

GLOBAL X ETFs RESEARCH

The Next Big Theme: December 2023



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Topic: **Disruptive**
Technology, Physical
Environment, People &
Demographics



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E-commerce & FinTech

Holiday Spending Trends Unwrapped

A record-breaking 200.4 million American consumers participated in shopping activities from Thanksgiving to Cyber Monday, including a substantial consumer shift towards digital platforms.¹ This activity surpassed last year's figures and significantly exceeded initial projections.² U.S. consumers spent a record \$12.4 billion on Cyber Monday alone, with overall online sales during Cyber Week increasing 5% year-over-year (YoY) to an impressive \$70.8 billion.³ Data from Cyber Week 2023 showed global sales rose 6% YoY to \$298 billion.⁴ Increased adoption of Buy Now, Pay Later (BNPL) options and mobile wallets were notable trends. BNPL orders in the U.S. increased 8% YoY, illustrating the growing consumer preference for flexible payment methods amid economic pressures.⁵ U.S. mobile wallet usage, boosted by Apple Pay in particular, rose 54%, reflecting a shift towards more convenient and frictionless payment methods.⁶

Amazon marked its "biggest ever" holiday shopping event with over 1 billion items sold, highlighting the strength of its extended promotional strategies and the consumer appeal of its product offerings, notably in electronics and personal care.⁷

Health & Wellness

Pharmaceuticals Reshape Obesity and Weight-Loss Treatments

The Food and Drug Administration's (FDA) recent approval of Eli Lilly's Zepbound™ (tirzepatide) is a major step in chronic weight management.⁸ In clinical trials, Zepbound demonstrated substantial weight loss, with the highest dose leading to an average loss of 48 pounds.⁹ This drug is the first approved treatment that activates two incretin hormone receptors, GIP and GLP-1, to address an underlying cause of excess weight.¹⁰ To promote its weight-loss drugs Wegovy and Saxenda, Novo Nordisk paid U.S. medical professionals \$25.8 million in fees and expenses between 2013 and 2022.¹¹ The drugs mimic a natural hormone that slows digestion and makes patients feel fuller. Wegovy shows 15% average weight loss in trials.¹² Roche's acquisition of Carmot Therapeutics for \$2.7 billion marks its entry into the weight-loss space, gaining access to promising GLP-1 receptor agonists.¹³ Carmot's lead asset, CT-388, demonstrated significant weight loss in Phase Ib studies.¹⁴ Roche also obtained CT-868 and CT-996, expanding its scope to address obesity and potentially conditions such as cardiovascular and neurodegenerative diseases.¹⁵

Cybersecurity

Transatlantic Synergy in Cybersecurity Efforts

The Cyber Resilience Act (CRA) in the European Union and the Federal Cybersecurity Workforce Expansion Act in the United States represent pivotal steps in enhancing cybersecurity at the government



level. On the cusp of adoption, the CRA is set to improve the security of digital products in the EU.¹⁶ It mandates comprehensive cybersecurity requirements for the manufacturers of connected devices, emphasizing robust security measures throughout the lifecycles of hardware and software products.¹⁷ In the U.S., the Federal Cybersecurity Workforce Expansion Act aims to establish a registered apprenticeship program within the Cybersecurity and Infrastructure Security Agency and a pilot program for veterans' cybersecurity training through the Department of Veterans Affairs.¹⁸ This initiative is a strategic response to the increasing demand for skilled cybersecurity professionals.

On the corporate front, the expanded partnership between IBM Consulting and Palo Alto Networks exemplifies the private sector's proactive stance on cybersecurity.¹⁹ This collaboration is designed to strengthen clients' overall security postures in the evolving landscape of cybersecurity threats.

CleanTech

UAE Spearheads Climate Fund Alterra

The United Arab Emirates, the host of the COP28 climate summit, launched a landmark initiative in the battle against climate change with the Alterra climate fund.²⁰ Backed by a \$30 billion commitment from the UAE and in partnership with global asset management giants BlackRock, Brookfield, and TPG, the new fund aims to attract over \$250 billion in investments by 2030 and set a new standard in climate investment.²¹ Core to Alterra's strategy is to direct investments into clean energy advancements and climate mitigation projects for the developing world and emerging economies. The fund already achieved a key milestone by earmarking funds for more than 6 gigawatts of clean energy initiatives in India.²² This strategy is pivotal not just for climate change mitigation but also for the sustainable development of these regions. It also shows the growing global consensus on the critical need for these investments.

