

GLOBAL X ETFs RESEARCH

The Next Big Theme: September 2020

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Telemedicine & Digital Health

Say Goodbye to Waiting Rooms

Some U.S. health care providers reported telemedicine visits increasing by as much as 175x since the beginning of the COVID-19 pandemic.¹ And new insurance data reflect this surge: Fairhealth released claims data that shows telehealth represented 6.9% of all U.S. claims in June, up from 0.2% in the same month last year.² Of note, rural claims reached 3.5%, jumping from less than 0.1% in 2019.³ While still representing just a small percent of overall claims, the increase among rural communities shows the viability of telemedicine in areas with less access to health care. Connected health care devices, digital health platforms, and centralized, interoperable health data are also important parts of the digital health care ecosystem that should benefit from structural trends accelerated by the pandemic.

Artificial Intelligence & Big Data

Artsy Al Pens Poems and Prose

OpenAl's new GPT-3 software toolset could very well be the most powerful artificial intelligence (AI) -based language model ever created. Its advanced machine learning (ML) capabilities are built on probabilistic connections between words, allowing the model to generate entirely original, logical, and factual prose if provided with enough text to learn from. At this point, the toolset can pen poetry and text messages, compose music, generate computer code, and seamlessly answer questions. GPT-3 is still in private beta and only a few hundred developers have access to the software. However, those who do are making quick use of it. One developer is using the toolset to automate email responses; another is using it to build characters in text-based computer games.²

E-commerce

Everyone Wants In on E-Commerce Growth

E-commerce has become the de-facto shopping solution for many consumers amid the COVID-19 pandemic. Approximately 16% of retail sales in the second quarter occurred online, a robust 44.5% increase from Q2 last year.⁴ So it doesn't come as a surprise that other non-native e-commerce companies





increasingly want a piece of that growth. Walmart, which reported that its Q2 online sales nearly doubled from the same period last year, recently partnered with e-commerce stalwarts Shopify and Instacart to further accelerate their movement online.⁵

Cloud Computing

Cloud Unicorns Coming of Age

Five more cloud software companies filed for initial public offerings (IPOs) on August 24. Unity Software, which offers a cloud-based video game development platform where 50% of the Apple App Store's top 1,000 were born, filed for an NYSE listing.⁶ Cloud-data company Snowflake, which investors valued at over \$12.4 billion in February, also plans to IPO. Asana, a workplace productivity software developer valued near \$5 billion, filed for a direct listing.⁷ JFrog, a provider of software development tools, and Sumo Logic, a data analytics provider, intend to list on Nasdaq. So far this year, 18 software companies have gone public, raising a total of \$5.5 billion of capital. As of August 24, those names were up 91% from their offer price in weighted average terms.⁸

Electric Vehicles

Electrifying IPO Market

Electric vehicles (EVs) are quieter than internal combustion engine (ICEs) vehicles. But EV companies are revving their engines in a sprint to raise capital and capture the largely unpenetrated EV market. XPeng, Jiuzi, Li Auto, Hyllion, and Fisker are just a few companies that have entered the public market in recent months. Some chose traditional initial public offerings (IPOs), while others went the Special Purpose Acquisition Company (SPAC) route. Also expected to make their public debuts in coming months are Canoo and QuantumScape, with the latter backed by Bill Gates. Regardless of how these companies go public, they aim to take advantage of a supportive regulatory environment, growing consumer acceptance of EVs, and improving technology that's close to reaching price parity with ICEs.

Social Media

The Mall for the Digital Age

In August, Facebook announced their newest foray into social commerce. Facebook Shops gives users a place to browse and purchase products from a variety of businesses. In July, they launched *Instagram Shops*, which provides a similar service. Snapchat recently entered the social commerce arena as well, announcing an augmented reality-based shopping feature. Social commerce represents a shift for social media companies, as they look to further monetize their vast networks of users and content. Social commerce is projected to grow from \$22 billion in U.S. sales in 2019 to \$83 billion in 2024, a 30.8% CAGR. CAGR. 11





Autonomous Vehicles & IoT

AVs Take Flight

Powered by deep learning, autonomous aviation company Xwing completed the first-ever fully autonomous cargo flight. Xwing uses sensors, lidar, radar, and advanced vision technologies to gather flight data. Its software then integrates all the data and maps with onboard flight control systems to allow regional aircraft to navigate, take off and land. Humans still have to sit in the cockpit and oversee the flight, similar to the current state of autonomous cars. However, the company expects that by 2022 they could have completely unmanned cargo operations in the U.S., with humans overseeing operators from the ground. Is

THE NUMBERS

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

AUGUST 2020 THEMATIC ETF RETURNS

Source: Bloomberg, August 31, 2020.



