

#### Authored by:

## Mayuranki De Research Analyst

Date: August 29, 2022 Topic: Disruptive Technology, Physical Environment, People & Demographics











#### **Related Posts**

Conversational Alpha: This Isn't Your Parents' EV Market

Q&A on the Energy Transition With Chart Industries CEO Jillian Evanko

An Investor's Guide to Smart Contract Blockchains

Global X ETFs Survey: American Familiarity with and Perspective on Disruptive Materials

#### **GLOBAL X ETFs RESEARCH**

# The Next Big Theme: August 2022



#### E-commerce

## E-commerce Shines a Spotlight on SMBs

Small and midsize businesses (SMBs) are being cast into the limelight as government aid and established commerce platforms lend a helping hand. Last month, India introduced the rollout of their Open Network for Digital Commerce (ONDC) across 100 major cities. ONDC is a government-backed initiative which seeks to make the online commerce market more equitable. The initiative will place tens of millions of kiranas, or Indian family businesses, at a more competitive level compared to reputable giants like Amazon, Google, and Flipkart. The ONDC initiative also offers a monetary advantage by capping referral commission to 3%, as opposed to the close to 30% third-party sellers currently pay.<sup>2</sup> Companies like Amazon are also recognizing the opportunity within third-party sellers as they were responsible for 57% of the units sold on Amazon during Q2 2022.3 Revenue from these SMBs peaked during Q2 2022 at \$27 billion—despite being a non-holiday quarter. Similarly, Alibaba announced an Intelligence Connectivity strategy at the annual AloT Partnership Conference which hopes to reduce research and development costs for SMBs by 50%.5

## **Electric Vehicles**

#### Inflation Reduction Act Should Make Electrification Accessible

An important implication of the impending Inflation Reduction Act (IRA) is how it impacts electric vehicle (EV) buyers. The provisions of the IRA detail the removal of the 200,000-vehicle limit per manufacturer as well as making the federal tax credit system more flexible. Upon purchase, consumers can opt to have the new incentive which will significantly reduce borrowing costs for new car buyers. There are limitations for qualifying price points and incomes, but generally this development is meant to promote America's competitiveness within the EV market. Alternatively, buyers can choose the currently used system of a \$7,500 capped EV tax credit which is being extended for 10 years on EVs placed into service after December 31, 2022.7 There are even considerations for used EVs as the IRA adds a rebate of up to \$4,000 for used EVs if they are sold by a licensed dealer.8 If applied, this could be transformative for mass adoption of EVs. Keep in mind that income and materials sourcing requirements mean that few of the EV models currently available in the U.S. are eligible for the new tax credits that begin in 2023.

## Renewable Energy Producers

Subsidy Auctions Are a Global Phenomenon

Globally, countries are leaning on subsidy auctions to support new renewable energy projects. As of most recent, Britain successfully held an auction which awarded contracts to projects able to generate 11





gigawatts (GW) of clean electricity. This level of clean energy capacity was nearly double previous auctions and could potentially power around 12 million homes in the U.K. and thus reduce reliance on volatile global prices. Likewise, Spain is planning an auction of 520 megawatts (MW) of renewable energy capacity in October. The auction will grant 140 MW towards photovoltaic projects, 220 MW towards solar thermal, 140 MW for biomass and 20 MW towards other technologies. The country aims to auction 20 GW or more of renewable capacity by 2025. Spain and the U.K. are not alone in these efforts—Greece plans to conduct four more renewable auctions by the end of 2022 while Croatia is currently holding their 622 MW renewable energy auction which already received admissions to compete from around 150 MW of power projects. 14,15

## **Agtech & Food Innovation**

## Food Security Concerns Ease Amid Ongoing Political Tensions

Ukraine successfully exported grain out of Odesa for the first time since the beginning of Russia's invasion. They procured an internationally brokered deal which resumes Ukraine's agricultural exports. This is the first step towards rectifying the growing global food crisis. The ship carried 26,000 tonnes of corn to Lebanon following a long-winded negotiation between Ukraine and Russia, led by Turkey and the United Nations. Since the beginning of the conflicts, 16 loaded vessels carrying 22 million tonnes of grain remained stagnant in Ukraine's ports and officials plan for ports to regain full transport capacity soon. This deal, which allows shipments to leave Black Sea ports once again, is potentially lifesaving for countries where food prices have drastically increased over the past six months. Regions such as Sudan saw prices rise 187%, 86% in Syria, and 60% in Yemen, for example. The

#### Social Media

## Platforms Driven by Engagement

Meta Platforms sales fell 1% Year-over-Year (YoY) to \$28.8 billion in Q2 2022, missing estimates and marking the first ever revenue drop for the company in its history. <sup>19</sup> Cost grew 22% YoY, which caused operating income to drop by 32%. <sup>20</sup> As the company navigates Apple's privacy changes within the iOS 14 update which is hindering their targeting algorithms, they continue to see progress within engagement and monetization through Reels. The company's video feature already reached over \$1 billion in revenue run rate and accounts for 30% of all of user time on Facebook and Instagram. <sup>21</sup> Growing engagement was a positive among all social platforms. Meta, which has over 3.5 billion users across its ecosystem of apps saw monthly active users up 1% YoY, and daily active users up 3% YoY. <sup>22</sup> Snapchat had +18% YoY daily active users and Twitter had +17% YoY monetizable daily active users. <sup>23</sup>

