

UCITS Thematic ETF Report

April 2022



Thematic Investing: Harnessing Disruption in Portfolios

Thematic Investing brings a rigorous and research-driven approach to harnessing **structural changes** around the world. It seeks to identify powerful **macro-level trends** and the **companies that stand to benefit** from the materialization of those trends.

General Process

Top Down

Identify disruptive macro-level trends and select related high-conviction themes



Bottom Up

Select investments highly exposed to those themes and related trends

Characteristics

- **Long-term, growth-focused** strategies
- **Unconstrained** by geographies & sectors
- **Concentrated**, often in tech & new consumer
- **Relatable** concepts that impact our daily lives

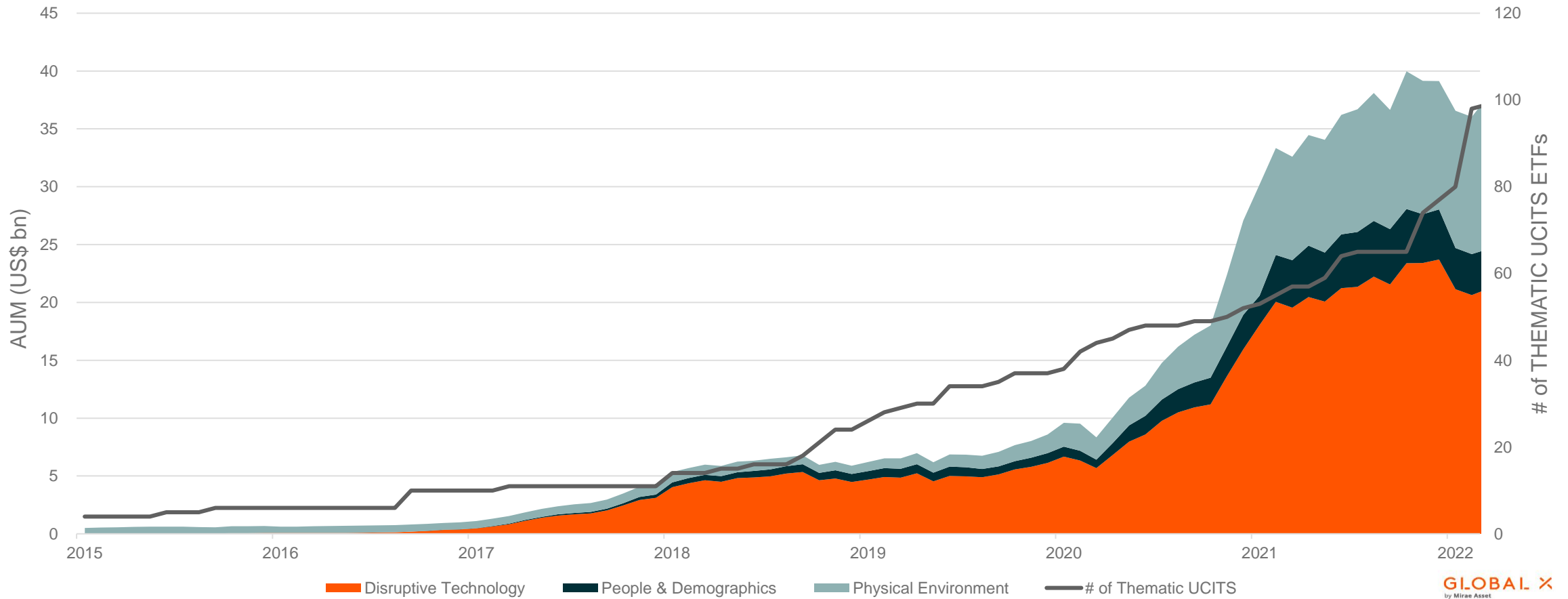
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Defining & Categorizing Themes: Global X’s Classification System