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

THEMATIC SALES GROWTH

Source: Bloomberg, August 31, 2020.



Note: Forward-looking based on data and analysis from 08/31/2020. 2-Year Annualized Forward Sales Growth is the consensus analyst expectations for total sales growth in the next two calendar years.



Standard Performance					Cumulative % Data as of month end 8/31/20			Avg. Annualized % Data as of quarter end 6/30/20			
	Gross Expense Ratio	Net Expense Ratio	Ticker		1 Month	3 Month	Since Inception	1 Year	3 Year	5 Year	Since Inceptio
				NAV	6.86%	17.33%	87.49%	15.88%	9.65%	-	14.15%
Robotics & Artificial Intelligence Inception Date 9/12/2016	0.68%	0.68%	вотz	Market Price	6.95%	17.08%	87.43%	15.51%	9.49%	-	14.11%
				Index	6.92%	17.39%	89.16%	16.63%	9.81%	-	14.379
FiTL				NAV	9.15%	21.45%	160.19%	12.35%	21.83%	-	23.109
FinTech Inception Date 9/12/2016	0.68%	0.68%	FINX	Market Price	8.88%	21.06%	159.25%	12.50%	21.79%	-	23.199
				Index	9.22%	21.61%	166.83%	13.07%	22.64%	-	23.889
				NAV	4.31%	18.41%	85.51%	23.06%	12.18%	-	14.51%
Internet of Things Inception Date 9/12/2016	0.68%	0.68%	SNSR	Market Price	4.44%	17.79%	85.44%	23.22%	12.05%	-	14.539
				Index	4.36%	18.56%	87.74%	23.34%	12.51%	-	14.849
Cloud Computing Inception Date 4/12/2019	0.68%	0.68%	CLOU	NAV	7.94%	22.67%	62.50%	35.33%	-	-	33.74
				Market Price	7.76%	22.70%	62.95%	35.40%	-	-	34.23
necpaon bato in El Esto				Index	7.98%	22.89%	63.78%	36.08%	-	-	34.38
		0.65%	SOCL	NAV	7.00%	32.73%	245.55%	32.82%	15.52%	16.79%	13.349
Social Media Inception Date 11/14/2011	0.65%			Market Price	7.07%	32.31%	245.54%	33.19%	15.49%	16.84%	13.35
nception bate 10 14/2011				Index	7.05%	32.91%	262.40%	33.69%	16.17%	17.48%	13.949
Artificial Intelligence				NAV	8.87%	23.64%	62.67%	27.90%	-	-	16.98
R Technology	0.68%	0.68%	AIQ	Market Price	9.01%	24.00%	62.81%	27.85%	-	-	16.92
nception Date 5/11/2018				Index	8.90%	23.78%	63.86%	28.39%	-	-	17.30
		0.68%	DRIV	NAV	11.88%	28.63%	20.74%	9.81%	-	-	0.599
Autonomous & Electric Vehicles nception Date 4/13/2018	0.68%			Market Price	12.00%	28.66%	20.95%	9.81%	-	-	0.629
riception Date 4/15/2016				Index	11.95%	28.75%	20.82%	9.87%	-	-	0.599
	0.75%	0.75%	LIT	NAV	9.31%	39.37%	48.20%	23.40%	5.84%	8.77%	1.78%
Lithium & Battery Technology				Market Price	9.32%	38.58%	47.96%	23.21%	5.77%	8.76%	1.78%
nception Date 7/22/2010				Index	9.23%	39.18%	55.44%	23.27%	5.82%	8.91%	2.279