#### **Artificial Intelligence & Cloud Computing**

## Tech Earnings in a Struggling Macro Environment

Major technology companies released Q2 2022 earnings including Alphabet, Apple, Amazon, and Microsoft. Alphabet topped expected ad revenue at \$56.29 billion during the quarter, which lifted the company's near-term outlook to investors. <sup>24</sup> Cloud unit grew 35% YoY, bringing in \$6.3 billion in revenue. <sup>25</sup> Microsoft, on the other hand, saw much of their growth attributed to their cloud computing sector. Increased enterprise commitment to Microsoft Azure saw revenue within Microsoft's Intelligent Cloud business grow 20% YoY to \$20.9 billion for the quarter. <sup>26</sup> Amazon gave a report which exceeded consumer expectations with respect to overall revenue, Amazon Web Services (AWS) revenue, and advertising revenue. Amazon incurred a company-wide 7% revenue jump, while AWS jumped 33% YoY to \$19.74 billion. <sup>27</sup> Similar to Amazon, Apple's earnings gave investors hope as Q2 brought in a revenue record of \$83.0 billion, led by success in their Services business. <sup>28</sup>



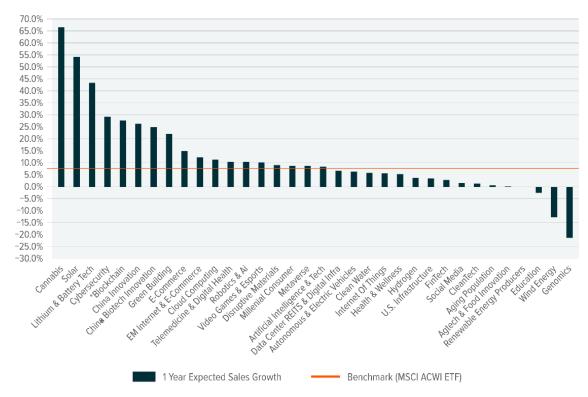


#### THE NUMBERS

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

# THEMATIC EXPECTED SALES GROWTH

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



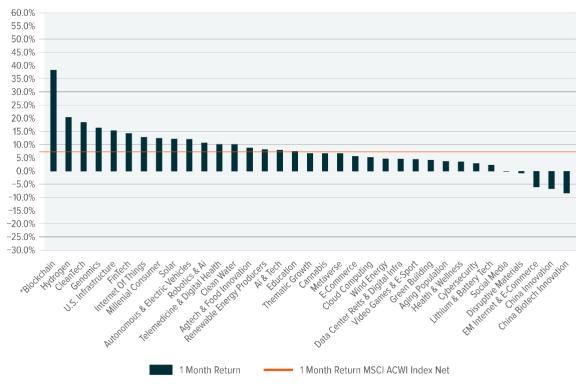
Note: Forward looking based on data and analysis from 7/31/2022. 1 year annualized forward sales growth is the consensus analyst expectations for total sales growth in the next 12 months. \*Blockchain reflects figures according to BKCH ETF





