performance may be higher or lower than the performance quoted. High short-term performance of the fund is unusual and investors should not expect such performance to be repeated. For performance data current to the most recent month end, please call 1-888-493-8631 or visit www.globalxetfs.com.

Standard Performance			Cumulative % Data as of month end (05/31/22)			Avg. Annualized % Data as of quarter end 03/31/22				
	Gross Expense Ratio		1 Month	3 Month	Since Inception	1 Year	3 Year	5 Year	10 Year	Since Inception
D 1 1 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		NAV	-0.54%	-19.28%	65.42%	-11.19%	13.97%	11.73%	-	13.58%
Robotics & Artificial Intelligence	0.68%	Market Price	0.00%	-19.34%	65.29%	-12.32%	13.54%	11.43%	-	13.41%
Inception Date 9/12/2016		Index	-0.48%	-19.20%	68.93%	-10.33%	14.62%	12.14%	-	14.00%
Fintent		NAV	-5.59%	-21.15%	77.42%	-23.18%	6.89%	15.96%	-	15.72%
Fintech	0.68%	Market Price	-5.13%	-21.16%	77.48%	-23.56%	6.80%	15.87%	-	15.67%
Inception Date 9/12/2016		Index	-5.58%	-21.23%	83.52%	-22.88%	7.50%	16.67%	-	16.41%
leaterment Of This are	0.68%	NAV	0.58%	-11.34%	105.00%	0.83%	22.89%	14.27%	-	16.38%
Internet Of Things Inception Date 9/12/2016		Market Price	1.27%	-10.92%	104.86%	0.26%	22.73%	14.15%	-	16.32%
inception Date 9/12/2016		Index	0.54%	-11.32%	108.77%	1.22%	23.30%	14.66%	-	16.76%
Claud Camandian		NAV	-7.90%	-15.65%	20.58%	-13.12%	-	-	-	14.27%
Cloud Computing Inception Date 4/12/2019	0.68%	Market Price	-7.75%	-15.68%	21.20%	-13.08%	-	-	-	14.45%
inception Date 4/12/2019		Index	-7.77%	-15.45%	22.99%	-12.58%	-	-	-	14.94%
Social Media		NAV	-4.67%	-17.52%	151.28%	-35.54%	10.19%	11.89%	11.11%	10.95%
Inception Date 11/14/2011	0.65%	Market Price	-4.36%	-18.20%	150.10%	-36.31%	9.98%	11.67%	10.98%	10.87%
inception date 11/14/2011		Index	-4.63%	-18.15%	165.30%	-35.66%	10.58%	12.35%	11.62%	11.47%
Artificial Intelligence		NAV	-2.74%	-15.17%	54.50%	-4.37%	20.31%	-	-	16.91%
& Technology	0.68%	Market Price	-2.36%	-15.03%	54.23%	-4.95%	20.27%	-	-	16.88%
Inception Date 5/11/2018		Index	-2.71%	-15.06%	56.92%	-3.88%	20.86%	-	-	17.35%
Autonomous P Electric Validas		NAV	3.10%	-9.31%	74.49%	4.81%	28.79%	-	-	18.10%
Autonomous & Electric Vehicles Inception Date 4/13/2018	0.68%	Market Price	3.69%	-8.79%	75.06%	4.19%	28.54%	-	-	18.02%
inception Date 4/15/2016		Index	3.10%	-9.45%	75.79%	5.09%	29.08%	-	-	18.27%