				NAV	1.14%	7.81%	16.49%	15.99%	-	-	11.869
Genomics & Biotechnology	0.50%	0.50%	GNOM		1.08%	8.06%	18.93%	16.07%	-	-	13.54
nception Date 4/5/2019		0.30%	5,1014	Index	1.19%	7.99%	17.48%	16.77%	-	-	12.53
Millennials Inception Date 5/4/2016	0.50%	0.50%	MILN	NAV	8.88%	22.91%	119.57%	11.73%	16.78%		16.479
				Market Price	8.89%	22.89%	118.64%	11.57%	16.72%		16.34
				Index	8.95%	23.07%	123.95%	12.32%	17.39%		16.98
	0.50%			NAV	1.90%	6.77%	75.47%	15.62%	10.51%	_	13.04
Longevity Inception Date 5/9/2016		0.50%	LNGR	Market Price	2.02%	6.55%	79.03%	15.66%	10.11%	-	13.62
				Index	1.93%	6.85%	77.64%	15.85%	10.76%		13.36
				NAV	6.18%	10.76%	49.93%	1.16%	9.01%	_	8.009
Health & Wellness	0.50%	0.50%	BFIT	Market Price	6.21%	10.02%	50.51%	0.55%	8.72%		8.13%
nception Date 5/9/2016				Index	6.21%	10.84%	52.75%	1.16%	9.01%		8.469
				NAV	6.44%	30.23%	87.61%	29.26%	3.01%		32.95
E-Commerce	0.50%	0.50%	EBIZ	Market Price	6.44%	30.26%	87.75%	29.33%	_	_	33.139
nception Date 11/27/2018				Index	6.54%	30.42%	89.45%	29.93%	-		33.68
				NAV	8.32%	16.28%	16.17%	-6.27%	2.23%		1.14%
nfrastructure	0.47%	0.47%	PAVE		8.39%	16.27%	16.24%	-6.03%	2.27%	-	1.20%
nception Date 3/6/2017				Market Price	8.39%	16.45%	18.06%	-5.83%	2.71%	-	1.62%
				Index	-5.82%	-15.49%	-58.76%	-3.03 /6	2./1/0		-56.12
Cannabis	0.50%	0.50%	DOTY	NAV					-		
nception Date 9/7/2019	0.50%	0.50%	POTX	Market Price	-5.98%	-14.65%	-59.58%	-	-	-	-57.05
				Index	-6.26%	-17.64%	-62.37%	-	-	-	-59.42
/ideo Games & Esports	0.500	0.500/	LIEBO	NAV	11.00%	33.19%	80.86%	-		-	53.85
nception Date 10/25/2019	0.50%	0.50%	HERO	Market Price	11.36%	33.27%	81.47%	-	-	-	54.28
				Index	11.04%	33.42%	81.53%	-	-	-	54.25
Cybersecurity			BUG	NAV	2.62%	17.50%	50.03%	-	-	-	29.77
nception Date 10/25/2019	0.60%	0.50%*		Market Price	2.71%	17.71%	53.00%	-	-	-	32.30
				Index	2.67%	17.71%	50.80%	-	-	-	30.25
Thematic Growth	0.50%	0.50%	GXTG	NAV	6.83%	24.29%	43.80%	-	-	-	23.79
Inception Date 10/25/2019				Market Price	7.77%	25.38%	46.45%	-	-	-	25.24
,				Index	6.82%	24.28%	43.65%	-	-	-	23.69
Education	0.50%	0.50%	EDUT	NAV	3.31%	-	4.80%	-	-	-	-
nception Date 7/10/2020				Market Price	3.50%	-	5.20%	-	-	-	-
				Index	3.32%	-	4.89%	-	-	-	-
Falancial of Prince 11				NAV	5.10%	-	6.83%	-	-	-	-
Telemedicine & Digital Health nception Date 7/29/2020	0.68%	0.68%	EDOC	Market Price	4.76%	-	6.89%	-	-	-	-
				Index	5.11%		6.83%	-	-		