## **JULY 2022 THEMATIC ETF RETURNS**

Source: Bloomberg, July 31, 2022, 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 (07/31/22)			Avg. Annualized % Data as of quarter end (06/30/22)					
	Gross Expense Ratio		1 Month	3 Month	Since Inception	1 Year	3 Year	5 Year	10 Year	Since Inception		
Debation () Autificial Intelligence		NAV	9.98%	-6.58%	55.37%	-41.69%	-0.33%	2.41%	-	6.14%		
Robotics & Artificial Intelligence Inception Date 9/12/2016	0.68%	Market Price	10.83%	-5.36%	56.42%	-41.73%	-0.43%	2.33%	-	6.12%		
inception Date 3/12/2010		Index	9.97%	-6.51%	58.69%	-41.17%	0.34%	2.78%	-	6.53%		
Fintech		NAV	14.27%	-9.00%	71.03%	-52.84%		4.20%	-	7.20%		
Inception Date 9/12/2016	0.68%	Market Price		-8.51%	71.15%	-52.82%		4.11%	-	7.19%		
meepdon bate 3/12/2010		Index	14.30%	-8.97%	76.92%	-52.71%	-8.12%	4.82%	-	7.82%		
Internet Of Things		NAV	12.61%	-0.73%	102.32%	-27.50%		8.68%	-	10.63%		
Inception Date 9/12/2016	0.68%	Market Price		0.13%	102.54%	-27.49%		8.54%	-	10.59%		
		Index	12.64%	-0.69%	106.21%	-27.25%		9.04%	-	10.99%		
Cloud Computing	0.000	NAV	5.40%	-10.27%	17.47%	-41.24%		-	-	3.43%		
Inception Date 4/12/2019	0.68%	Market Price	5.40%	-10.23%	17.94%	-41.24%		-	-	3.55%		
· · · · · · · · · · · · · · · · · · ·		Index	5.45%	-10.10%	19.89%	-40.83%		- 2.000/	0.540/	4.07%		
Social Media	0.659/	NAV Market Price	0.00%	-13.25%	128.66%	-54.09%		3.66%	9.54%	8.09%		
Inception Date 11/14/2011	0.65%	Market Price	-0.12%	-12.69%	128.32%	-54.04%		3.62%	9.56%	8.09%		
<u> </u>		Index	0.05%	-13.12%	141.68%	-53.98% -31.49%		4.18%	10.06%	8.65%		
Artificial Intelligence	0.68%	NAV Market Price	7.68% 8.07%	-3.85% -3.05%	52.73% 53.14%	-31.49%		-	-	8.81%		
& Technology Inception Date 5/11/2018	0.00%	Market Price	7.70%	-3.76%	55.23%	-31.14%	9.06%		-	8.78% 9.23%		
inception Date 5/11/2018		Index NAV	11.97%	-0.13%	69.03%	-23.60%		-	-	10.26%		
Autonomous & Electric Vehicles	0.68%	Market Price	12.16%	0.29%	69.32%	-23.60%		-	-	10.26%		
Inception Date 4/13/2018	0.00%	Index	12.01%	-0.07%	70.38%	-23.34%		-	-	10.46%		
	0.75%	NAV	2.22%	11.64%	180.42%	0.01%		22.25%	10.88%	8.81%		
Lithium and Battery Tech		Market Price	2.44%	13.74%	181.48%	0.48%	41.64%		10.91%	8.83%		
Inception Date 7/22/2010		Index	2.19%	11.64%	196.39%	0.71%	41.92%		11.31%	9.32%		
	0.50%	NAV	16.08%	11.44%	-6.78%	-50.71%	-6.74%	22.7170	11.5170	-6.55%		
Genomics and Biotechnology		Market Price		11.77%	-4.91%	-50.89%		-	_	-6.09%		
Inception Date 4/5/2019		Index	16.11%	11.61%	-5.27%	-50.51%		-	_	-6.09%		
	0.50%	NAV	12.24%	-7.99%	100.50%	-39.68%		8.59%	_	9.88%		
Millennial Consumer		Market Price		-7.96%	99.97%	-39.88%		8.53%	_	9.78%		
Inception Date 5/4/2016		Index	12.30%	-7.88%	106.48%	-39.42%		9.15%	_	10.39%		
		NAV	3.73%	-1.39%	80.37%	-16.41%	6.56%	7.15%	_	9.42%		
Aging Population	0.50%	Market Price	3.84%	-1.09%	84.87%	-16.31%	6.66%	6.97%	-	9.84%		
Inception Date 5/09/2016		Index	3.78%	-1.32%	83.27%	-16.35%		7.37%	-	9.70%		
	0.50%	NAV	3.82%	-4.57%	48.96%	-32.66%	1.81%	6.21%	-	6.05%		
Health and Wellness Inception		Market Price	3.71%	-3.48%	50.37%	-32.32%	1.79%	6.15%	-	6.23%		
Date 5/9/2016		Index	3.83%	-4.49%	52.74%	-32.45%	2.19%	6.60%	-	6.48%		
F. C		NAV	5.47%	-9.17%	20.07%	-50.77%	-2.21%	-	-	3.68%		
E-Commerce Inception Date 11/27/2018	0.50%	Market Price	5.66%	-9.08%	20.01%	-50.93%	-2.34%	-	-	3.61%		
inception Date 11/27/2018		Index	5.54%	-9.07%	22.02%	-50.62%	-1.82%	-	-	4.12%		
He Infractuatura Davidar		NAV	15.60%	0.32%	81.21%	-10.96%	12.27%	10.03%	-	8.81%		
Us Infrastucture Development Inception Date 3/6/2017	0.47%	Market Price	15.46%	0.39%	81.14%	-10.95%	12.32%	10.03%	-	8.83%		
inception Date 3/0/201/		Index	15.66%	0.47%	86.30%	-10.44%		10.60%	-	9.37%		
Cannabis		NAV	9.26%	-27.46%	-86.83%	-80.09%	-	-	-	-53.21%		
Inception Date 9/17/2019	0.50%	Market Price	6.81%	-28.15%	-87.18%	-79.76%	-	-	-	-53.27%		
inception bate 3/1/12013		Index	8.97%	-28.26%	-88.62%	-80.73%	-	-	-	-55.44%		
Video Games & Esports	0.50%	NAV	4.54%	-1.36%	48.72%	-34.71%	-	-	-	14.05%		
Inception Date 10/25/2019		Market Price	4.64%	-0.82%	48.62%	-34.69%		-	-	13.98%		
		Index	4.61%	-1.26%	50.71%	-34.44%	-	-	-	14.58%		
Cybersecurity	0.50%	NAV	2.80%	-11.74%	70.96%	-12.59%	-	-	-	20.88%		
Inception Date 10/25/2019		Market Price	2.96%	-11.61%	74.23%	-12.72%	-	-	-	21.67%		
		Index	2.86%	-11.61%	72.77%	-12.43%	-	-	-	21.33%		
Thematic Growth	0.50%	NAV	6.57%	-2.34%	25.90%	-43.01%	-	-	-	6.41%		
Inception Date 10/25/2019		Market Price	6.91%	-2.86%	26.89%	-43.28%		-	-	6.60%		
		Index	6.57%	-2.44%	24.84%	-43.29%		-	-	6.08%		
Education		NAV	8.37%	0.44%	-53.83%	-54.56%		-	-	-35.12%		
Inception Date 7/10/2020	0.50%	Market Price	7.74%	1.17%	-54.03%	-54.46%		-	-	-35.07%		
		Index	8.30%	0.56%	-53.37%	-54.28%	-	-	-	-34.76%		