ABOUT

CONTACT

Lithium and Battery Tech Inception Date 7/22/2010	0.75%	NAV	11.69%	-3.09%	180.56%			24.64%	10.31%	9.61%
		Market Price	12.45%	-5.65%	178.29%		40.85%		10.28%	9.57%
meephon bate //22/2010		Index	11.75%	-2.94%	196.68%	35.50%	41.13%	24.63%	10.71%	10.12%
Genomics and Biotechnology Inception Date 4/5/2019		NAV	-6.11%	-22.76%	-21.47%	-32.95%	-	-	-	-0.52%
	0.50%	Market Price	-5.81%	-22.38%	-19.87%	-33.12%	-	-	-	0.12%
		Index	-5.96%	-22.64%	-20.18%	-32.69%	-	-	-	-0.02%
Millennial Consumer Inception Date 5/4/2016		NAV	-7.20%	-18.42%	102.21%	-9.16%	15.64%	17.61%	-	16.73%
	0.50%	Market Price	-7.42%	-18.63%	101.13%	-9.31%	15.60%	17.54%	-	16.64%
		Index	-7.18%	-18.34%	108.07%	-8.69%	16.27%	18.20%	-	17.27%
		NAV	-1.95%	-3.55%	79.33%	4.32%	10.88%	12.10%	-	12.17%
Aging Population	0.50%	Market Price	-1.73%	-3.18%	83.67%	4.02%	10.69%	11.95%	-	12.57%
Inception Date 5/09/2016		Index	-1.94%	-3.53%	82.12%	4.46%	11.09%	12.34%	_	12.45%
		NAV	-3.54%	-13.71%	50.56%	-8.26%	7.60%	10.91%	-	9.21%
Health and Wellness Inception	0.50%	Market Price	-2.81%	-13.95%	51.41%	-9.64%	7.15%	10.66%	-	9.21%
Date 5/9/2016		Index	-3.51%	-13.63%	54.30%	-7.99%	7.98%	11.32%	-	9.64%
		NAV	-5.94%	-21.44%	24.34%	-34.62%		-	_	12.96%
E-Commerce	0.50%	Market Price	-6.05%	-21.38%	24.00%	-34.79%		_		12.96%
Inception Date 11/27/2018	0.5070	Index	-5.92%	-21.35%	26.24%	-34.38%			_	13.46%
		NAV	-1.90%	-3.55%	77.20%		22.45%	14.62%		13.40%
US Infrastucture Development	0.470/									
Inception Date 3/6/2017	0.47%	Market Price	-1.71%	-3.51%	77.34%		22.45%	14.56%	-	13.99%
		Index	-1.82%	-3.42%	82.05%	14.24%		15.21%	-	14.55%
Cannabis	0.500/	NAV	-14.96%	-32.21%	-84.57%	-64.78%	-	-	-	-42.50%
Inception Date 9/17/2019	0.50%	Market Price	-15.84%	-33.20%	-84.98%	-64.85%	-	-	-	-42.92%
,		Index	-15.24%	-32.72%	-86.55%	-65.69%	-	-	-	-45.40%
Video Games & Esports		NAV	4.54%	-9.85%	57.62%	-18.85%	-	-	-	24.61%
Inception Date 10/25/2019	0.50%	Market Price	4.61%	-10.49%	56.77%	-19.50%	-	-	-	24.41%
inception bate 10/23/2013		Index	4.55%	-9.79%	59.58%	-18.47%	-	-	-	25.22%
Cybersecurity		NAV	-9.51%	-14.33%	75.28%	26.88%	-	-	-	35.43%
Inception Date 10/25/2019	0.50%	Market Price	-9.55%	-14.65%	78.29%	26.25%	-	-	-	36.37%
inception Date 10/25/2019		Index	-9.46%	-14.21%	76.98%	27.08%	-	-	-	35.92%
Thematic Growth	0.50%	NAV	-0.91%	-15.21%	27.74%	-21.11%	-	-	-	18.39%
		Market Price	-1.82%	-15.48%	28.25%	-21.58%	-	-	-	18.63%
Inception Date 10/25/2019		Index	-0.96%	-15.31%	26.74%	-21.44%	-	-	-	18.06%
		NAV	-5.44%	-14.51%	-56.54%	-51.10%	_	_	_	-30.71%
Education	0.50%	Market Price	-4.93%	-15.14%	-56.80%	-51.37%	-	_	-	-30.76%
Inception Date 7/10/2020	0.0070	Index	-5.43%	-14.39%	-56.14%	-50.87%	_	_	_	-30.40%
	0.68%	NAV	-4.33%	-17.67%	-21.64%	-23.87%	-	_	_	-2.72%
Telemedicine & Digital Health		Market Price	-3.87%	-17.33%	-21.64%	-23.95%	_	_	_	-2.72%
Inception Date 7/29/2020		Index	-4.23%	-17.57%	-20.80%	-23.39%	_	_	-	-2.15%
		NAV	-1.80%	-19.14%	-35.06%	-27.65%	_	_		-15.54%
China Biotech Innovation	0.65%		-1.52%	-19.50%	-35.45%	-28.90%	_	_	_	-16.15%
Inception Date 9/22/2020	0.05%	Market Price						-		
		Index	-1.61%	-18.91%	-34.29%	-27.15%	-		-	-15.00%
Cleantech	0.500/	NAV Market Price	4.08%	-8.75%	-1.40%	-23.35%	-	-	-	7.76%
Inception Date 10/27/2020	0.50%	Market Price	4.38%	-9.16%	-1.53%	-24.64%	-	-	-	7.31%
·		Index	4.13%	-8.66%	-3.42%	-25.04%	-	-	-	6.19%
Data Center Reits		NAV	0.96%	0.26%	6.70%	6.57%	-	-	-	7.75%
& Digital Infrastructure	0.50%	Market Price	1.35%	0.57%	7.03%	6.03%	-	-	-	7.61%
Inception Date 10/27/2020		Index	0.98%	0.25%	6.79%	6.67%	-	-	-	7.82%
Emerging Markets Internet		NAV	1.78%	-12.69%	-49.76%	-50.10%	-	-	-	-36.62%
& E-Commerce	0.65%	Market Price	1.95%	-14.37%	-50.44%	-51.04%	-	-	-	-37.09%
Inception Date 11/09/2020		Index	1.89%	-13.21%	-49.40%	-50.14%	-	-	-	-36.60%
Renewable Energy		NAV	1.20%	-1.17%	29.19%	3.50%	10.73%	10.82%	-	4.87%
Producers	0.65%	Market Price	1.68%	-1.95%	28.74%	2.73%	10.34%	10.63%	-	4.77%
Inception Date 05/27/2015		Index	1.17%	-1.70%	32.26%	3.53%	10.95%	11.23%	-	5.20%
•		NAV	4.84%	-14.59%	-45.44%	-27.48%	-	-	-	-39.37%
China Innovation Inception Date 02/22/2021	0.75%	Market Price	6.35%	-15.19%	-45.72%	-29.57%	-	-	-	-40.36%
	5.7570	Index	1.82%	-12.50%	-36.28%	-24.20%	-	-	-	-30.70%
		NAV	0.07%	-6.85%	-5.77%	-	_	_	_	-
Clean Water Inception Date 04/08/2021	0.500/	Market Price	-0.29%	-7.18%	-5.97%	_	_	_	_	-
	0.50%									
·		Index	0.08%	-6.77%	-5.45%	-	-	-	-	-
Agtech and Food		NAV	0.45%	-3.69%	-28.44%	-	-	-	-	-
Innovation ETF	0.50%	Market Price	0.89%	-3.32%	-28.20%	-	-	-	-	-
Inception Date 07/12/2021		Index	0.54%	-3.56%	-28.20%	-	-	-	-	-
Hudroson		NAV	-7.01%	-20.92%	-42.74%	-	-	-	-	-
Hydrogen	0.50%	Market Price	-6.61%	-20.40%	-42.46%	-	-	-	-	-
Inception Date 07/12/2021		Index	-7.32%	-21.10%	-42.72%	_	_	-	-	_