Defense Tech & Artificial Intelligence

The DoD's Comprehensive AI Integration Strategy

The U.S. Department of Defense (DoD) is strategically incorporating artificial intelligence (AI) into military operations. A prime example is the "Digital On-Demand" initiative led by the Chief Digital and Artificial Intelligence Office (CDAO) in collaboration with online learning platform MIT Horizon.²³ This program aims to boost AI literacy across the DoD and ensure its seamless integration into defense strategies. The U.S. Air Force and Space Force are intensifying efforts to integrate AI and machine learning into decision-making processes as part of a broader modernization initiative.²⁴

Notable recent partnerships include RTX's Raytheon BBN Technologies unit securing an \$8 million contract with the DoD to develop a supply chain simulator, utilizing predictive analytics to enhance the resilience of defense logistics networks.²⁵ In the private sector, Northrop Grumman and Rohde & Schwarz have a Memorandum of Understanding (MOU) to develop resilient communication systems across Europe. This collaboration extends to technologies enhancing interoperability between 5th and 4th generation aircraft, connecting assets across multiple domains.²⁶

Social Media

Digital Ad Growth Defies 2023 Odds

Global advertising revenue for 2023 is forecast to increase a significant 5.8% YoY to approximately \$889 billion, in line with midyear projections.²⁷ A surge in digital advertising spending is a significant factor in this growth. In particular, pure-play digital advertising, which includes popular platforms like YouTube and TikTok but excludes areas like connected-TV and digital out-of-home advertising, is forecast to end the year up



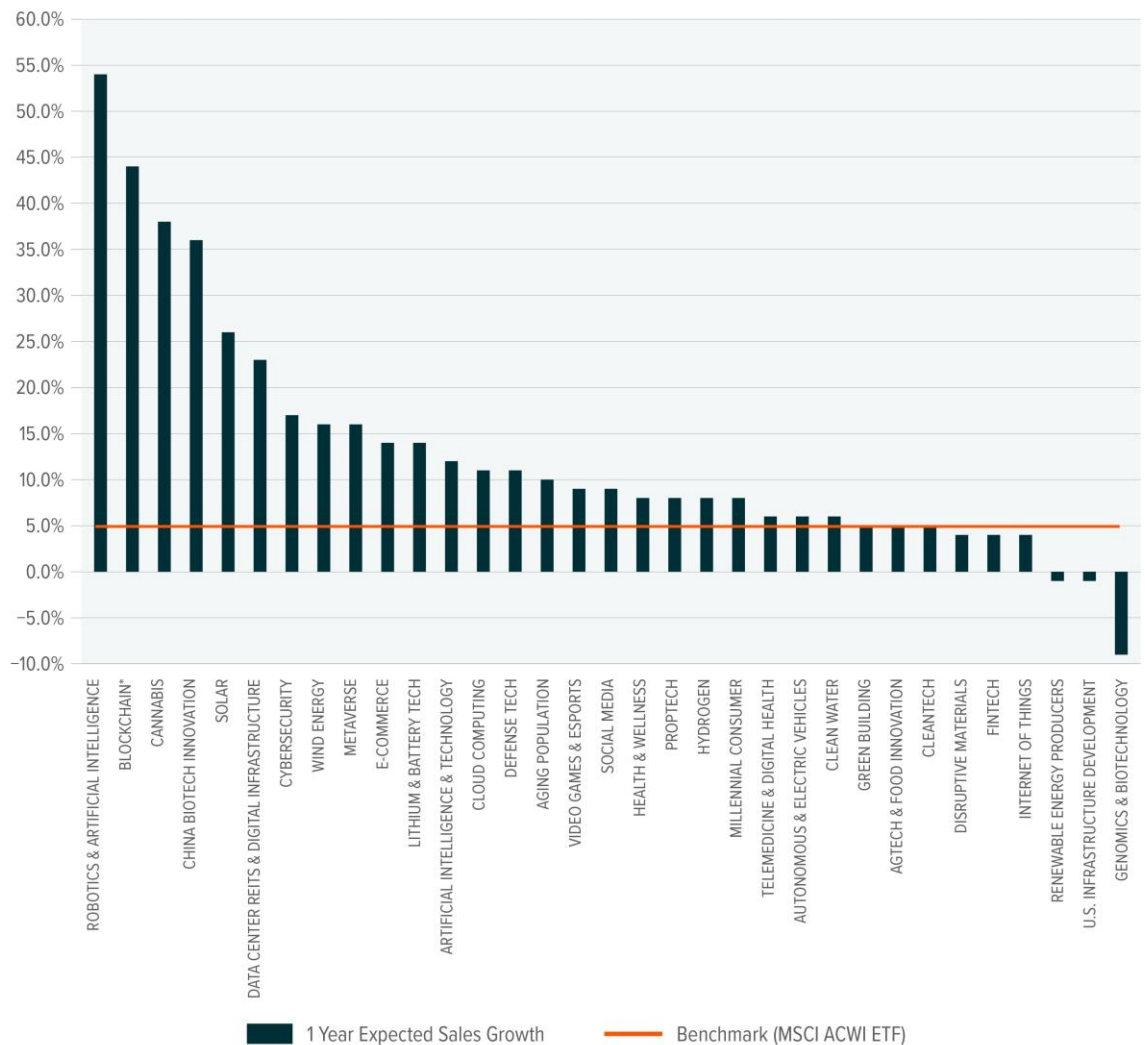
9.2% YoY, surpassing earlier expectations.²⁸ By 2028, this segment is expected to eclipse the size of the entire advertising industry as it stood in 2022.²⁹ The increasing popularity of short-form video content and e-commerce marketplace ads is a major reason. Short-form video platforms have emerged as a highly engaging medium for advertisers, offering creative ways to capture audience attention. E-commerce marketplace ads also offer advertisers direct channels to target consumers effectively.