| Category | Mega-Theme | Theme | Sub-Theme |
|--------------------------------|----------------------------|-----------------------------|---|
| Disruptive Technology | Big Data | Machine/Deep Learning | |
| | | Cybersecurity | |
| | | Quantum Computing | |
| | Mobility | Cloud/Edge Computing | Remote Work, MarTech |
| | | Autonomous Vehicles | |
| | | Electric Vehicles | Lithium/Batteries, Charging Infrastructure |
| | Digital Experiences | AR/VR | |
| | | Video Games | E-sports |
| | | Social Media | |
| | | Streaming | |
| | FinTech | Mobile Payments | |
| | | Peer-to-Peer Lending | |
| | | Crowdfunding | |
| | | Blockchain | |
| | Connectivity | Digital Infrastructure | |
| | | 5G/Next Gen Networking | |
| | | Emerging Markets Internet | |
| | | Internet of Things | Smart Devices, Smart Cities, IIoT |
| Space/Satellite Communications | | | |
| Robotics | AI/Automation | | |
| | 3D Printing | | |
| People & Demographics | New Consumer | Drones | |
| | | Millennials & Gen Z | |
| | | Emerging Market Consumers | |
| | | Urbanization | |
| | | E-commerce | |
| | | Education | |
| | | Sharing/Gig Economy | |
| | | Safety and Security | |
| | | Cannabis | |
| | | Sports Betting | |
| | | Professional Sports | |
| | Health | Healthcare Innovation | Telemedicine & Digital Health, Genomics, Immunotherapy, Public Health |
| | | Aging Population | Senior Care, Senior Economy |
| | | Health & Wellness | Obesity, Organics |
| | | Emerging Markets Healthcare | |
| | | Alternative Medicine | |
| | | CleanTech | |
| | | | |
| Physical Environment | Climate Change | Clean & Renewable Energy | Solar, Wind, Hydrogen |
| | | Resource Scarcity | Water, Waste/Recycling, Sustainable Food |
| | Disruptive Materials | | |
| | Infrastructure Development | | |
| | | | |

UCITS Thematic ETF Landscape

At the end of April 2022, there were 102 UCITS thematic ETFs totaling \$34.3B in assets under management (AUM), down 9.2% from March 2022 and down 0.3% from the same month last year.

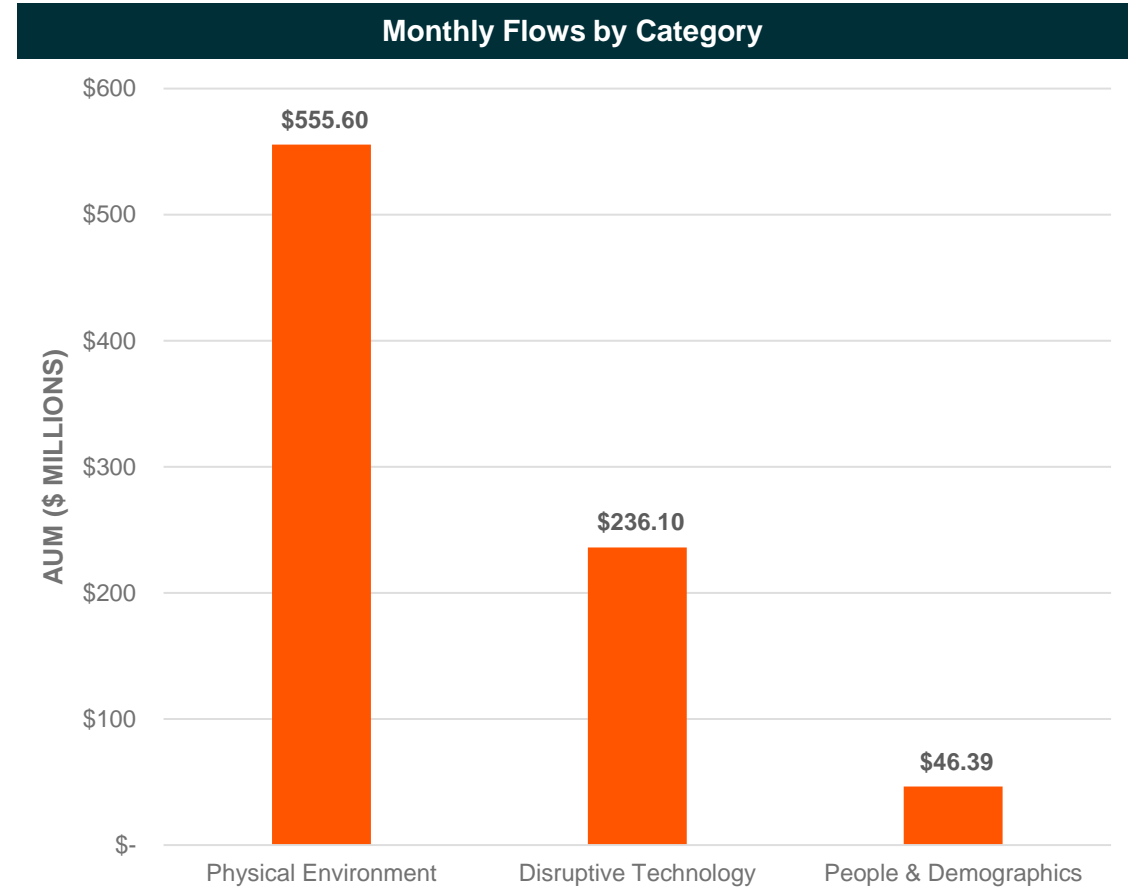
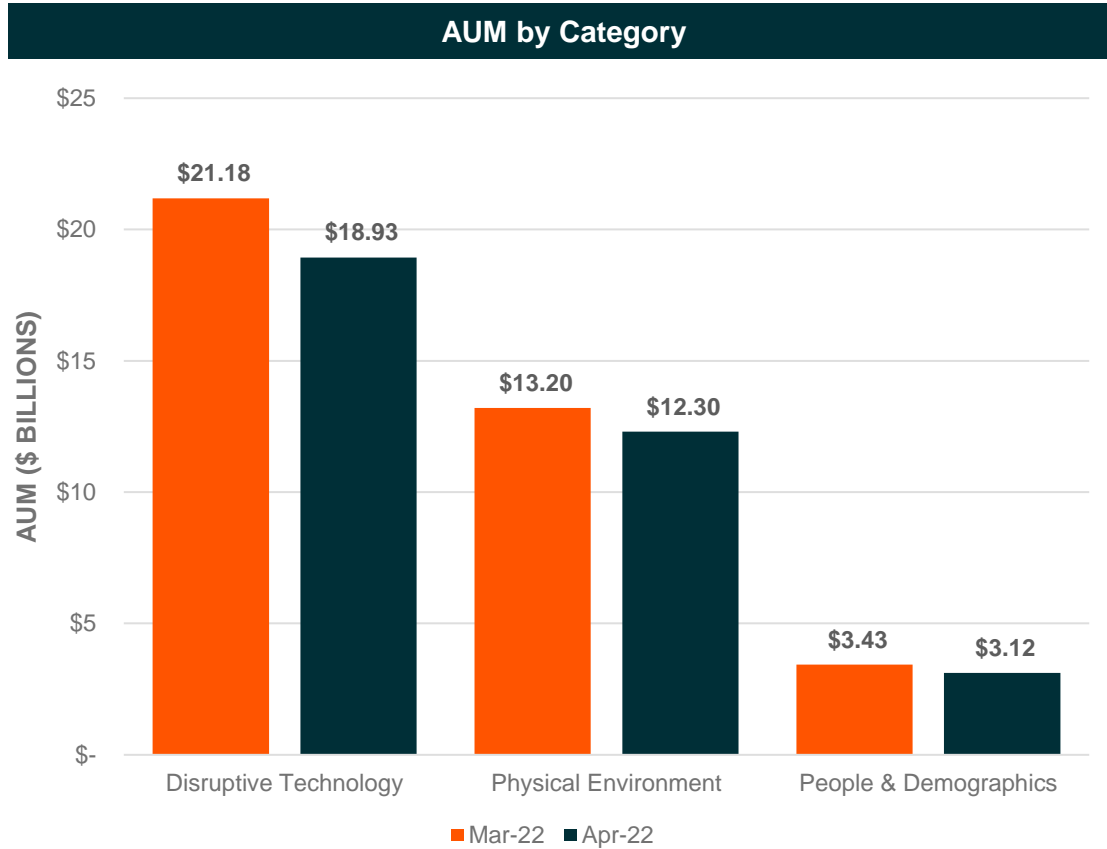