Blockchain Inception Date 07/12/2021		NAV	-25.59%	-49.76%	-64.76%	-	-	-	-	-
	0.50%	Market Price	-25.11%	-49.49%	-64.60%	-	-	-	-	-
		Index	-25.60%	-49.82%	-64.96%	-	-	-	-	-
Calaii		NAV	14.51%	-7.58%	-16.77%	-	-	-	-	-
Solar	0.50%	Market Price	15.11%	-9.09%	-16.85%	-	-	-	-	-
Inception Date 09/08/2021		Index	14.58%	-7.42%	-16.44%	-	-	-	-	-
Wind Energy		NAV	5.19%	-11.37%	-19.90%	-	-	-	-	-
	0.50%	Market Price	6.10%	-12.64%	-20.06%	-	-	-	-	-
Inception Date 09/08/2021		Index	5.29%	-11.26%	-19.59%	-	-	-	-	-
	0.59%	NAV	4.33%	-11.21%	-0.63%	-	-	-	-	-
Disruptive Materials		Market Price	5.11%	-11.69%	-0.42%	-	-	-	-	-
Inception Date 01/24/22		Index	4.39%	-11.11%	-0.47%	-	-	-	-	-
		NAV	-1.36%	-	-5.95%	-	-	-	-	-
Green Building	0.45%	Market Price	-0.71%	-	-5.64%	-	-	-	-	-
Inception Date 04/11/22	0.1070	Index	-1.37%	-	-5.96%	-	-	-	-	-
Metaverse		NAV	-1.71%	-	-2.28%	-	-	-	-	-
Inception Date 04/26/22	0.50%	Market Price	-3.09%	-	-2.32%	-	-	-	-	-
	2.0070	Index	-1.65%	-	-2.32%	-	-	-	-	_





P/S AND EV/S Source: Bloomberg, data is as of 5/31/22 and 4/30/22, Global X ETFs.