elemedicine & Digital Health		NAV	10.40%	2.17%	-16.32%	-40.18%	-	-	-	-13.44%
Inception Date 7/29/2020	0.68%	Market Price	10.33%	2.42%	-16.52%	-40.31%	-	-	-	-13.51%
inception Date 7/29/2020		Index	10.42%	2.30%	-15.40%	-39.91%	-	-	-	-12.95%
China Biotoch Innovetion		NAV	-6.35%	5.10%	-30.49%	-40.07%	-	-	-	-15.50%
China Biotech Innovation	0.65%	Market Price	-8.30%	5.14%	-31.09%	-39.61%	-	-	-	-14.90%
Inception Date 9/22/2020		Index	-6.36%	5.38%	-29.62%	-39.62%	-	-	-	-14.90%
Classatasala		NAV	18.62%	13.45%	7.48%	-34.21%	-	-	-	-5.72%
Cleantech Inception Date 10/27/2020	0.50%	Market Price	18.64%	14.29%	7.81%	-34.30%	-	-	-	-5.55%
inception date 10/2//2020		Index	18.67%	13.61%	5.38%	-34.16%	-	-	-	-6.85%
Data Center Reits		NAV	5.06%	0.49%	6.20%	-12.58%	-	-	-	0.65%
& Digital Infrastructure	0.50%	Market Price	4.66%	0.10%	5.71%	-12.90%	-	-	-	0.60%
Inception Date 10/27/2020		Index	5.09%	0.48%	6.27%	-12.51%	-	-	-	0.67%
Emerging Markets Internet		NAV	-6.19%	-2.12%	-51.69%	-51.27%	-	-	-	-33.30%
& E-Commerce	0.65%	Market Price	-5.96%	-0.90%	-51.82%	-51.40%	-	-	-	-33.52%
Inception Date 11/09/2020		Index	-6.15%	-1.97%	-51.31%	-51.10%	-	-	-	-33.01%
Renewable Energy		NAV	8.07%	2.64%	31.03%	-12.00%	4.01%	6.41%	-	2.75%
Producers	0.65%	Market Price	8.33%	3.87%	31.51%	-11.87%	3.97%	6.39%	-	2.77%
Inception Date 05/27/2015		Index	8.38%	2.84%	34.44%	-12.03%	4.28%	6.81%	-	3.08%
011 1 11		NAV	-6.11%	8.85%	-43.35%	-33.05%	-	-	-	-31.21%
China Innovation	0.75%	Market Price	-6.71%	11.30%	-43.19%	-32.25%	-	-	-	-30.73%
Inception Date 02/22/2021		Index	-	-	-	_	_	-	_	-
	0.50%	NAV	10.23%	3.84%	-2.23%	-15.78%	-	-	-	-9.31%
Clean Water		Market Price	10.33%	4.26%	-1.68%	-15.56%	-	-	-	-8.97%
Inception Date 04/08/2021	0.0070	Index	10.30%	3.94%	-1.80%	-15.54%	-	-	-	-9.03%
Agtech and Food		NAV	8.84%	-4.22%	-31.76%	-	-	-	-	-
Innovation ETF	0.50%	Market Price	8.99%	-3.50%	-31.33%	-	-	-	-	-
Inception Date 07/12/2021		Index	8.89%	-4.06%	-31.49%	-	-	-	-	-
11.1	0.50%	NAV	20.75%	-6.36%	-42.34%	-	-	-	-	-
Hydrogen		Market Price	20.51%	-5.90%	-42.02%	-	-	-	-	-
Inception Date 07/12/2021		Index	20.83%	-6.55%	-42.24%	-	-	-	-	-
	0.50%	NAV	37.94%	-38.21%	-70.73%	-	-	-	-	-
Blockchain		Market Price	38.42%	-38.02%	-70.70%	-	-	-	-	-
Inception Date 07/12/2021		Index	37.58%	-38.49%	-71.03%	_	_	-	-	-
		NAV	13.15%	40.50%	2.13%	_		-	_	_
Solar	0.50%	Market Price	12.27%	41.96%	2.54%	_	_	_	_	_
Inception Date 09/08/2021	0.0070	Index	13.18%	40.75%	2.64%	_	_	_	_	_
	0.50%	NAV	5.37%	9.27%	-16.79%	_		_	_	_
Wind Energy		Market Price	4.76%	10.92%	-16.43%	_	_	_	_	_
Inception Date 09/08/2021		Index	5.41%	9.44%	-16.43%	_	_	_	_	_
Disruptive Materials		NAV Market Price	0.00%	-10.45%	-14.71%	-	-	-	-	-
Inception Date 01/24/22	0.59%	Market Price	-0.70%	-10.01%	-14.75%	-	-	-	-	-
		Index	0.03%	-10.35%	-14.53%	-	-	-	-	-
Croon Building		NAV	4.05%	-6.84%	-11.18%	-	-	-	-	-
Green Building		Market Price	4.29%	-5.53%	-10.23%	-	-	-	-	-
Inception Date 04/11/22		Index	4.02%	-7.27%	-11.59%	-	-	-	-	-
				-7.69%						
Motavorco		NAV	6 84%	-/ 69%	-0 //70			- 1	-	
Metaverse Inception Date 04/26/22	0.50%	NAV Market Price	6.84% 6.77%	-8.78%	-8.22% -8.06%	-	-	-	-	-