Source: Global X ETFs, Bloomberg. As of Apr 29, 2022.

Note: AUM includes assets of funds closed until the last month of trading activity.

UCITS Thematic ETF Landscape: AUM & Flows

AUM increased across the Disruptive Technology, Physical Environment and People & Demographics categories.



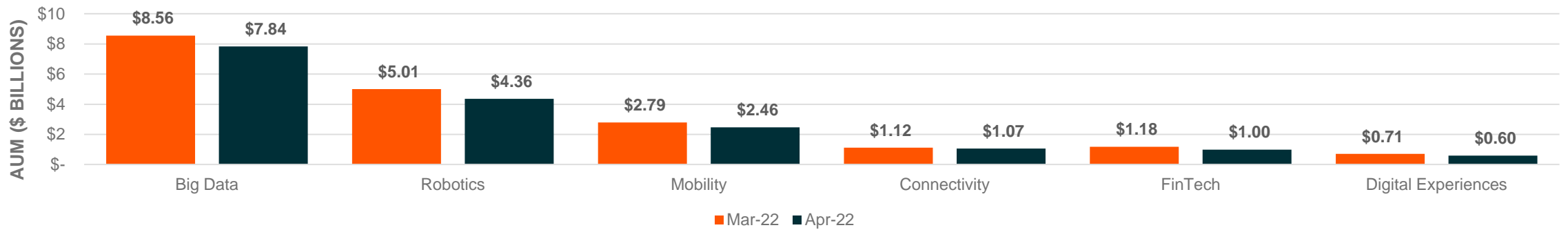
Source: Global X ETFs, Bloomberg. As of Apr 29, 2022.

