

GLOBAL X ETFs RESEARCH

The Next Big Theme: October 2023



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Date: October 25, 2023
Topic: **Disruptive Technology, Physical Environment, People & Demographics**



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Genomics & Artificial Intelligence

Big Pharma Prescribes AI-Powered Drug Discovery

Pharmaceutical companies are increasingly working with artificial intelligence (AI) companies to integrate their technologies. Earlier in the year, Eli Lilly and XtalPi partnered to identify potential drug candidates for clinical and commercial development.¹ Last month, Eli Lilly further advanced its AI capabilities within the pharmaceutical sector by collaborating with the clinical trial automation platform, ProofPilot.² Eli Lilly extended its support by providing the platform access to its cutting-edge sensor cloud technology, known as Magnol.AI, ensuring the secure management of high-frequency sensor data. This partnership marks the first instance of Lilly licensing its technology.³ Similarly, Novo Nordisk is using Valo Health's AI-powered Opal Computational Platform to combine real-world patient data with human tissue modeling and machine learning.⁴ This combination can accelerate drug development process by identifying small molecules for novel therapies. Novo Nordisk committed up to \$2.7 billion in payments tied to program achievements, potentially spanning 11 of Valo's programs.⁵ Elsewhere in drug discovery, Merck KGaA announced strategic partnerships with Benevolent AI and Exscientia, both of which aim to leverage Merck KGaA's expertise in oncology and neuroinflammation.⁶

Lithium & Electric Vehicles

DOE Fuels Lithium Production

The U.S. Department of Energy (DOE) is in discussions with Lithium Americas about a landmark funding opportunity for the company's Nevada project. The funding could inject a substantial \$1 billion into the North American lithium industry and potentially cover 50–75% of the construction costs for the Thacker Pass project.^{7,8} If finalized, this loan would be the largest ever awarded by the DOE to a mining company.⁹ The U.S. lithium industry has grown considerably under the Biden Administration, which views securing lithium supply chains as vital to its climate goals. Once operational, the Thacker Pass mine could become North America's primary source of lithium for electric vehicle batteries.¹⁰ Previously, General Motors secured exclusive access to the initial production phase by committing to a \$650 million investment in the project.¹¹ In line with this trend to advance lithium projects, Peugeot Citroen Argentina, a subsidiary of auto manufacturer Stellantis, pledged \$90 million to acquire shares in Argentina Lithium & Energy Corp.¹²

Artificial Intelligence & Metaverse

Big Tech's AI Transformation Intensifies

Amazon is set to invest up to \$4 billion in Anthropic, an AI startup renowned for its Claude chatbot.¹³ Although smaller in scale than Microsoft's \$13 billion commitment to OpenAI, this move highlights Amazon's



venture into AI.¹⁴ Anthropic's Claude chatbots, akin to ChatGPT and Google's Bard, excel in translation, code generation, and answering queries. Claude handles more extensive prompts, making it particularly suited for business and legal documents. In this partnership, Amazon would secure minority ownership and integrate Anthropic's technology into various products, including the Amazon Bedrock service.¹⁵ Google granted select companies early access to Gemini, a conversational AI software designed to compete with OpenAI's GPT-4.¹⁶ Gemini encompasses chatbots and text summarization through Google Cloud Vertex AI. Meta unveiled its highly anticipated Quest 3 virtual reality headset and a suite of generative AI tools aimed at enhancing user experiences on Facebook and Instagram.¹⁷ These tools include image editing, virtual assistants, and AI characters inspired by celebrities. Getty Images collaborated with Nvidia on Generative AI by Getty Images. With it, users can create images from Getty's vast library of licensed photos, ensuring compliance with copyright regulations.¹⁸

Emerging Markets E-commerce & FinTech

India's Digital Commerce Surges

E-commerce in India is projected to be a \$117.3 billion market in 2023 after growing at a compound annual growth rate (CAGR) of 28.2% from \$39.3 billion in 2018.¹⁹ The growth is attributable to increased internet and smartphone penetration and a growing consumer preference for online shopping post-pandemic. Government initiatives like the Digital India campaign to enhance online infrastructure and expand Internet connectivity are also major factors. The growth is forecast to continue at a 22.4% CAGR to \$263.6 billion by 2027.²⁰ The FinTech sector is also getting a boost from India's thriving e-commerce and other emerging markets. With a 58.1% market share in 2023, alternative payment methods such as mobile and digital wallets have supplanted cash and cards as the predominant online payment method in India.²¹ Also, instant payment systems like India's UPI and Brazil's PIX earned global recognition for their contributions to advancing financial inclusion.