P/S AND EV/S

Source: Bloomberg, data is as of July 31, 2022 and June 30, 2022, Global X ETFs.

Ticker	Name	ı	P/S	EV/S		
		7/31/22	6/30/22	7/31/22	6/30/22	
BUG	Global X Cybersecurity ETF	7.90	7.69	8.01	7.85	
GNOM	Global X Genomics & Biotechnology ETF	5.60	5.03	4.97	4.29	
HYDR	Global X Hydrogen ETF	5.49	4.55	4.97	3.97	
VPN	Global X Data Center REITs & Digital Infrastructure ETF	4.85	4.63	7.92	7.64	
СНВ	Global X China Biotech Innovation ETF	4.19	4.47	4.11	4.39	
CLOU	Global X Cloud Computing ETF	4.12	3.93	4.78	4.55	
VR	Global X Metaverse ETF	3.93	3.66	3.73	3.46	
BOTZ	Global X Robotics & Artifical Intelligence ETF	3.67	2.75	3.63	2.70	
AGNG	Global X Aging Population ETF	3.63	3.50	4.23	4.12	
KEJI	Global X China Innovation ETF	3.62	3.95	2.94	3.29	
HERO	Global X Video Games & Esports ETF	3.45	3.26	3.20	2.92	
FINX	Global X FinTech ETF	3.34	3.10	4.14	3.86	
SOCL	Global X Social Media ETF	3.31	3.32	3.14	3.16	
RNRG	Global X Renewable Energy Producers ETF	3.26	3.16	5.23	5.22	
RAYS	Global X Solar ETF	3.25	2.88	4.14	3.76	
EDOC	Global X Telemedicine & Digital Health ETF	3.09	2.82	3.23	2.93	
AQWA	Global X Clean Water ETF	2.74	2.50	3.92	3.68	
AIQ	Global X Artificial Intelligence & Technology ETF	2.67	2.47	3.09	2.86	
SPX	S&P 500 Index	2.50	2.34	2.80	2.64	
SNSR	Global X Internet of Things ETF	2.50	2.21	2.80	2.51	
GRNR	Global X Green Building ETF	2.25	2.17	4.12	4.11	
MILN	Global X Millennial Consumer ETF	2.12	1.90	2.42	2.20	
LIT	Global X Lithium and Battery Tech ETF	2.06	2.05	2.18	2.17	
POTX	Global X Cannabis ETF	1.97	1.77	2.31	2.13	
EWEB	Global X Emerging Markets Internet & E-commerce ETF	1.89	2.02	1.93	2.07	
ACWI	MSCI ACWI Index	1.79	1.70	2.06	1.97	
WNDY	Global X Wind Energy ETF	1.65	1.59	2.37	2.22	
EDUT	Global X Education ETF	1.61	1.49	1.92	1.60	
DMAT	Global X Disruptive Materials ETF	1.58	1.56	1.90	1.85	
CTEC	Global X Cleantech ETF	1.46	1.25	1.75	1.51	
KROP	Global X AgTech & Food Innovation ETF	1.38	1.27	1.56	1.45	
PAVE	Global X U.S. Infrastructure ETF	1.35	1.27	1.63	1.45	
ВКСН	Global X Blockchain ETF	1.24	0.85	1.70	1.06	
BFIT	Global X Health & Wellness ETF	1.22	1.18	1.43	1.38	
EBIZ	Global X E-commerce ETF	1.07	1.01	1.02	0.95	
DRIV	Global X Autonomous & Electric Vehicles ETF	0.96	1.00	1.08	1.00	

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 July 31, 2022 and June 30, 2022, Global X ETFs.