Note: AUM includes assets of funds closed until the last month of trading activity.

UCITS Thematic ETF Landscape: AUM & Flows

All mega-themes within the Disruptive Technology category saw a decrease in AUM, with FinTech experiencing the largest fall in AUM over the month. The Big Data mega-theme saw a large increase in monthly flows.

AUM – Disruptive Technology’s Mega-Themes



Monthly Flows – Disruptive Technology’s Mega-Themes



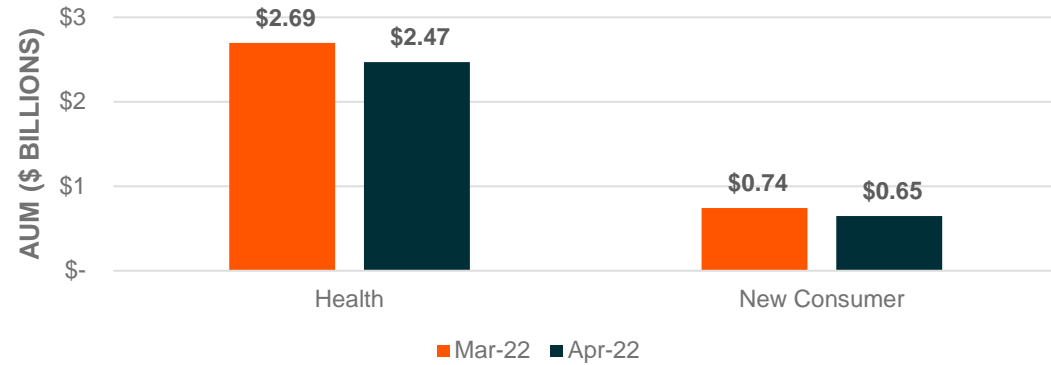
Source: Global X ETFs, Bloomberg. As of Apr 29, 2022.

Note: Mega-Themes may or may not add up to the Category AUM given that some ETFs considered are broad and are only classified by its Category.

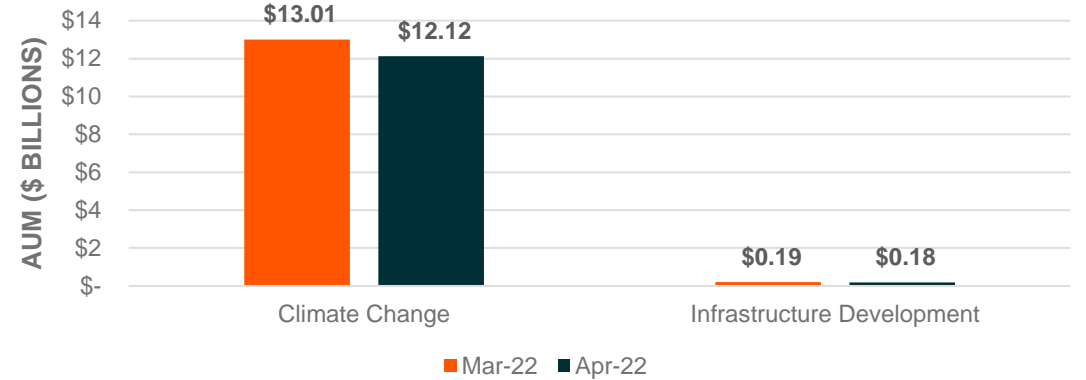
UCITS Thematic ETF Landscape: AUM & Flows

Mega-themes within People & Demographics and the Physical Environment saw AUM decreases over the month, however the Climate Change and Health mega-themes saw large increases in monthly flows.

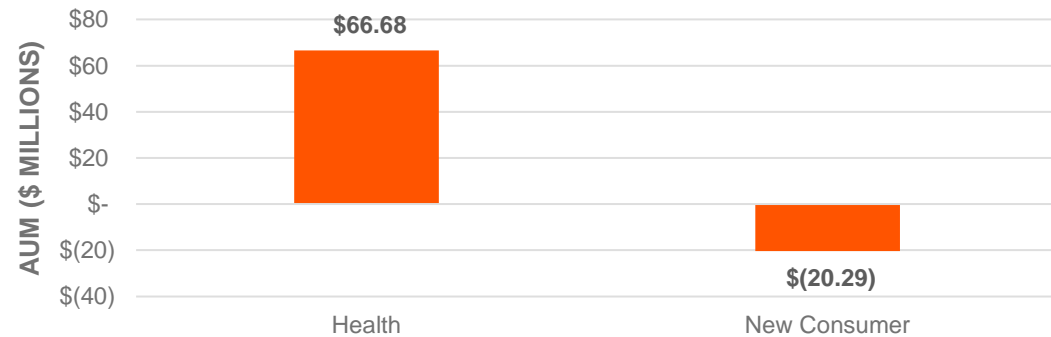
AUM – People & Demographic's Mega-Themes