THE NUMBERS

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

THEMATIC EXPECTED SALES GROWTH

Source: Bloomberg, November 30, 2023, Global X ETFs.



Note: Forward looking based on index data and analysis from 11/30/2023.

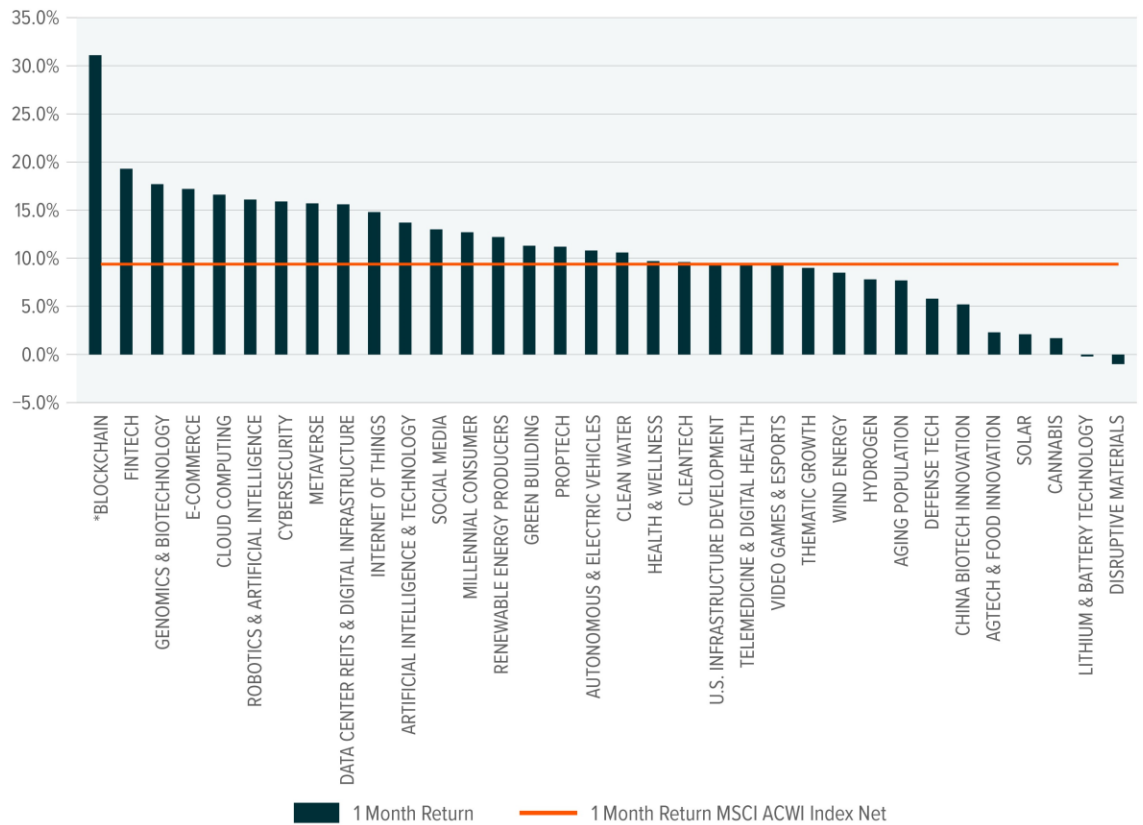
1 year annualized forward sales growth is the consensus analyst expectations for total sales growth in the next 12 months.

Refer to Appendix above Footnotes for details on Indices used.



NOVEMBER 2023 THEMATIC ETF RETURNS

Source: Bloomberg, November 30, 2023, Global X ETFs.