Millennial Consumers

Buyers Enter the iPhone 15 Queue

Customers in China, Japan, and the United States may have to wait until November to get their Apple iPhone 15 Pro or Pro Max, a sign of strong demand following pre-orders that commenced at the end of September.²² The delay offers reassurance for Apple following a global smartphone market decline that negatively affected iPhone sales in Q3 2023.²³ In China, the 4–5 week wait for the Pro Max, the more expensive model, alleviates concerns about potential financial setbacks in Apple's third-largest market.²⁴ Concerns arose due to competition from Huawei and restrictions on iPhone usage among government personnel. The iPhone 15 Pro and the Pro Max sold out within minutes on platforms like Alibaba's Tmall. Sales were 253% higher than the iPhone 14's launch on JD.com's Dada one-hour delivery app last year.²⁵ The wait for the Pro Max is 6–7 weeks in the United States and 5–6 weeks in Japan.²⁶ Apple's ability to meet and generate demand for these products is crucial for its holiday season success.

Defense Technology

Contracts Signed to Modernize Military Systems

Amid ongoing geopolitical uncertainty, nations are strengthening their defense capabilities, with major defense technology firms securing contracts. The General Dynamics Ordnance and Tactical Systems (OTS), a division of General Dynamics, was awarded an initial task order worth \$218 million for the 155mm M1128 Load, Assemble, and Pack (LAP).²⁷ This project involves modernizing processes and air-cooling technology to enhance the quality and efficiency of the 155mm artillery LAP. This task order is part of a



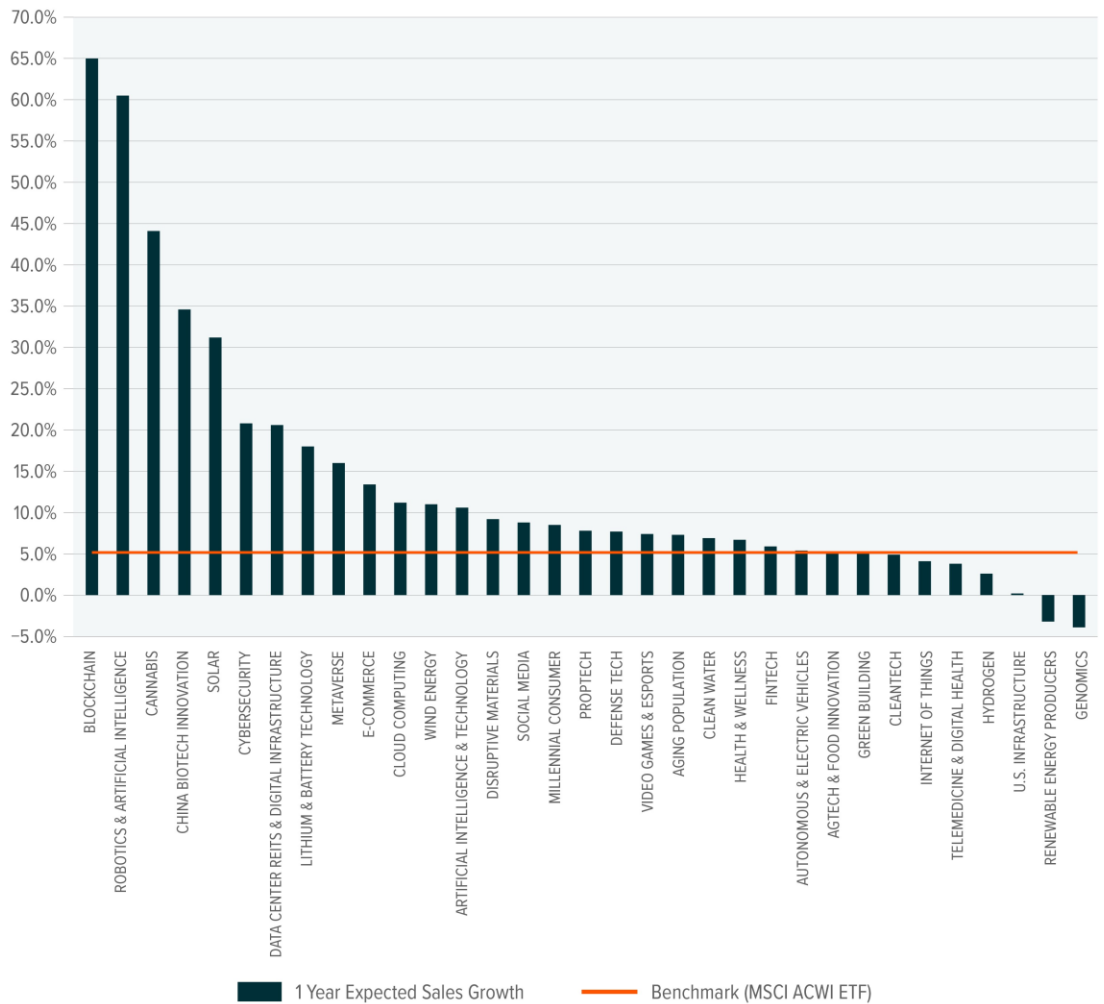
\$974 million multiyear firm-fixed-price contract from the U.S. Army.²⁸ The United States Air Force (USAF) granted Northrop Grumman a \$705 million contract for its Stand-in Attack Weapon (SiAW), an air-to-ground missile.²⁹ SiAW, the USAF's first digital weapons acquisition and development program, is designed to engage rapidly relocatable targets. Its open architecture interfaces enables swift subsystem upgrades for enhanced capabilities.³⁰ BAE Systems, the United Kingdom's largest defense company, secured a \$4.82 billion contract to build a new generation of submarines.³¹ The contract is a significant step in the security pact between Australia, the United Kingdom, and the United State. Known as Aukus, this pact aims to equip Australia with nuclear-powered attack submarines by the late 2030s.³²