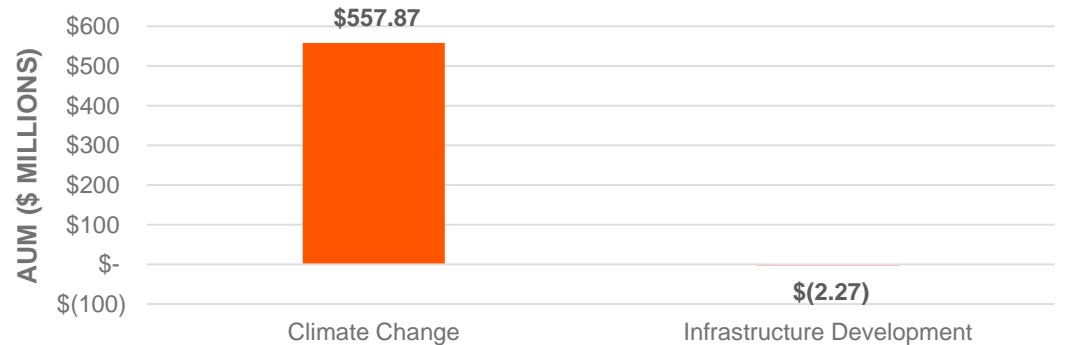
AUM – Physical Environment's Mega-Themes



Monthly Flows – People & Demographic's Mega-Themes



Monthly Flows – Physical Environment's Mega-Themes

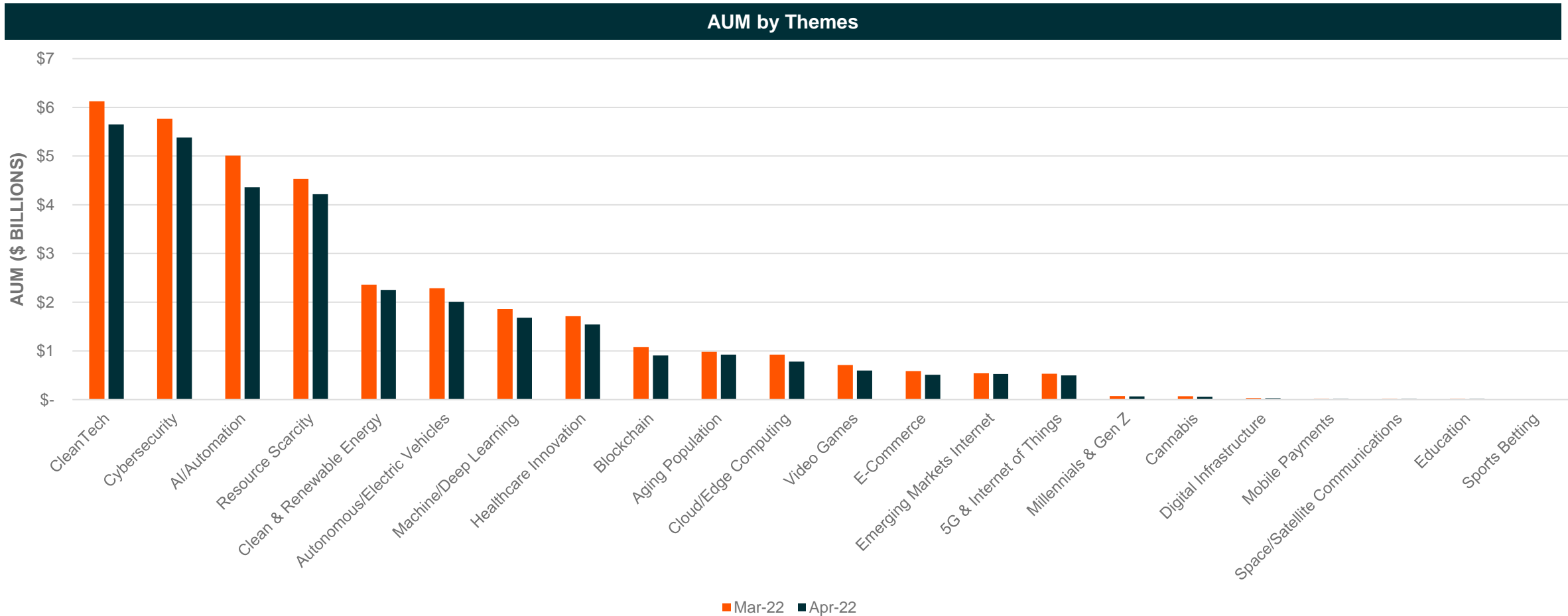


Source: Global X ETFs, Bloomberg. As of Apr 29, 2022.