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

*Blockchain reflects figures according to BKCH ETF

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 (11/30/23)			Avg. Annualized % Data as of quarter end (09/30/23)				
	Expense Ratio		1 Month	3 Month	Since Inception	1 Year	3 Year	5 Year	10 Year	Since Inception
Robotics & Artificial Intelligence Inception Date 9/12/2016	0.69%	NAV	17.07%	-1.08%	84.20%	36.68%	-3.62%	2.20%	-	8.02%
		Market Price	16.07%	-1.12%	83.93%	36.98%	-3.76%	2.20%	-	8.00%
		Index	17.11%	-0.99%	89.01%	37.15%	-3.10%	2.60%	-	8.41%
Fintech Inception Date 9/12/2016	0.68%	NAV	19.37%	2.80%	57.49%	-0.80%	-17.50%	-5.77%	-	5.08%
		Market Price	19.29%	2.81%	57.13%	-0.45%	-17.53%	-5.76%	-	5.08%
		Index	19.41%	2.93%	63.45%	-0.60%	-17.21%	-5.34%	-	5.62%
Internet Of Things Inception Date 9/12/2016	0.68%	NAV	14.70%	-0.12%	128.39%	24.63%	6.09%	9.53%	-	11.56%
		Market Price	14.79%	0.06%	128.32%	24.33%	5.86%	9.51%	-	11.51%
		Index	14.88%	0.05%	134.05%	25.08%	6.46%	9.87%	-	11.92%
Cloud Computing Inception Date 4/12/2019	0.68%	NAV	16.73%	1.22%	40.52%	18.13%	-7.08%	-	-	5.54%
		Market Price	16.55%	1.27%	40.95%	17.98%	-7.08%	-	-	5.64%
		Index	16.80%	1.36%	44.64%	18.86%	-6.48%	-	-	6.20%
Social Media Inception Date 11/14/2011	0.65%	NAV	13.38%	3.33%	173.11%	30.36%	-9.25%	2.60%	6.56%	8.02%
		Market Price	13.03%	3.29%	171.79%	29.91%	-9.60%	2.52%	6.46%	7.96%
		Index	13.48%	3.47%	191.00%	31.27%	-8.82%	3.12%	7.08%	8.59%