THE NUMBERS

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

THEMATIC EXPECTED SALES GROWTH

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



Note: Forward looking based on index data and analysis from 9/30/2023.
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.



SEPTEMBER 2023 THEMATIC ETF RETURNS

Source: Bloomberg, September 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 (09/30/23) | | | | 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 | -7.47% | -13.58% | 72.30% | 36.68% | -3.62% | 2.20% | - | 8.02% |
| | | Market Price | -7.52% | -13.99% | 72.03% | 36.98% | -3.76% | 2.20% | - | 8.00% |
| | | Index | -7.43% | -13.52% | 76.72% | 37.15% | -3.10% | 2.60% | - | 8.41% |
| Fintech Inception Date 9/12/2016 | 0.68% | NAV | -7.44% | -8.79% | 41.79% | -0.80% | -17.50% | -5.77% | - | 5.08% |
| | | Market Price | -7.23% | -8.74% | 41.78% | -0.45% | -17.53% | -5.76% | - | 5.08% |
| | | Index | -7.42% | -8.66% | 47.03% | -0.60% | -17.21% | -5.34% | - | 5.62% |
| Internet Of Things Inception Date 9/12/2016 | 0.68% | NAV | -5.42% | -10.90% | 116.28% | 24.63% | 6.09% | 9.53% | - | 11.56% |
| | | Market Price | -5.52% | -11.42% | 115.58% | 24.33% | 5.86% | 9.51% | - | 11.51% |
| | | Index | -5.42% | -10.79% | 121.26% | 25.08% | 6.46% | 9.87% | - | 11.92% |
| Cloud Computing Inception Date 4/12/2019 | 0.68% | NAV | -8.33% | -5.09% | 27.27% | 18.13% | -7.08% | - | - | 5.54% |
| | | Market Price | -8.19% | -5.09% | 27.78% | 17.98% | -7.08% | - | - | 5.64% |
| | | Index | -8.31% | -4.94% | 30.84% | 18.86% | -6.48% | - | - | 6.20% |