The 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 investor's 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. Returns for periods greater than one year are annualized. Market price returns are based upon the midpoint of the bid/ask spread at the close of the exchange and do not represent the returns you would receive if you traded shares at other times. For performance data current to the most recent month end, please call 1-888-493-8631, or visit www.globalxetfs.com. "Net Expense Ratio reflects fees incurred by the Fund after waivers and reimbursements. Fee waivers for BUG are contractual and into effect until at least April 1, 2021.





P/S AND EV/S

Source: Bloomberg, data is as of 8/31/20 and 7/31/20.

Ticker	Nama	P	/S	EV/S		
licker	Name	8/31/20	7/31/20	8/31/20	7/31/20	
GNOM	Global X Genomics & Biotechnology ETF	12.70	12.60	12.22	12.38	
CLOU	Global X Cloud Computing ETF	10.90	10.31	11.47	10.74	
BUG	Global X Cybersecurity ETF	8.35	8.05	8.14	7.88	
FINX	Global X FinTech ETF	7.53	6.97	8.60	8.38	
SOCL	Global X Social Media ETF	5.70	5.35	6.06	5.65	
EDOC	Global X Telemedicine & Digital Health ETF	5.45	5.30	6.73	7.17	
HERO	Global X Video Games & Esports ETF	5.22	4.37	5.19	4.93	
AIQ	Global X Future Analytics Tech ETF	4.18	4.20	4.33	4.35	
POTX	Global X Cannabis ETF	3.95	4.24	4.76	5.06	
LNGR	Global X Longevity Thematic ETF	3.95	3.86	4.59	4.55	
EDUT	Global X Education ETF	3.78	3.58	4.20	4.04	
BOTZ	Global X Robotics & Artificial Intelligence ETF	2.71	2.53	2.50	2.47	
MILN	Global X Millennials Thematic ETF	2.63	2.37	3.23	2.98	
SPX	S&P 500 Index	2.55	2.38	2.95	2.78	
SNSR	Global X Internet of Things ETF	2.45	2.33	2.95	2.83	
EBIZ	Global X E-Commerce ETF	2.42	2.46	2.36	2.43	
LIT	Global X Lithium and Battery Tech ETF	2.11	1.93	2.46	2.29	
ACWI	ACWI Index	1.87	1.72	2.30	2.14	
BFIT	Global X Health & Wellness Thematic ETF	1.40	1.29	1.61	1.64	
PAVE	Global X U.S. Infrastructure Development ETF	1.01	0.92	1.33	1.23	
DRIV	Global X Autonomous & Electric Vehicles ETF	0.91	1.01	1.10	1.22	

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

F12M SALES GROWTH, PSG, AND EVSG Bloomberg, data is as of 8/31/20 and 7/31/20.

Ticker	Name	F12M Sales (%)		PSG		EVSG	
rickei	Name	7/31/20	6/30/20	7/31/20	6/30/20	7/31/20	6/30/20
POTX	Global X Cannabis ETF	51.0%	53.7%	0.08	0.08	0.09	0.09
EDUT	Global X Education ETF	35.2%	33.3%	0.11	0.11	0.12	0.12
EBIZ	Global X E-Commerce ETF	27.9%	26.2%	0.09	0.09	0.08	0.09
LIT	Global X Lithium and Battery Tech ETF	26.4%	20.2%	0.08	0.96	0.09	0.11
BFIT	Global X Health & Wellness Thematic ETF	25.1%	6.8%	0.06	0.19	0.06	0.24
HERO	Global X Video Games & Esports ETF	23.6%	27.9%	0.22	0.16	0.22	0.18
EDOC	Global X Telemedicine & Digital Health ETF	21.9%	21.4%	0.25	0.25	0.31	0.33
CLOU	Global X Cloud Computing ETF	21.4%	19.9%	0.51	0.52	0.54	0.54
BUG	Global X Cybersecurity ETF	17.4%	14.1%	0.48	0.57	0.47	0.56
LNGR	Global X Longevity Thematic ETF	15.8%	14.4%	0.25	0.27	0.29	0.32
SOCL	Global X Social Media ETF	15.4%	13.8%	0.37	0.39	0.39	0.41
AIQ	Global X Future Analytics Tech ETF	15.2%	14.6%	0.28	0.29	0.28	0.30
GNOM	Global X Genomics & Biotechnology ETF	14.6%	15.2%	0.87	0.83	0.83	0.81
MILN	Global X Millennials Thematic ETF	12.2%	10.1%	0.21	0.24	0.26	0.30
SPX	S&P 500 Index	9.3%	8.0%	0.27	0.30	0.32	0.35
BOTZ	Global X Robotics & Artificial Intelligence ETF	9.2%	7.9%	0.29	0.32	0.27	0.31
ACWI	ACWI Index	9.1%	6.7%	0.21	0.26	0.25	0.32
SNSR	Global X Internet of Things ETF	8.2%	5.3%	0.30	0.44	0.36	0.54
DRIV	Global X Autonomous & Electric Vehicles ETF	6.5%	3.8%	0.14	0.27	0.17	0.32
FINX	Global X FinTech ETF	4.6%	8.4%	1.65	0.83	1.88	1.00
PAVE	Global X U.S. Infrastructure Development ETF	-1.9%	-4.0%	N/A	N/A	N/A	N/A

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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- Chart: What Happens When Themes Converge?
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To see individual ETF holdings across the Global X Thematic Growth Suite, click the below links:

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- People and Demographics: Global X Cannabis ETF (POTX), Global X Millennials Thematic ETF (MILN), Global X Health & Wellness Thematic ETF (BFIT), Global X E-Commerce ETF (EBIZ), Global X Genomics & Biotechnology ETF (GNOM), Global X Longevity Thematic ETF (LNGR), Global X Telemedicine & Digital Health ETF (EDOC), Global X Education ETF (EDUT)
- Infrastructure Development: Global X U.S. Infrastructure Development ETF (PAVE)
- Multi-Theme: Global X Thematic Growth ETF (GXTG)





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