Ticker	Name	F12M Sa	iles (%)	P:	SG .	EVSG		
		7/31/22	6/30/22	7/31/22	6/30/22	7/31/22	6/30/22	
POTX	Global X Cannabis ETF	66.6%	74.0%	0.03	0.02	0.03	0.03	
RAYS	Global X Solar ETF	54.2%	52.8%	0.06	0.05	0.08	0.07	
LIT	Global X Lithium and Battery Tech ETF	43.4%	39.6%	0.05	0.05	0.05	0.05	
BUG	Global X Cybersecurity ETF	29.3%	27.7%	ა.27	0.28	0.27	0.20	
ВКСН	Global X Blockchain ETF	27.7%	29.5%	0.04	0.03	0.06	0.04	
KEJI	Global X China Innovation ETF	26.3%	24.5%	0.14	0.16	0.11	0.13	
СНВ	Global X China Biotech Innovation ETF	25.0%	22.8%	0.17	0.20	0.16	0.19	
GRNR	Global X Green Building ETF	22.1%	20.6%	0.10	0.11	0.19	0.20	
EBIZ	Global X E-commerce ETF	15.0%	15.4%	0.07	0.07	0.07	0.06	
EWEB	Global X Emerging Markets Internet & E-commerce ETF	12.3%	12.0%	0.15	0.17	0.16	0.17	
CLOU	Global X Cloud Computing ETF	11.4%	14.1%	0.36	0.28	0.42	0.32	
EDOC	Global X Telemedicine & Digital Health ETF	10.4%	13.0%	0.30	0.22	0.31	0.23	
BOTZ	Global X Robotics & Artificial Intelligence ETF	10.4%	10.9%	0.35	0.25	0.35	0.25	
HERO	Global X Video Games & Esports ETF	10.2%	8.5%	0.34	0.38	0.31	0.34	
DMAT	Global X Disruptive Materials ETF	9.1%	9.3%	0.17	0.17	0.21	0.20	
MILN	Global X Millennial Consumer ETF	8.8%	10.4%	0.24	0.18	0.27	0.21	
VR	Global X Metaverse ETF	8.7%	11.3%	0.45	0.32	0.43	0.31	
AIQ	Global X Artificial Intelligence & Technology ETF	8.4%	10.5%	0.32	0.24	0.37	0.27	
VPN	Global X Data Center REITs & Digital Infrastructure ETF	6.7%	9.3%	0.73	0.49	1.18	0.82	
SPX	S&P 500 Index	6.5%	8.5%	0.38	0.27	0.43	0.31	
DRIV	Global X Autonomous & Electric Vehicles ETF	6.3%	8.0%	0.15	0.11	0.17	0.13	
ACWI	MSCI ACWI Index	5.9%	7.8%	0.30	0.22	0.35	0.25	
AQWA	Global X Clean Water ETF	5.8%	7.9%	0.47	0.32	0.68	0.47	
SNRS	Global X Internet of Things ETF	5.7%	7.6%	0.44	0.29	0.49	0.33	
BFIT	Global X Health & Wellness ETF	5.3%	6.6%	0.23	0.18	0.27	0.21	
HYDR	Global X Hydrogen ETF	3.7%	1.8%	1.48	2.56	1.34	2.23	
PAVE	Global X U.S. Infrastructure Development ETF	3.5%	8.0%	0.39	0.15	0.47	0.19	
FINX	Global X FinTech ETF	2.9%	1.4%	1.16	2.16	1.44	2.69	
SOCL	Global X Social Media ETF	1.6%	7.4%	2.07	0.45	1.96	0.43	
CTEC	Global X Cleantech ETF	1.4%	2.2%	1.05	0.57	1.25	0.70	
AGNG	Global X Aging Population ETF	0.6%	2.8%	5.76	1.27	6.73	1.50	
KROP	Global X AgTech & Food Innovation ETF	0.1%	1.4%	13.36	0.92	15.15	1.06	
RNRG	Global X Renewable Energy Producers ETF	0.0%	6.2%	97.50	0.51	156.26	0.84	
EDUT	Global X Education ETF	-2.5%	0.3%	-0.64	4.49	-0.20	-0.20	
WNDY	Global X Wind Energy ETF	-12.7%	-20.8%	-0.13	-0.33	-0.19	-0.46	
GNOM	Global X Genomics & Biotechnology ETF	-21.3%	-20.8%	-0.26	-0.23	-0.23	-0.20	

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).





#### INTRO TO THEMATIC INVESTING COURSE - ELIGIBLE FOR CE CREDIT

Global X has developed an interactive, self-guided <u>Intro to Thematic Investing course</u>, that is designed to share the latest ideas and best practices for incorporating thematic investing into a portfolio.