| | | | | | | | | | | |
|--|-------|--------------|---------|---------|---------|---------|---------|--------|-------|---------|
| Social Media Inception Date 11/14/2011 | 0.65% | NAV | -5.35% | -1.58% | 150.16% | 30.36% | -9.25% | 2.60% | 6.56% | 8.02% |
| | | Market Price | -5.56% | -2.02% | 148.50% | 29.91% | -9.60% | 2.52% | 6.46% | 7.96% |
| | | Index | -5.31% | -1.40% | 166.31% | 31.27% | -8.82% | 3.12% | 7.08% | 8.59% |
| Artificial Intelligence & Technology Inception Date 5/11/2018 | 0.68% | NAV | -5.77% | -3.44% | 83.99% | 41.17% | 5.15% | 11.74% | - | 11.97% |
| | | Market Price | -5.81% | -3.76% | 83.86% | 40.92% | 5.02% | 11.71% | - | 11.96% |
| | | Index | -5.69% | -3.21% | 88.32% | 42.07% | 5.70% | 12.22% | - | 12.46% |
| Autonomous & Electric Vehicles Inception Date 4/13/2018 | 0.68% | NAV | -5.53% | -9.38% | 68.09% | 18.23% | 12.71% | 11.39% | - | 9.96% |
| | | Market Price | -5.70% | -9.79% | 67.46% | 18.37% | 12.48% | 11.25% | - | 9.89% |
| | | Index | -5.52% | -9.41% | 69.46% | 18.22% | 12.97% | 11.59% | - | 10.13% |
| Lithium and Battery Tech Inception Date 7/22/2010 | 0.75% | NAV | -6.82% | -14.27% | 112.39% | -15.47% | 12.42% | 12.46% | 9.03% | 5.87% |
| | | Market Price | -6.90% | -15.15% | 111.26% | -15.52% | 11.90% | 12.32% | 8.99% | 5.83% |
| | | Index | -6.79% | -14.24% | 125.83% | -15.04% | 12.95% | 12.73% | 9.56% | 6.37% |
| Genomics and Biotechnology Inception Date 4/5/2019 | 0.50% | NAV | -9.54% | -16.12% | -33.46% | -18.93% | -17.18% | - | - | -8.67% |
| | | Market Price | -9.44% | -16.09% | -32.09% | -18.96% | -17.24% | - | - | -8.26% |
| | | Index | -9.44% | -15.88% | -32.09% | -18.65% | -16.88% | - | - | -8.26% |
| Millennial Consumer Inception Date 5/4/2016 | 0.50% | NAV | -5.36% | -4.80% | 108.70% | 18.51% | -0.68% | 5.38% | - | 10.44% |
| | | Market Price | -5.32% | -4.55% | 108.28% | 18.90% | -0.64% | 5.41% | - | 10.41% |
| | | Index | -5.33% | -4.68% | 116.05% | 19.11% | -0.20% | 5.90% | - | 10.95% |
| Aging Population Inception Date 5/09/2016 | 0.50% | NAV | -4.46% | -6.11% | 81.16% | 11.72% | 1.24% | 3.89% | - | 8.36% |
| | | Market Price | -4.55% | -6.44% | 84.28% | 11.43% | 1.12% | 3.71% | - | 8.61% |
| | | Index | -4.43% | -6.00% | 84.66% | 12.03% | 1.47% | 4.10% | - | 8.64% |
| Health and Wellness Inception Date 5/9/2016 | 0.50% | NAV | -5.32% | -7.08% | 48.82% | 15.85% | -0.66% | 2.09% | - | 5.52% |
| | | Market Price | -4.90% | -7.26% | 49.88% | 16.77% | -0.80% | 2.03% | - | 5.62% |
| | | Index | -5.29% | -7.00% | 53.18% | 16.24% | -0.33% | 2.44% | - | 5.93% |
| E-Commerce Inception Date 11/27/2018 | 0.50% | NAV | -4.92% | -1.73% | 23.17% | 19.34% | -12.19% | - | - | 4.40% |
| | | Market Price | -5.14% | -2.16% | 22.63% | 19.36% | -12.38% | - | - | 4.30% |
| | | Index | -4.91% | -1.62% | 25.79% | 19.82% | -11.84% | - | - | 4.85% |
| Us Infrastructure Development Inception Date 3/6/2017 | 0.47% | NAV | -5.89% | -3.37% | 110.82% | 32.69% | 22.51% | 12.87% | - | 12.02% |
| | | Market Price | -5.86% | -3.34% | 110.96% | 32.78% | 22.48% | 12.91% | - | 12.03% |
| | | Index | -5.85% | -3.24% | 117.98% | 33.43% | 23.20% | 13.45% | - | 12.59% |
| Cannabis Inception Date 9/17/2019 | 0.51% | NAV | -9.73% | 6.20% | -94.66% | -49.11% | -44.51% | - | - | -51.59% |
| | | Market Price | -10.86% | 4.23% | -94.82% | -49.59% | -44.80% | - | - | -51.95% |
| | | Index | -9.80% | 5.39% | -95.56% | -50.91% | -46.15% | - | - | -53.76% |