Note: Mega-Themes may or may not add up to the Category AUM given that some ETFs considered are broad and are only classified by its Category.

UCITS Thematic ETF Landscape: AUM & Flows

On a theme level, saw a decrease in AUM, with the Cannabis theme seeing the largest fall in AUM over the month.



Source: Global X ETFs, Bloomberg. As of Apr 29, 2022.

Note: Themes may or may not add up to the Mega-Themes AUM given that some ETFs considered are broad and are only classified by its Mega-Theme.

April 2022 UCITS Thematic ETFs Recap

Top/Bottom AUM by %Δ

| Ticker | Name | Apr 2022 (\$M) | Mar 2022 (\$M) | %Δ |
|--------|--|----------------|----------------|------|
| QCLN | First Trust Nasdaq Clean Edge Green Energy UCITS ETF | \$37.20 | \$22.40 | 66% |
| XMOV | Xtrackers Future Mobility UCITS ETF | \$114.23 | \$106.53 | 7% |
| YODA | Procure Space UCITS ETF | \$14.50 | \$14.71 | -1% |
| BIOT | L&G Pharma Breakthrough UCITS ETF | \$37.22 | \$37.77 | -1% |
| KWEB | KraneShares CSI China Internet UCITS ETF | \$528.37 | \$539.34 | -2% |
| CBDX | Medical Cannabis & Wellness UCITS ETF | \$26.14 | \$31.96 | -18% |
| SKYY | HAN-GINS Cloud Technology UCITS ETF | \$17.98 | \$22.06 | -18% |
| VOLT | WisdomTree Battery Solutions UCITS ETF | \$416.58 | \$567.81 | -27% |
| DAPP | Vaneck Vectors Digital Assets Equity UCITS ETF | \$24.94 | \$36.25 | -31% |
| HERU | Global X Video Games & Esports UCITS ETF | \$18.01 | \$29.48 | -39% |

Source: Global X ETFs, Bloomberg. As of Apr 29, 2022.

Note: Top/bottom ETFs by %Δ are limited to those that started March 2022 with AUM > \$10M and excludes fund closures

Top/Bottom AUM by \$Δ (in millions)

| Ticker | Name | Apr 2022 (\$M) | Mar 2022 (\$M) | \$Δ (\$M) |
|--------|--|----------------|----------------|-----------|
| QCLN | First Trust Nasdaq Clean Edge Green Energy UCITS ETF | \$37.20 | \$22.40 | \$15 |
| XMOV | Xtrackers Future Mobility UCITS ETF | \$114.23 | \$106.53 | \$8 |
| YODA | Procure Space UCITS ETF | \$14.50 | \$14.71 | \$0 |
| BIOT | L&G Pharma Breakthrough UCITS ETF | \$37.22 | \$37.77 | -\$1 |
| LERN | Rize Education Tech & Digital Learning UCITS ETF | \$11.97 | \$12.83 | -\$1 |
| ROBO | L&G ROBO Global Robotics and Automation UCITS ETF | \$936.98 | \$1,094.58 | -\$158 |
| IH2O | iShares Global Water UCITS ETF | \$2,127.11 | \$2,297.23 | -\$170 |
| ISPY | L&G Cyber Security UCITS ETF | \$2,935.81 | \$3,205.48 | -\$270 |
| RBOT | iShares Automation & Robotics UCITS ETF | \$3,110.62 | \$3,541.16 | -\$431 |
| INRG | iShares Global Clean Energy UCITS ETF | \$5,608.74 | \$6,095.40 | -\$487 |

April 2022 UCITS Thematic ETFs Recap

Cybersecurity and Clean and Renewable Energy-related themes received the most inflows during the month on an absolute basis.

Top/Bottom MoM Flows by \$Δ (in millions)

| Ticker | Name | MoM Flows \$Δ (\$M) |
|--------|---|---------------------|
| INRG | iShares Global Clean Energy UCITS ETF | \$293.65 |
| NRJ | Lyxor New Energy DR UCITS ETF | \$137.26 |
| ISPY | L&G Cyber Security UCITS ETF | \$89.39 |
| LOCK | iShares Digital Security UCITS ETF | \$71.36 |
| CIBR | First Trust Nasdaq Cybersecurity UCITS ETF | \$61.18 |
| ESPO | Vaneck Vectors Video Gaming & eSports UCITS ETF | -\$7.22 |
| HERU | Global X Video Games & Esports UCITS ETF | -\$8.08 |
| ROBO | L&G ROBO Global Robotics and Automation UCITS ETF | -\$10.58 |
| ECOM | L&G Ecommerce Logistics UCITS ETF | -\$22.45 |
| VOLT | WisdomTree Battery Solutions UCITS ETF | -\$80.09 |

Source: Global X ETFs, Bloomberg. As of Apr 29, 2022.