This program has been accepted for 1.0 hour of CE credit towards the CFP®, CIMA®, CIMC®, CPWA® or RMA certifications. To receive credit, course takers must submit accurate and complete information on the requested forms, complete the entire course, and receive a 70% or higher on the Intro to Thematic Investing Quiz.

For Canadian course takers: This program has been reviewed by FP Canada and qualifies for 1 FP Canada-Approved CE Credit, in the category of Product Knowledge, towards the CFP® certification or QAFP™ certification. To receive credit, course takers must submit accurate and complete information (including Job Title) on the requested forms, complete the entire course, and receive a 70% or higher on the Intro to Thematic Investing Quiz.

Questions on receiving CE credit may be sent to: <a href="mailto:Education@globalxetfs.com">Education@globalxetfs.com</a>

#### KEEP UP WITH THE LATEST RESEARCH FROM GLOBAL X

To learn more about the disruptive themes changing our world, read the latest research from Global X, including:

- Conversational Alpha: This Isn't Your Parents' EV Market
- Q&A on the Energy Transition With Chart Industries CEO Jillian Evanko
- An Investor's Guide to Smart Contract Blockchains
- Global X ETFs Survey: American Familiarity with and Perspective on Disruptive Materials
- Webinar Replay: Thematic Investing The Energy Transition Accelerates

#### **ETF HOLDINGS AND PERFORMANCE:**

To see individual ETF holdings and current performance across the Global X Thematic Growth Suite, including information on the indexes shown, click the below links:

- Disruptive Technology: Artificial Intelligence & Technology ETF (AIQ), Robotics & Artificial Intelligence ETF (BOTZ), Cybersecurity ETF (BUG), Cloud Computing ETF (CLOU), Autonomous & Electric Vehicles ETF (DRIV), FinTech ETF (FINX), Video Games & Esports ETF (HERO), Lithium and Battery Tech ETF (LIT), Internet of Things ETF (SNSR), Social Media ETF (SOCL), China Biotech Innovation ETF (CHB), Data Center REITs & Digital Infrastructure ETF (VPN), Emerging Markets Internet & E-Commerce ETF (EWEB), AgTech & Food Innovation ETF (KROP), Blockchain ETF (BKCH), Blockchain & Bitcoin Strategy ETF (BITS), Metaverse ETF (VR)
- People and Demographics: <u>Cannabis ETF (POTX)</u>, <u>Millennial Consumer ETF (MILN)</u>, <u>Health & Wellness ETF (BFIT)</u>, <u>E-Commerce ETF (EBIZ)</u>, <u>Genomics & Biotechnology ETF (GNOM)</u>, <u>Aging Population ETF (AGNG)</u>, <u>Telemedicine & Digital Health ETF (EDOC)</u>, <u>Education ETF (EDUT)</u>
- Physical Environment: U.S. Infrastructure Development ETF (PAVE), CleanTech ETF (CTEC),
   Renewable Energy Producers (RNRG), Clean Water ETF (AQWA), Hydrogen ETF (HYDR), Solar
   ETF (RAYS), Wind Energy ETF (WNDY), Disruptive Materials ETF (DMAT), Green Building ETF
   (GRNR)
- Multi-Theme: Thematic Growth ETF (GXTG), China Innovation ETF (KEJI)