Ticker	Name	F	P/S	EV/S		
	-	5/31/2022	4/30/2022	5/31/2022	4/30/2022	
BUG	Global X Cybersecurity ETF	8.15	8.94	8.29	8.55	
HYDR	Global X Hydrogen ETF	5.46	5.02	4.89	4.68	
VPN	Global X Data Center REITs & Digital Infrastructure ETF	4.91	4.86	8.00	8.03	
GNOM	Global X Genomics & Biotechnology ETF	4.87	5.65	4.21	4.93	
CLOU	Global X Cloud Computing ETF	4.40	5.99	5.06	6.42	
VR	Global X Metaverse ETF	4.13	4.11	4.07	4.00	
СНВ	Global X China Biotech Innovation ETF	3.79	4.59	3.72	4.35	
HERO	Global X Video Games & Esports ETF	3.65	3.47	3.44	3.21	
SOCL	Global X Social Media ETF	3.64	3.63	3.46	3.39	
FINX	Global X FinTech ETF	3.63	3.82	4.59	4.55	
AGNG	Global X Aging Population ETF	3.62	3.76	4.32	4.48	
KEJI	Global X China Innovation ETF	3.58	3.57	2.90	2.82	
RNRG	Global X Renewable Energy Producers ETF	3.20	3.26	5.00	5.08	
BOTZ	Global X Robotics & Artifical Intelligence ETF	3.17	3.21	3.19	3.17	
EDOC	Global X Telemedicine & Digital Health ETF	2.94	2.92	3.03	3.24	
AIQ	Global X Artificial Intelligence & Technology ETF	2.71	2.56	3.13	3.26	
AQWA	Global X Clean Water ETF	2.67	2.72	3.86	3.88	
RAYS	Global X Solar ETF	2.65	2.09	3.52	2.91	
SPX	S&P 500 Index	2.55	2.58	2.84	2.89	
SNSR	Global X Internet of Things ETF	2.53	2.51	2.83	2.85	
GRNR	Global X Green Building ETF	2.39	2.41	4.32	4.31	
POTX	Global X Cannabis ETF	2.17	2.95	2.47	3.33	
MILN	Global X Millennial Consumer ETF	2.16	2.38	2.46	2.70	
LIT	Global X Lithium and Battery Tech ETF	2.07	1.97	2.21	2.18	
EWEB	Global X Emerging Markets Internet & E-commerce ETF	1.99	2.00	1.91	1.88	
ACWI	MSCI ACWI Index	1.85	1.88	2.10	2.14	
DMAT	Global X Disruptive Materials ETF	1.82	1.77	2.14	2.09	
WNDY	Global X Wind Energy ETF	1.57	1.51	2.26	2.61	
KROP	Global X AgTech & Food Innovation ETF	1.44	1.54	1.63	1.71	
EDUT	Global X Education ETF	1.43	1.47	1.29	1.18	
ВКСН	Global X Blockchain ETF	1.43	3.15	1.82	3.87	
PAVE	Global X U.S. Infrastructure Development ETF	1.36	1.42	1.64	1.71	
CTEC	Global X Cleantech ETF	1.35	1.31	1.65	1.61	
BFIT	Global X Health & Weliness ETF	1.24	1.29	1.46	1.50	
EBIZ	Global X E-commerce ETF	1.10	1.17	1.05	1.12	
DRIV	Global X Autonomous & Electric Vehicles ETF	1.00	0.97	1.13	1.10	

P/S and EV/S refer to price-to-sales and enterprise value-to-sales, respectively.





F12 MONTH SALES GROWTH, PSG, AND EVSG

Source: Bloomberg, data is as of 5/31/22 and 4/30/22, Global X ETFs.