| Video Games & Esports Inception Date 10/25/2019 | 0.50% | NAV | -5.76% | -8.63% | 26.90% | 4.71% | -11.16% | - | - | 6.24% |
| | | Market Price | -5.90% | -8.98% | 26.88% | 4.89% | -11.24% | - | - | 6.24% |
| | | Index | -5.76% | -8.57% | 29.17% | 5.12% | -10.77% | - | - | 6.72% |
| Cybersecurity Inception Date 10/25/2019 | 0.51% | NAV | -3.19% | 0.04% | 63.97% | 2.70% | 4.48% | - | - | 13.39% |
| | | Market Price | -3.19% | 0.12% | 66.97% | 2.61% | 4.51% | - | - | 13.92% |
| | | Index | -3.13% | 0.17% | 66.82% | 3.34% | 4.89% | - | - | 13.89% |
| Thematic Growth Inception Date 10/25/2019 | 0.50% | NAV | -7.93% | -11.55% | -2.58% | -7.70% | -10.25% | - | - | -0.66% |
| | | Market Price | -8.52% | -11.85% | -2.01% | -7.73% | -10.39% | - | - | -0.52% |
| | | Index | -7.93% | -11.56% | -3.44% | -7.78% | -10.50% | - | - | -0.89% |
| Telemedicine & Digital Health Inception Date 7/29/2020 | 0.68% | NAV | -11.21% | -21.18% | -39.64% | -18.82% | -18.16% | - | - | -14.71% |
| | | Market Price | -11.39% | -21.07% | -39.70% | -18.76% | -18.30% | - | - | -14.74% |
| | | Index | -11.14% | -21.04% | -38.79% | -18.32% | -17.79% | - | - | -14.33% |
| China Biotech Innovation Inception Date 9/22/2020 | 0.65% | NAV | 4.26% | -1.04% | -49.43% | -10.60% | -20.73% | - | - | -20.20% |
| | | Market Price | 2.86% | -1.56% | -49.56% | -9.45% | -21.02% | - | - | -20.27% |
| | | Index | 4.28% | -0.88% | -48.38% | -9.99% | -20.19% | - | - | -19.66% |
| Cleantech Inception Date 10/27/2020 | 0.50% | NAV | -11.52% | -25.46% | -26.66% | -21.32% | - | - | - | -10.06% |
| | | Market Price | -11.27% | -25.58% | -26.93% | -21.21% | - | - | - | -10.17% |
| | | Index | -11.52% | -25.47% | -27.80% | -21.02% | - | - | - | -10.53% |
| Data Center Reits & Digital Infrastructure Inception Date 10/27/2020 | 0.50% | NAV | -6.13% | -6.20% | -11.17% | 6.05% | - | - | - | -3.97% |
| | | Market Price | -6.19% | -6.47% | -11.02% | 6.25% | - | - | - | -3.91% |
| | | Index | -6.27% | -6.20% | -11.36% | 5.82% | - | - | - | -4.04% |
| Renewable Energy Producers Inception Date 05/27/2015 | 0.66% | NAV | -8.96% | -16.38% | -12.69% | -21.01% | -10.58% | -1.29% | - | -1.61% |
| | | Market Price | -9.42% | -16.60% | -13.29% | -21.17% | -10.80% | -1.33% | - | -1.69% |
| | | Index | -8.99% | -16.34% | -9.95% | -20.76% | -10.23% | -0.85% | - | -1.25% |
| Clean Water Inception Date 04/08/2021 | 0.50% | NAV | -7.20% | -8.16% | -2.37% | 16.28% | - | - | - | -0.96% |
| | | Market Price | -7.48% | -7.72% | -2.03% | 16.12% | - | - | - | -0.82% |
| | | Index | -7.18% | -8.10% | -1.69% | 16.55% | - | - | - | -0.68% |
| Agtech and Food Innovation ETF Inception Date 07/12/2021 | 0.50% | NAV | -5.00% | -12.51% | -56.42% | -23.43% | - | - | - | -31.22% |
| | | Market Price | -5.62% | -11.86% | -56.10% | -23.61% | - | - | - | -31.00% |
| | | Index | -4.91% | -12.37% | -56.08% | -23.19% | - | - | - | -30.98% |
| Hydrogen Inception Date 07/12/2021 | 0.50% | NAV | -13.68% | -18.99% | -70.51% | -33.87% | - | - | - | -42.32% |
| | | Market Price | -14.37% | -19.67% | -70.47% | -33.78% | - | - | - | -42.28% |
| | | Index | -13.62% | -18.84% | -70.14% | -33.19% | - | - | - | -42.00% |
| Blockchain Inception Date 07/12/2021 | 0.50% | NAV | -16.14% | -24.24% | -75.45% | -0.09% | - | - | - | -46.90% |
| | | Market Price | -15.61% | -24.45% | -75.37% | 0.08% | - | - | - | -46.82% |
| | | Index | -16.19% | -24.32% | -76.29% | -2.10% | - | - | - | -47.72% |