Artificial Intelligence & Technology Inception Date 5/11/2018	0.68%	NAV	13.86%	4.02%	103.12%	41.17%	5.15%	11.74%	-	11.97%
		Market Price	13.65%	4.06%	103.13%	40.92%	5.02%	11.71%	-	11.96%
		Index	13.92%	4.18%	108.04%	42.07%	5.70%	12.22%	-	12.46%
Autonomous & Electric Vehicles Inception Date 4/13/2018	0.68%	NAV	11.38%	-7.09%	65.31%	18.23%	12.71%	11.39%	-	9.96%
		Market Price	10.83%	-7.19%	64.82%	18.37%	12.48%	11.25%	-	9.89%
		Index	11.44%	-7.06%	66.69%	18.22%	12.97%	11.59%	-	10.13%
Lithium and Battery Tech Inception Date 7/22/2010	0.75%	NAV	1.52%	-19.28%	83.98%	-15.47%	12.42%	12.46%	9.03%	5.87%
		Market Price	-0.15%	-19.56%	82.54%	-15.52%	11.90%	12.32%	8.99%	5.83%
		Index	1.56%	-19.19%	95.78%	-15.04%	12.95%	12.73%	9.56%	6.37%
Genomics and Biotechnology Inception Date 4/5/2019	0.50%	NAV	17.49%	-7.22%	-31.76%	-18.93%	-17.18%	-	-	-8.67%
		Market Price	17.74%	-7.21%	-30.42%	-18.96%	-17.24%	-	-	-8.26%
		Index	17.71%	-6.89%	-30.18%	-18.65%	-16.88%	-	-	-8.26%
Millennial Consumer Inception Date 5/4/2016	0.50%	NAV	12.61%	2.40%	125.81%	18.51%	-0.68%	5.38%	-	10.44%
		Market Price	12.66%	2.21%	124.86%	18.90%	-0.64%	5.41%	-	10.41%
		Index	12.69%	2.50%	133.92%	19.11%	-0.20%	5.90%	-	10.95%
Aging Population Inception Date 5/09/2016	0.50%	NAV	7.98%	-1.46%	86.85%	11.72%	1.24%	3.89%	-	8.36%
		Market Price	7.66%	-1.54%	90.08%	11.43%	1.12%	3.71%	-	8.61%
		Index	8.07%	-1.36%	90.61%	12.03%	1.47%	4.10%	-	8.64%
Health and Wellness Inception Date 5/9/2016	0.50%	NAV	9.99%	0.81%	58.46%	15.85%	-0.66%	2.09%	-	5.52%
		Market Price	9.66%	1.00%	59.17%	16.77%	-0.80%	2.03%	-	5.62%
		Index	10.02%	0.97%	63.30%	16.24%	-0.33%	2.44%	-	5.93%
E-Commerce Inception Date 11/27/2018	0.50%	NAV	17.22%	4.03%	34.76%	19.34%	-12.19%	-	-	4.40%
		Market Price	17.15%	4.25%	34.76%	19.36%	-12.38%	-	-	4.30%
		Index	17.28%	4.13%	37.75%	19.82%	-11.84%	-	-	4.85%
Us Infrastructure Development Inception Date 3/6/2017	0.47%	NAV	9.41%	-2.36%	118.74%	32.69%	22.51%	12.87%	-	12.02%
		Market Price	9.34%	-2.42%	118.67%	32.78%	22.48%	12.91%	-	12.03%
		Index	9.55%	-2.14%	126.57%	33.43%	23.20%	13.45%	-	12.59%
Cannabis Inception Date 9/17/2019	0.51%	NAV	1.30%	-26.49%	-95.65%	-49.11%	-44.51%	-	-	-51.59%
		Market Price	1.69%	-27.21%	-95.77%	-49.59%	-44.80%	-	-	-51.95%
		Index	1.25%	-26.68%	-96.39%	-5.09%	-46.15%	-	-	-53.76%
Video Games & Esports Inception Date 10/25/2019	0.50%	NAV	10.66%	0.76%	35.69%	4.71%	-11.16%	-	-	6.24%
		Market Price	9.27%	-0.10%	34.71%	4.89%	-11.24%	-	-	6.24%
		Index	10.76%	0.83%	38.20%	5.12%	-10.77%	-	-	6.72%
Cybersecurity Inception Date 10/25/2019	0.51%	NAV	16.09%	7.02%	81.25%	2.70%	4.48%	-	-	13.39%
		Market Price	15.89%	6.70%	84.02%	2.61%	4.51%	-	-	13.92%
		Index	16.16%	7.18%	84.57%	3.34%	4.89%	-	-	13.89%
Thematic Growth Inception Date 10/25/2019	0.50%	NAV	8.78%	-10.00%	-4.77%	-7.70%	-10.25%	-	-	-0.66%
		Market Price	9.00%	-10.39%	-4.02%	-7.73%	-10.39%	-	-	-0.52%
		Index	8.80%	-10.03%	-5.65%	-7.78%	-10.50%	-	-	-0.89%
Telemedicine & Digital Health Inception Date 7/29/2020	0.68%	NAV	9.41%	-13.53%	-41.21%	-18.82%	-18.16%	-	-	-14.71%
		Market Price	9.31%	-13.90%	-41.41%	-18.76%	-18.30%	-	-	-14.74%
		Index	9.52%	-13.37%	-40.33%	-18.32%	-17.79%	-	-	-14.33%
China Biotech Innovation Inception Date 9/22/2020	0.65%	NAV	5.32%	17.06%	-43.23%	-10.60%	-20.73%	-	-	-20.20%
		Market Price	5.23%	14.97%	-43.63%	-9.45%	-21.02%	-	-	-20.27%
		Index	5.38%	17.24%	-41.97%	-9.99%	-20.19%	-	-	-19.66%
Cleantech Inception Date 10/27/2020	0.50%	NAV	9.29%	-20.39%	-34.01%	-21.32%	-	-	-	-10.06%
		Market Price	9.56%	-20.03%	-34.14%	-21.21%	-	-	-	-10.17%
		Index	9.27%	-20.40%	-35.04%	-21.02%	-	-	-	-10.53%
Data Center Reits & Digital Infrastructure Inception Date 10/27/2020	0.50%	NAV	15.04%	5.69%	0.02%	6.05%	-	-	-	-3.97%
		Market Price	15.56%	5.68%	0.25%	6.25%	-	-	-	-3.91%
		Index	15.14%	5.69%	-0.05%	5.82%	-	-	-	-4.04%
Renewable Energy Producers Inception Date 05/27/2015	0.66%	NAV	12.47%	-5.34%	-9.22%	-21.01%	-10.58%	-1.29%	-	-1.61%
		Market Price	12.22%	-5.98%	-10.00%	-21.17%	-10.80%	-1.33%	-	-1.69%
		Index	12.56%	-5.30%	-6.29%	-20.76%	-10.23%	-0.85%	-	-1.20%
Clean Water Inception Date 04/08/2021	0.50%	NAV	10.79%	0.79%	6.03%	16.28%	-	-	-	-0.96%
		Market Price	10.59%	0.46%	6.37%	16.12%	-	-	-	-0.82%
		Index	10.87%	0.93%	6.90%	16.55%	-	-	-	-0.68%
Agtech and Food Innovation ETF Inception Date 07/12/2021	0.50%	NAV	2.42%	-10.87%	-59.11%	-23.43%	-	-	-	-31.22%
		Market Price	2.31%	-12.01%	-59.08%	-23.61%	-	-	-	-31.00%
		Index	2.45%	-10.74%	-58.77%	-23.19%	-	-	-	-30.98%
Hydrogen Inception Date 07/12/2021	0.50%	NAV	7.96%	-23.86%	-73.99%	-33.87%	-	-	-	-42.32%
		Market Price	7.76%	-24.33%	-73.91%	-33.78%	-	-	-	-42.28%
		Index	8.08%	-23.71%	-73.63%	-33.19%	-	-	-	-42.00%
Blockchain Inception Date 07/12/2021	0.50%	NAV	30.00%	10.94%	-67.52%	-0.09%	-	-	-	-46.90%
		Market Price	31.06%	12.02%	-67.31%	0.08%	-	-	-	-46.82%
		Index	29.94%	10.80%	-68.65%	-2.10%	-	-	-	-47.72%
Solar Inception Date 09/08/2021	0.51%	NAV	2.45%	-20.92%	-51.54%	-33.73%	-	-	-	-24.76%
		Market Price	2.09%	-21.42%	-51.46%	-33.43%	-	-	-	-24.65%
		Index	2.48%	-20.90%	-50.98%	-33.38%	-	-	-	-24.34%
Wind Energy Inception Date 09/08/2021	0.50%	NAV	8.68%	-5.84%	-47.34%	-20.86%	-	-	-	-26.89%
		Market Price	8.45%	-5.87%	-47.55%	-20.65%	-	-	-	-27.06%
		Index	8.70%	-5.80%	-46.87%	-20.61%	-	-	-	-26.60%
Disruptive Materials Inception Date 01/24/22	0.59%	NAV	-0.14%	-15.82%	-38.44%	-9.34%	-	-	-	-19.52%
		Market Price	-0.98%	-17.11%	-38.92%	-8.16%	-	-	-	-19.46%
		Index	-0.06%	-15.67%	-37.95%	-8.96%	-	-	-	-19.20%