#### **Footnotes**

- Salkever, A., Amla, I., & Wadhwa, V. (2022, August 2). Why India could single-handedly shape the future of e-commerce this summer. Fortune. https://fortune.com/2022/08/02/why-india-could-single-handedly-shape-the-future-of-e-commerce-this-summer-vivek-wadhwa-alex-salkever/
- 2. Ibid
- Bishop, T. (2022, July 28). Amazon's 1st-party online sales drop to 42% of business as 3rd-party units hit new high. GeekWire. https://www.geekwire.com/2022/amazon-milestones-1st-party-online-sales-dip-below-42-of-business-3rd-party-units-hit-new-high/
- Ibid
- Lahiri, A. (2022, July 21). Alibaba looks to cut intelligence R&D costs of SMEs by 50% with latest move. Benzinga. https://www.benzinga.com/news/22/07/28146098/alibaba-looks-to-cut-intelligence-r-d-costs-of-smes-by-50-with-latest-move.
- Hanley, S. (2022, July 29). Cars: What the inflation reduction act means to electric car & truck buyers. CleanTechnica. https://cleantechnica.com/2022/07/29/what-the-inflation-reduction-act-means-to-electric-car-truck-buyers/
- Taylor, K, R. (2022, August 17). Tax breaks: EV tax credits are changing: what's ahead. Kiplinger. https://www.kiplinger.com/taxes/605081/ev-tax-credit-inflation-reduction-act-2022-changes
- Ibid
- Chestney, N. (2022, July 7). UK renewables subsidy auction secures 11 gw of new capacity. Reuters. https://www.reuters.com/business/energy/british-renewables-subsidies-auction-will-support-up-11-gw-new-capacity-2022-07-07/
- 10. Ibid.
- 11. Montel group. (2022, July 25). Spain finally names CSP auction date: October. Solarpaces. https://www.solarpaces.org/spain-finally-names-csp-auction-date-october/
- 12. Ibid.
- 13. Ibid.
- Aposporis, H. (2022, July 8). Renewables: Four renewables auctions to take place in Greece by end of 2022.
   Balkan Green Energy News. https://balkangreenenergynews.com/four-renewables-auctions-to-take-place-in-greece-by-end-of-2022/
- 15. Bellini, E. (2022, July 12). Just 12.9 mw of PV to compete in Croatia's 622 mw renewables auction. PV Magazine. https://www.pv-magazine.com/2022/07/12/just-12-9-mw-of-pv-to-compete-in-croatias-622-mw-renewables-auction/
- Bloomberg News. (2022, August 2). Ukraine latest: US to send \$550 million in arms in new package. Bloomberg. https://www.bloomberg.com/news/articles/2022-08-01/ukraine-latest-first-grains-vessel-departs-from-odesa-port#xj4y7vzkg
- 17. Wieting, A., & Fraser, S. (2022, July 23). 'A beacon of hope': Ukraine, Russia sign grain export deal. *AP News*. https://apnews.com/article/russia-ukraine-middle-east-global-trade-a2c89d94a0f8473b40a1fcde5710bda8
- 18. Ibid.
- Meta Investor Relations. (2022, July 27). Meta reports second quarter 2022 results [Press release]. Meta. https://investor.fb.com/investor-news/press-release-details/2022/Meta-Reports-Second-Quarter-2022-Results/default.aspx
- 20. Ibid.
- 21. Ibid.
- 22. Ibid
- Enberg, J., & Ollinger, C. (2022, June 30). Social media update Q2 2022: Musk takes on Twitter, TikTok gets hotter, and Meta loses Sandberg. *Insider Intelligence*. https://www.insiderintelligence.com/content/social-media-update-q2-2022
- Semenova, A. (2022, July 27). Alphabet earnings miss estimates, ad revenue beats, stock pops. Yahoo Finance. https://finance.yahoo.com/news/google-earnings-alphabet-second-quarter-2022-201005191.html
- 25. Ibid.





- 26. Microsoft Corp. (2022, July 26). Earnings release FY22 Q4: Microsoft cloud strength drives fourth quarter results [Press release]. https://www.microsoft.com/en-us/Investor/earnings/FY-2022-Q4/press-release-webcast
- 27. Palmer, A. (2022, July 28). Amazon jumps on revenue beat and rosy guidance for third quarter. *CNBC*. https://www.cnbc.com/2022/07/28/amazon-amzn-q2-2022-earnings.html
- 28. Apple. (2022, July 28). *Apple reports third quarter results* [Press release]. https://www.apple.com/newsroom/2022/07/apple-reports-third-quarter-results/

Investing involves risk, including the possible loss of principal. International investments may involve risk of capital loss from unfavorable fluctuation in currency values, from differences in generally accepted accounting principles or from economic or political instability in other nations. Emerging markets involve heightened risks related to the same factors as well as increased volatility and lower trading volume. Narrowly focused investments may be subject to higher volatility. The funds are non-diversified.

The companies in which DRIV and EBIZ invest may be subject to rapid changes in technology, intense competition, rapid obsolescence of products and services, loss of intellectual property protections, evolving industry standards and frequent new product productions, and changes in business cycles and government regulation. There are additional risks associated with investing in mining industries.

The value of securities issued by companies in the energy sector may decline for many reasons, including, without limitation, changes in energy prices; international politics; energy conservation; the success of exploration projects; natural disasters or other catastrophes; changes in exchange rates, interest rates, or economic conditions; changes in demand for energy products and services; and tax and other government regulatory policies.

Carefully consider the Funds' investment objectives, risk factors, charges, and expenses before investing. This and additional information can be found in the Funds' summary or full prospectus, which may be obtained by calling 1.888.493.8631, or by visiting globalxetfs.com. Please read the prospectus carefully before investing.

Global X Management Company LLC serves as an advisor to Funds. The Funds are distributed by SEI Investments Distribution Co. (SIDCO), which is not affiliated with Global X Management Company LLC or Mirae Asset Global Investments.

Shares of ETFs are bought and sold at market price (not NAV) and are not individually redeemed from the Fund. Brokerage commissions will reduce returns. Beginning October 15, 2020, market price returns are based on the official closing price of an ETF share or, if the official closing price isn't available, the midpoint between the national best bid and national best offer ("NBBO") as of the time the ETF calculates current NAV per share. Prior to October 15, 2020, market price returns were based on the midpoint between the Bid and Ask price. NAVs are calculated using prices as of 4:00 PM Eastern Time. The returns shown do not represent the returns you would receive if you traded shares at other times.

Indices are unmanaged and do not include the effect of fees, expenses or sales charges. One cannot invest directly in an index. This information is not intended to be individual or personalized investment or tax advice and should not be used for trading purposes. Please consult a financial advisor or tax professional for more information regarding your investment and/or tax situation.