| | | | | | | | | | | |
|--|-------|--------------|--------|---------|---------|---------|---|---|---|---------|
| Solar Inception Date 09/08/2021 | 0.51% | NAV | -9.18% | -27.05% | -44.35% | -33.73% | - | - | - | -24.76% |
| | | Market Price | -9.64% | -27.11% | -44.18% | -33.43% | - | - | - | -24.65% |
| | | Index | -9.17% | -27.00% | -43.71% | -33.38% | - | - | - | -24.34% |
| Wind Energy Inception Date 09/08/2021 | 0.50% | NAV | -6.21% | -19.85% | -47.55% | -20.86% | - | - | - | -26.89% |
| | | Market Price | -6.30% | -19.97% | -47.79% | -20.65% | - | - | - | -27.06% |
| | | Index | -6.22% | -19.86% | -47.11% | -20.61% | - | - | - | -26.60% |
| Disruptive Materials Inception Date 01/24/22 | 0.59% | NAV | -5.09% | -11.34% | -30.60% | -9.34% | - | - | - | -19.52% |
| | | Market Price | -5.70% | -12.16% | -30.51% | -8.16% | - | - | - | -19.46% |
| | | Index | -5.05% | -11.22% | -30.14% | -8.96% | - | - | - | -19.20% |
| Green Building Inception Date 04/11/22 | 0.45% | NAV | -6.40% | -1.59% | -15.84% | 14.26% | - | - | - | -11.06% |
| | | Market Price | -6.53% | -1.96% | -15.96% | 14.91% | - | - | - | -11.15% |
| | | Index | -6.34% | -1.46% | -15.66% | 14.85% | - | - | - | -10.93% |
| Metaverse Inception Date 04/26/22 | 0.50% | NAV | -6.61% | -9.05% | -2.28% | 27.20% | - | - | - | -1.60% |
| | | Market Price | -6.66% | -9.43% | -2.31% | 27.18% | - | - | - | -1.62% |
| | | Index | -6.63% | -9.01% | -1.78% | 27.69% | - | - | - | -1.25% |
| Proptech Inception Date 04/11/23 | 0.50% | NAV | -6.69% | -1.77% | 6.24% | - | - | - | - | - |
| | | Market Price | -6.78% | -1.80% | 6.40% | - | - | - | - | - |
| | | Index | -6.64% | -1.63% | 6.36% | - | - | - | - | - |
| Carbon Credits Strategy Inception Date 05/24/23 | 0.39% | NAV | -6.89% | -8.24% | -5.57% | - | - | - | - | - |
| | | Market Price | -7.97% | -9.04% | -6.06% | - | - | - | - | - |
| | | Index | -6.89% | -8.24% | -3.47% | - | - | - | - | - |
| Defense Tech Inception date 09/11/23 | 0.50% | NAV | - | - | -2.22% | - | - | - | - | - |
| | | Market Price | - | - | -1.97% | - | - | - | - | - |
| | | Index | - | - | -2.18% | - | - | - | - | - |