Green Building Inception Date 04/11/22	0.45%	NAV	12.00%	-1.05%	-11.04%	14.26%	-	-	-	-11.06%
		Market Price	11.26%	-1.14%	-11.11%	14.91%	-	-	-	-11.15%
		Index	12.11%	-0.86%	-10.73%	14.85%	-	-	-	-10.93%
Metaverse Inception Date 04/26/22	0.50%	NAV	16.79%	7.61%	12.59%	27.20%	-	-	-	-1.60%
		Market Price	15.65%	6.96%	11.94%	27.18%	-	-	-	-1.62%
		Index	16.81%	7.66%	13.25%	27.69%	-	-	-	-1.25%
Proptech Inception Date 04/11/23	0.50%	NAV	11.58%	-4.52%	8.71%	-	-	-	-	-
		Market Price	11.16%	-4.96%	8.47%	-	-	-	-	-
		Index	11.64%	-4.37%	8.94%	-	-	-	-	-
Carbon Credits Strategy Inception Date 05/24/23	0.39%	NAV	-2.04%	-10.26%	-8.99%	-	-	-	-	-
		Market Price	-1.49%	-10.36%	-8.50%	-	-	-	-	-
		Index	-1.53%	-9.42%	-6.09%	-	-	-	-	-
Defense Tech Inception date 09/11/23	0.50%	NAV	6.12%	-	8.90%	-	-	-	-	-
		Market Price	5.79%	-	9.02%	-	-	-	-	-
		Index	6.20%	-	9.04%	-	-	-	-	-



P/S AND EV/S

Source: Bloomberg, data is as of 11/30/23 and 10/31/23, Global X ETFs.