April 2022 UCITS Thematic ETF Launches/Closures

During the month, three new thematic ETFs launched, with two focusing on Disruptive Technology, and one on Physical Environment. No ETFs closed during the quarter.

Thematic ETF Launches

| Ticker | Name | Issuer | Inception Date |
|--------|---|-------------|----------------|
| WRCY | WisdomTree Recycling Decarbonisation UCITS ETF | WisdomTree | 4/22/2022 |
| GRDU | First Trust Nasdaq Clean Edge Smart Grid Infrastructure UCITS ETF | First Trust | 4/22/2022 |
| ELEC | Electric Vehicle Charging Infrastructure UCITS ETF | HANetf | 4/27/2022 |



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Risk Information

Risk Information

The Global X Thematic Classification System is based on the expertise, views, and opinions of the Global X Thematic Classification Committee and are subject to change.

Global X defines thematic investing as the process of identifying powerful disruptive macro-level trends and the underlying investments that stand to benefit from the materialization of those trends. By nature, thematic investing is a long term, growth-oriented strategy, that is typically unconstrained geographically or by traditional sector/industry classifications, has low correlation to other growth strategies, and invests in relatable concepts.

The process of identifying themes consists of three inexorable principles:

- 1) There must be high conviction that the theme will materialize and have a meaningful impact on segments of the economy or markets. Often this is due to observable structural changes in technology, demographics, consumer behavior, or the physical environment, but can also be influenced by other factors.
- 2) A theme must be investable, meaning there are publicly traded companies that provide exposure to the concept. Ideally, the group of companies is broad, have high liquidity, and attribute a substantial portion of their business operations (revenues, assets, research & development) to the theme.
- 3) A theme must be expected to express itself over a medium to long-term time horizon, generally considered to be five years or longer. A longer-term time horizon makes market timing less of a factor in the success of identifying a theme.

Notably, and taking into consideration the principles above, thematic investing does not consist of ESG, values-based, or policy-driven strategies, unless they otherwise represent a disruptive structural trend (e.g. climate change). Further, funds that adhere to traditional sector or industry classifications, or that are used primarily to gain exposure to cyclical trends (e.g. currencies, valuations, inflation) are not considered thematic. Finally, alternative asset classes, such as listed infrastructure, MLPs, and ubiquitous commodities are not considered thematic. We recognize that these exclusions may differ from other third-party definitions of thematic investing, but it is consistent with, and core to, Global X's thematic classification system and process.

Based on the definition and principles of thematic investing above, Global X has established a thematic classification system that seeks to identify powerful themes and organize them by common traits and drivers. The system consists of four layers of classifications: 1) Categories; 2) Mega-Themes; 3) Themes; and 4) Sub-Themes, with each layer becoming sequentially narrower in its focus.

'Categories' is the broadest layer and represents three fundamental drivers of disruption: exponential advancements in technology (Disruptive Technology), changing consumer habits and demographics (People & Demographics), and the evolving physical landscape (Physical Environment). One layer down are 'Mega-Themes,' which serve as a foundation to multiple transformative forces that are causing substantial changes in a common area. Conceptually, Mega-Themes are a collection of more narrowly targeted Themes. For example, Big Data is a Mega-Theme that consists of Machine/Deep Learning, Cybersecurity, Quantum Computing, and Cloud/Edge Computing. Further down, we identify 'Themes' as the specific areas of transformational disruption that are driving technology forward, changing consumer demands, or impacting the environment. 'Sub-Themes' are more niche areas, such as specific applications of themes or upstream forces that are driving themes forward.

The number and categories, mega-themes, themes, and sub-themes is expected to evolve over time as new drivers of structural changes emerge or fade. Such decisions will be made by the Global X Thematic Classification Committee ("the committee") and take into account internal and external research and data about potential themes.