P/S AND EV/S

Source: Bloomberg, data is as of 9/30/23 and 8/31/23, Global X ETFs.

| Ticker | Name | P/S | | EV/S | |
|--------|---|---------|---------|---------|---------|
| | | 9/30/23 | 8/31/23 | 9/30/23 | 8/31/23 |
| BUG | Global X Cybersecurity ETF | 5.57 | 5.77 | 5.26 | 5.47 |
| GNOM | Global X Genomics & Biotechnology ETF | 5.40 | 5.98 | 4.84 | 5.42 |
| CHB | Global X China Biotech Innovation ETF | 4.40 | 4.24 | 4.14 | 3.98 |
| VR | Global X Metaverse ETF | 4.15 | 4.46 | 4.23 | 4.52 |
| VPN | Global X Data Center REITs & Digital Infrastructure ETF | 3.98 | 4.33 | 6.39 | 6.87 |
| CLOU | Global X Cloud Computing ETF | 3.86 | 4.21 | 4.10 | 4.46 |
| BOTZ | Global X Robotics & Artificial Intelligence ETF | 3.80 | 4.12 | 4.25 | 4.65 |
| BKCH | Global X Blockchain ETF | 3.31 | 3.92 | 3.95 | 4.67 |
| AGNG | Global X Aging Population ETF | 3.30 | 3.40 | 3.96 | 4.07 |
| AIQ | Global X Artificial Intelligence & Technology ETF | 3.10 | 3.30 | 3.24 | 3.44 |
| SOCL | Global X Social Media ETF | 2.95 | 3.12 | 2.83 | 3.04 |
| HYDR | Global X Hydrogen ETF | 2.93 | 3.38 | 2.86 | 3.32 |
| HERO | Global X Video Games & Esports ETF | 2.88 | 3.06 | 2.91 | 3.14 |
| FINX | Global X FinTech ETF | 2.72 | 3.04 | 3.45 | 3.81 |
| SNSR | Global X Internet of Things ETF | 2.51 | 2.65 | 2.82 | 2.95 |
| SPY | S&P 500 ETF | 2.37 | 2.48 | 2.70 | 2.81 |
| GRNR | Global X Green Building ETF | 2.32 | 2.32 | 4.16 | 4.16 |
| EDOC | Global X Telemedicine & Digital Health ETF | 2.23 | 2.52 | 2.28 | 2.57 |
| AQWA | Global X Clean Water ETF | 2.22 | 2.41 | 3.21 | 3.43 |
| RNRG | Global X Renewable Energy Producers ETF | 1.91 | 2.12 | 4.46 | 4.48 |
| MILN | Global X Millennial Consumer ETF | 1.87 | 1.97 | 2.20 | 2.31 |
| ACWI | MSCI ACWI ETF | 1.74 | 1.81 | 2.07 | 2.15 |
| LIT | Global X Lithium and Battery Tech ETF | 1.62 | 1.76 | 1.72 | 1.86 |
| PTEC | Global X PropTech ETF | 1.54 | 1.64 | 2.89 | 3.17 |
| RAYS | Global X Solar ETF | 1.53 | 1.69 | 2.10 | 2.25 |
| PAVE | Global X U.S. Infrastructure ETF | 1.46 | 1.56 | 1.75 | 1.84 |
| POTX | Global X Cannabis ETF | 1.45 | 1.55 | 1.70 | 1.78 |
| DMAT | Global X Disruptive Materials ETF | 1.41 | 1.49 | 1.75 | 1.81 |
| SHLD | Global X Defense Tech ETF | 1.37 | - | 1.64 | - |
| WNDY | Global X Wind Energy ETF | 1.35 | 1.44 | 2.74 | 2.84 |
| BFIT | Global X Health & Wellness ETF | 1.20 | 1.28 | 1.40 | 1.47 |
| EBIZ | Global X E-commerce ETF | 0.98 | 1.04 | 0.85 | 0.91 |
| CTEC | Global X Cleantech ETF | 0.93 | 0.95 | 1.29 | 1.34 |
| KROP | Global X AgTech & Food Innovation ETF | 0.91 | 0.96 | 1.27 | 1.32 |
| DRIV | Global X Autonomous & Electric Vehicles ETF | 0.81 | 0.86 | 0.93 | 0.99 |

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 9/30/23 and 8/31/23, Global X ETFs.