Ticker	Name	F12M Sa	ales (%)	P:	SG	EVSG	
		5/31/2022	4/30/2022	5/31/2022	4/30/2022	5/31/2022	4/30/2022
POTX	Global X Cannabis ETF	63.1%	73.5%	0.03	0.04	0.04	0.05
LIT	Global X Lithium and Battery Tech ETF	51.7%	48.2%	0.04	0.04	0.04	0.05
RAYS	Global X Solar ETF	48.3%	42.1%	0.05	0.05	0.07	0.07
ВКСН	Global X Blockchain ETF	32.0%	49.1%	0.04	0.06	0.06	0.08
KEJI	Global X China Innovation ETF	30.3%	32.1%	0.12	0.11	0.10	0.09
BUG	Global X Cybersecurity ETF	26.8%	26.2%	0.30	0.34	0.31	0.33
GRNR	Global X Green Building ETF	26.4%	9.2%	0.09	0.26	0.16	0.47
СНВ	Global X China Biotech Innovation ETF	20.7%	27.8%	0.18	0.17	0.18	0.16
EBIZ	Global X E-commerce ETF	15.2%	17.5%	0.07	0.07	0.07	0.06
CLOU	Global X Cloud Computing ETF	13.0%	12.5%	0.34	0.48	0.39	0.52
EWEB	Global X Emerging Markets Internet & E-commerce ETF	13.0%	18.4%	0.15	0.11	0.15	0.10
BOTZ	Global X Robotics & Artificial Intelligence ETF	12.8%	11.4%	0.25	0.28	0.25	0.28
EDOC	Global X Telemedicine & Digital Health ETF	11.7%	6.8%	0.25	0.43	0.26	0.48
VR	Global X Metaverse ETF	10.6%	10.3%	0.39	0.40	0.39	0.39
AIQ	Global X Artificial Intelligence & Technology ETF	10.5%	10.5%	0.26	0.24	0.30	0.31
DRIV	Global X Autonomous & Electric Vehicles ETF	10.4%	9.3%	0.10	0.10	0.11	0.12
VPN	Global X Data Center REITs & Digital Infrastructure ETF	10.3%	10.4%	0.47	0.47	0.77	0.77
MILN	Global X Millennial Consumer ETF	9.7%	10.0%	0.22	0.24	0.25	0.27
BFIT	Global X Health & Wellness ETF	8.8%	8.2%	0.14	0.16	0.17	0.18
HERO	Global X Video Games & Esports ETF	8.5%	9.2%	0.43	0.38	0.40	0.35
PAVE	Global X U.S. Infrastructure Development ETF	8.0%	9.3%	0.17	0.15	0.20	0.18
SNSR	Global X Internet of Things ETF	8.0%	8.0%	0.32	0.31	0.36	0.36
SPX	S&P 500 Index	7.8%	7.6%	0.33	0.34	0.37	0.38
DMAT	Global X Disruptive Materials ETF	7.6%	5.6%	0.24	0.32	0.28	0.38
AQWA	Global X Clean Water ETF	7.5%	7.4%	0.36	0.37	0.51	0.53
ACWI	MSCI ACWI Index	7.5%	7.5%	0.25	0.25	0.28	0.28
SOCL	Global X Social Media ETF	6.9%	7.5%	0.53	0.48	0.50	0.45
HYDR	Global X Hydrogen ETF	5.3%	3.4%	1.02	1.47	0.91	1.37
RNRG	Global X Renewable Energy Producers ETF	4.0%	1.1%	0.79	3.01	1.24	4.70
AGNG	Global X Aging Population ETF	2.8%	1.7%	1.29	2.22	1.54	2.65
CTEC	Global X Cleantech ETF	2.1%	-2.2%	0.66	-0.60	0.80	-0.74
KROP	Global X AgTech & Food Innovation ETF	1.9%	5.1%	0.78	0.30	0.87	0.34
FINX	Global X FinTech ETF	0.7%	3.2%	5.36	1.19	6.78	1.41
EDUT	Global X Education ETF	-4.8%	0.8%	-0.30	1.79	-0.27	1.43
WNDY	Global X Wind Energy ETF	-7.5%	-9.0%	-0.21	-0.17	-0.30	-0.29
GNOM	Global X Genomics & Biotechnology ETF	-20.8%	0.1%	-0.23	76.42	-0.20	66.63

Note: F12 Sales Growth refers to the consensus analyst expectations for total sales growth in the next 12 months. PSG and EVSG refer to Price-to-Sales over F12 Sales Growth and Enterprise Value over F12 Sales Growth, respectively. N/As reflect a negative growth number in the denominator and similar to traditional PEG ratios aren't typically displayed as such (hence the N/A).

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- Physical Environment: <u>U.S. Infrastructure Development ETF (PAVE)</u>, <u>CleanTech ETF (CTEC)</u>, Renewable Energy Producers (RNRG), <u>Clean Water ETF (AQWA)</u>, <u>Hydrogen ETF (HYDR)</u>, <u>Solar ETF (RAYS)</u>, <u>Wind Energy ETF (WNDY)</u>, <u>Disruptive Materials ETF (DMAT)</u>, <u>Green Building ETF (GRNR)</u>
- Multi-Theme: Thematic Growth ETF (GXTG), China Innovation ETF (KEJI)

Footnotes

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