Ticker	Name	P/S		EV/S	
		11/30/23	10/31/23	11/30/23	10/31/23
GNOM	Global X Genomics & Biotechnology ETF	6.60	4.71	5.65	4.14
BUG	Global X Cybersecurity ETF	5.33	5.30	5.07	4.99
CHB	Global X China Biotech Innovation ETF	5.08	4.80	4.72	4.46
VR	Global X Metaverse ETF	4.79	4.08	4.79	4.11
VPN	Global X Data Center REITs & Digital Infrastructure ETF	4.51	3.97	7.13	6.41
BOTZ	Global X Robotics & Artificial Intelligence ETF	4.08	3.52	4.54	3.89
CLOU	Global X Cloud Computing ETF	3.94	3.63	4.20	3.88
AIQ	Global X Artificial Intelligence & Technology ETF	3.42	3.01	3.53	3.15
AGNG	Global X Aging Population ETF	3.40	3.15	4.00	3.79
BKCH	Global X Blockchain ETF	3.21	3.28	3.87	3.99
FINX	Global X FinTech ETF	3.17	2.52	3.90	3.31
SOCL	Global X Social Media ETF	3.12	2.83	3.03	2.69
HERO	Global X Video Games & Esports ETF	2.97	2.68	2.94	2.62
SNSR	Global X Internet of Things ETF	2.68	2.33	2.96	2.62
HYDR	Global X Hydrogen ETF	2.52	2.38	2.48	2.29
SPY	S&P 500 ETF	2.49	2.30	2.85	2.65
GRNR	Global X Green Building ETF	2.45	2.19	4.40	4.11
AQWA	Global X Clean Water ETF	2.37	2.17	3.36	3.15
EDOC	Global X Telemedicine & Digital Health ETF	1.99	1.98	1.97	2.04
RNRG	Global X Renewable Energy Producers ETF	1.99	1.75	4.39	4.27
MILN	Global X Millennial Consumer ETF	1.95	1.74	2.29	2.08
ACWI	MSCI ACWI ETF	1.85	1.68	2.18	2.01
PTEC	Global X PropTech ETF	1.78	1.40	2.88	2.63
LIT	Global X Lithium and Battery Tech ETF	1.58	1.41	1.75	1.48
PAVE	Global X U.S. Infrastructure ETF	1.52	1.41	1.85	1.69
SHLD	Global X Defense Tech ETF	1.47	1.42	1.75	1.69
WNDY	Global X Wind Energy ETF	1.38	1.25	2.82	2.69
RAYS	Global X Solar ETF	1.37	1.33	2.03	1.95
BFIT	Global X Health & Wellness ETF	1.30	1.17	1.47	1.36
POTX	Global X Cannabis ETF	1.27	1.17	1.36	1.40
DMAT	Global X Disruptive Materials ETF	1.21	1.22	1.52	1.51
EBIZ	Global X E-commerce ETF	1.09	0.92	1.17	0.78
KROP	Global X AgTech & Food Innovation ETF	0.89	0.84	1.25	1.19
CTEC	Global X Cleantech ETF	0.83	0.76	1.17	1.09
DRIV	Global X Autonomous & Electric Vehicles ETF	0.79	0.71	0.91	0.83

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



F12M SALES GROWTH, PSG, AND EVSG

Source: Bloomberg, data is as of 11/30/23 and 10/31/23, Global X ETFs.

Ticker	Name	F12M Sales (%)		PSG		EVSG	
		11/30/23	10/31/23	11/30/23	10/31/23	11/30/23	10/31/23
BOTZ	Global X Robotics & Artificial Intelligence ETF	54.3%	64.1%	0.08	0.05	0.08	0.06
BKCH	Global X Blockchain ETF	44.5%	68.0%	0.07	0.05	0.09	0.06
POTX	Global X Cannabis ETF	37.9%	44.6%	0.03	0.03	0.04	0.03
CHB	Global X China Biotech Innovation ETF	36.1%	31.8%	0.14	0.15	0.13	0.14
RAYS	Global X Solar ETF	26.4%	30.3%	0.05	0.04	0.08	0.06
VPN	Global X Data Center REITs & Digital Infrastructure ETF	23.4%	22.2%	0.19	0.18	0.30	0.29
BUG	Global X Cybersecurity ETF	16.5%	22.6%	0.32	0.23	0.31	0.22
WNDY	Global X Wind Energy ETF	16.1%	13.2%	0.09	0.10	0.17	0.20
VR	Global X Metaverse ETF	16.0%	15.3%	0.30	0.27	0.30	0.27
EBIZ	Global X E-commerce ETF	14.4%	12.2%	0.08	0.07	0.08	0.06
LIT	Global X Lithium and Battery Tech ETF	14.1%	14.5%	0.11	0.10	0.12	0.10
AIQ	Global X Artificial Intelligence & Technology ETF	11.9%	10.4%	0.29	0.29	0.30	0.30
CLOU	Global X Cloud Computing ETF	11.1%	10.3%	0.36	0.35	0.38	0.38
SHLD	Global X Defense Tech ETF	11.1%	8.7%	0.13	0.16	0.16	0.19
AGNG	Global X Aging Population ETF	9.5%	9.6%	0.36	0.33	0.42	0.39
HERO	Global X Video Games & Esports ETF	9.3%	6.8%	0.32	0.40	0.32	0.39
SOCL	Global X Social Media ETF	8.7%	7.3%	0.36	0.39	0.35	0.37
BFIT	Global X Health & Wellness ETF	8.3%	6.4%	0.16	0.18	0.18	0.21
PTEC	Global X PropTech ETF	8.2%	8.6%	0.22	0.16	0.35	0.31
HYDR	Global X Hydrogen ETF	8.0%	1.7%	0.31	1.37	0.31	1.31
MILN	Global X Millennial Consumer ETF	7.6%	7.4%	0.26	0.23	0.30	0.28
EDOC	Global X Telemedicine & Digital Health ETF	6.3%	4.1%	0.31	0.49	0.31	0.50
DRIV	Global X Autonomous & Electric Vehicles ETF	6.1%	6.0%	0.13	0.12	0.15	0.14
AQWA	Global X Clean Water ETF	5.7%	5.7%	0.41	0.38	0.59	0.56
SPY	S&P 500 ETF	5.6%	5.3%	0.45	0.43	0.51	0.50
GRNR	Global X Green Building ETF	5.4%	4.2%	0.46	0.52	0.82	0.97
KROP	Global X AgTech & Food Innovation ETF	5.4%	6.5%	0.16	0.13	0.23	0.18
ACWI	MSCI ACWI ETF	5.1%	4.6%	0.36	0.36	0.42	0.43
CTEC	Global X Cleantech ETF	4.8%	1.1%	0.17	0.72	0.24	1.03
DMAT	Global X Disruptive Materials ETF	4.2%	6.7%	0.29	0.18	0.36	0.22
FINX	Global X FinTech ETF	4.0%	5.8%	0.79	0.44	0.97	0.57
SNSR	Global X Internet of Things ETF	3.7%	3.7%	0.72	0.64	0.79	0.72
RNRG	Global X Renewable Energy Producers ETF	-0.7%	-2.9%	-2.81	-0.60	-6.21	-1.47
PAVE	Global X U.S. Infrastructure Development ETF	-0.8%	1.2%	-1.84	1.17	-2.22	1.41
GNOM	Global X Genomics & Biotechnology ETF	-8.8%	-4.2%	-0.75	-1.13	-0.64	-0.99