| Ticker | Name | F12M Sales (%) | | PSG | | EVSG | |
|--------|---|----------------|---------|---------|---------|---------|---------|
| | | 9/30/23 | 8/31/23 | 9/30/23 | 8/31/23 | 9/30/23 | 8/31/23 |
| BKCH | Global X Blockchain ETF | 65.1% | 56.9% | 0.05 | 0.07 | 0.06 | 0.08 |
| BOTZ | Global X Robotics & Artificial Intelligence ETF | 60.6% | 56.3% | 0.06 | 0.07 | 0.07 | 0.08 |
| POTX | Global X Cannabis ETF | 44.1% | 40.8% | 0.03 | 0.04 | 0.04 | 0.04 |
| CHB | Global X China Biotech Innovation ETF | 34.6% | 30.8% | 0.13 | 0.14 | 0.12 | 0.13 |
| RAYS | Global X Solar ETF | 31.2% | 31.2% | 0.05 | 0.05 | 0.07 | 0.07 |
| BUG | Global X Cybersecurity ETF | 20.8% | 22.6% | 0.27 | 0.26 | 0.25 | 0.24 |
| VPN | Global X Data Center REITs & Digital Infrastructure ETF | 20.6% | 17.8% | 0.19 | 0.24 | 0.31 | 0.39 |
| LIT | Global X Lithium and Battery Tech ETF | 19.0% | 18.3% | 0.09 | 0.10 | 0.09 | 0.10 |
| VR | Global X Metaverse ETF | 16.1% | 14.9% | 0.26 | 0.30 | 0.26 | 0.30 |
| EBIZ | Global X E-commerce ETF | 13.4% | 12.5% | 0.07 | 0.08 | 0.06 | 0.07 |
| CLOU | Global X Cloud Computing ETF | 11.2% | 10.3% | 0.34 | 0.41 | 0.37 | 0.43 |
| WNDY | Global X Wind Energy ETF | 11.0% | 11.6% | 0.12 | 0.12 | 0.25 | 0.24 |
| AIQ | Global X Artificial Intelligence & Technology ETF | 10.6% | 10.0% | 0.29 | 0.33 | 0.30 | 0.34 |
| DMAT | Global X Disruptive Materials ETF | 9.2% | 8.7% | 0.15 | 0.17 | 0.19 | 0.21 |
| SOCL | Global X Social Media ETF | 8.8% | 7.6% | 0.33 | 0.41 | 0.32 | 0.40 |
| MILN | Global X Millennial Consumer ETF | 8.5% | 7.9% | 0.22 | 0.25 | 0.26 | 0.29 |
| PTEC | Global X PropTech ETF | 7.8% | 6.1% | 0.20 | 0.27 | 0.37 | 0.52 |
| SHLD | Global X Defense Tech ETF | 7.7% | - | 0.18 | - | 0.21 | - |
| HERO | Global X Video Games & Esports ETF | 7.4% | 9.5% | 0.39 | 0.32 | 0.39 | 0.33 |
| AGNG | Global X Aging Population ETF | 7.3% | 5.4% | 0.45 | 0.63 | 0.54 | 0.75 |
| AQWA | Global X Clean Water ETF | 6.9% | 6.8% | 0.32 | 0.35 | 0.47 | 0.50 |
| BFIT | Global X Health & Wellness ETF | 6.7% | 7.7% | 0.18 | 0.17 | 0.21 | 0.19 |
| DRIV | Global X Autonomous & Electric Vehicles ETF | 6.5% | 6.3% | 0.12 | 0.14 | 0.14 | 0.16 |
| FINX | Global X FinTech ETF | 5.9% | 5.4% | 0.46 | 0.56 | 0.58 | 0.71 |
| SPY | S&P 500 ETF | 5.5% | 4.7% | 0.43 | 0.53 | 0.49 | 0.60 |
| KROP | Global X AgTech & Food Innovation ETF | 5.2% | 5.1% | 0.17 | 0.19 | 0.24 | 0.26 |
| GRNR | Global X Green Building ETF | 5.1% | 4.5% | 0.45 | 0.52 | 0.82 | 0.93 |
| CTEC | Global X Cleantech ETF | 4.9% | 6.2% | 0.19 | 0.15 | 0.27 | 0.22 |
| ACWI | MSCI ACWI ETF | 4.6% | 4.0% | 0.38 | 0.45 | 0.45 | 0.53 |
| SNSR | Global X Internet of Things ETF | 4.1% | 4.0% | 0.61 | 0.65 | 0.69 | 0.73 |
| EDOC | Global X Telemedicine & Digital Health ETF | 3.8% | 4.1% | 0.59 | 0.61 | 0.61 | 0.63 |
| HYDR | Global X Hydrogen ETF | 2.6% | 2.5% | 1.14 | 1.35 | 1.11 | 1.33 |
| PAVE | Global X U.S. Infrastructure Development ETF | 0.2% | 0.2% | 6.09 | 7.59 | 7.28 | 8.98 |
| RNRG | Global X Renewable Energy Producers ETF | -3.2% | -4.0% | -0.59 | -0.53 | -1.38 | -1.13 |
| GNOM | Global X Genomics & Biotechnology ETF | -3.8% | -4.1% | -1.44 | -1.45 | -1.29 | -1.31 |

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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