Note: F12M Growth is calculated using consensus analyst expectations for total sales in the next 12 months and weighted average trailing 12 month revenue.

Please note that substantial month-over-month variations in F12M Sales may be the result of Bloomberg coverage and estimates of underlying securities.

PSG and EVSG refer to Price-to-Sales over F12 Sales Growth and Enterprise Value over F12 Sales Growth, respectively.

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- **Multi-Theme:** [Thematic Growth ETF \(GXTG\)](#)

Appendix: Thematic Expected Sales Growth Graph Indices

AgTech & Food Innovation: *Solactive AgTech & Food Innovation Index*

Aging Population: *Indxx Aging Population Thematic Index*

Artificial Intelligence & Technology: *Indxx Artificial Intelligence & Big Data Index*

Autonomous & Electric Vehicles: *Solactive Autonomous & Electric Vehicles Index*

Blockchain: *Solactive Blockchain Index*

Cannabis: *Cannabis Index*

China Biotech Innovation: *Solactive China Biotech Innovation Index*



Clean Water: *Solactive Global Clean Water Industry Index*
CleanTech: *Indxx Global CleanTech Index*
Cloud Computing: *Indxx Global Cloud Computing Index*
Cybersecurity: *Indxx Cybersecurity Index*
Data Center REITs & Digital Infrastructure: *Solactive Data Center REITs & Digital Infrastructure Index*
Defense Tech: *Global X Defense Tech Index*
Disruptive Materials: *Solactive Disruptive Materials Index*
E-Commerce: *Solactive E-commerce Index*
FinTech: *Indxx Global FinTech Thematic Index*
Genomics: *Solactive Genomics Index*
Green Building: *Solactive Green Building Index*
Health & Wellness: *Indxx Global Health & Wellness Thematic Index*
Hydrogen: *Solactive Global Hydrogen Index*
Internet Of Things: *Indxx Global Internet of Things Thematic Index*
Lithium & Battery Technology: *Solactive Global Lithium Index*
Metaverse: *Global X Metaverse Index*
Millennial Consumer: *Indxx Millennials Thematic Index*
PropTech: *Global X PropTech Index*
Renewable Energy Producers: *Indxx Renewable Energy Producers Index*
Robotics & Artificial Intelligence: *Indxx Global Robotics & Artificial Intelligence Thematic Index*
Social Media: *Solactive Social Media Total Return Index*
Solar: *Solactive Solar Index*
Telemedicine & Digital Health: *Solactive Telemedicine & Digital Health Index*
U.S. Infrastructure: *Indxx U.S. Infrastructure Development Index*
Video Games & Esports: *Solactive Video Games & Esports Index*
Wind Energy: *Solactive Wind Energy Index*

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