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Appendix

Appendix – Classification of UCITS Thematic ETFs

| Ticker | Name | Apr 2022 (\$M) | Mar 2022 (\$M) | MoM Flows (\$M) | Category | Mega-Theme | Theme | Sub-Theme |
|---------|---|----------------|----------------|-----------------|-----------------------|---------------------|--------------------------------|---------------|
| SKYU | First Trust Cloud Computing UCITS ETF | \$336.81 | \$401.90 | \$0.05 | Disruptive Technology | Big Data | Cloud/Edge Computing | |
| SKYY | HAN-GINS Cloud Technology UCITS ETF | \$17.98 | \$22.06 | -\$1.77 | Disruptive Technology | Big Data | Cloud/Edge Computing | |
| WCLD | WisdomTree Cloud Computing UCITS ETF | \$387.86 | \$462.11 | -\$0.16 | Disruptive Technology | Big Data | Cloud/Edge Computing | |
| CIBR | First Trust Nasdaq Cybersecurity UCITS ETF | \$483.52 | \$494.25 | \$61.18 | Disruptive Technology | Big Data | Cybersecurity | |
| LOCK | iShares Digital Security UCITS ETF | \$1,725.21 | \$1,833.99 | \$71.36 | Disruptive Technology | Big Data | Cybersecurity | |
| ISPY | L&G Cyber Security UCITS ETF | \$2,935.81 | \$3,205.48 | \$89.39 | Disruptive Technology | Big Data | Cybersecurity | |
| CYBR | Rize Cybersecurity and Data Privacy UCITS ETF | \$146.68 | \$151.06 | \$8.38 | Disruptive Technology | Big Data | Cybersecurity | |
| WCBR | WisdomTree Cybersecurity UCITS ETF | \$72.99 | \$76.69 | \$4.98 | Disruptive Technology | Big Data | Cybersecurity | |
| GOAI | Amundi STOXX Global Artificial Intelligence UCITS ETF | \$392.91 | \$436.33 | \$0.00 | Disruptive Technology | Big Data | Machine/Deep Learning | |
| AIAI LN | L&G Artificial Intelligence UCITS ETF | \$241.75 | \$287.38 | \$1.51 | Disruptive Technology | Big Data | Machine/Deep Learning | |
| OWLE | Ossiam World Esg Machine Learning UCITS ETF | \$77.06 | \$81.21 | \$0.00 | Disruptive Technology | Big Data | Machine/Deep Learning | |
| WTA | WisdomTree Artificial Intelligence UCITS ETF | \$361.65 | \$415.44 | \$2.19 | Disruptive Technology | Big Data | Machine/Deep Learning | |
| XAIX | Xtrackers Artificial Intelligence & Big Data UCITS ETF | \$607.78 | \$642.05 | \$29.13 | Disruptive Technology | Big Data | Machine/Deep Learning | |
| CLO | Global X Cloud Computing UCITS ETF | \$33.69 | \$37.89 | \$0.00 | Disruptive Technology | Big Data | Cloud/Edge Computing | |
| BUG | Global X Cybersecurity UCITS ETF | \$15.62 | \$7.68 | \$8.86 | Disruptive Technology | Big Data | Cybersecurity | |
| CCLD | Global X China Cloud Computing UCITS ETF | \$1.97 | \$2.13 | \$0.00 | Disruptive Technology | Big Data | Cloud Computing | |
| NXTG | First Trust Indxx NextG UCITS ETF | \$8.43 | \$9.14 | \$0.00 | Disruptive Technology | Connectivity | 5G & Internet of Things | |
| DIGI | Digital Infrastructure & Connectivity UCITS ETF | \$25.88 | \$29.12 | \$0.00 | Disruptive Technology | Connectivity | Digital infrastructure | |
| KWEB | KraneShares CSI China Internet UCITS ETF | \$528.37 | \$539.34 | -\$6.17 | Disruptive Technology | Connectivity | Emerging Markets Internet | |
| SCITY | Amundi Smart City UCITS ETF | \$25.00 | \$27.05 | \$0.00 | Disruptive Technology | Connectivity | 5G & Internet of Things | Smart Cities |
| CITY | iShares Smart City Infrastructure UCITS ETF | \$377.92 | \$397.11 | \$15.12 | Disruptive Technology | Connectivity | 5G & Internet of Things | Smart Cities |
| IQCY | Lyxor MSCI Smart Cities ESG Filtered DR UCITS ETF | \$68.80 | \$80.52 | -\$3.48 | Disruptive Technology | Connectivity | 5G & Internet of Things | Smart Cities |
| YODA | Procore Space UCITS ETF | \$14.50 | \$14.71 | \$1.71 | Disruptive Technology | Connectivity | Space/Satellite Communications | |
| SNSR | Global X Internet of Things UCITS ETF | \$1.33 | \$1.51 | \$0.00 | Disruptive Technology | Connectivity | 5G & Internet of Things | |
| CAVE | VanEck Vectors Smart Home Active UCITS ETF | \$12.58 | \$14.56 | \$0.00 | Disruptive Technology | Connectivity | Internet of Things | Smart Devices |
| VPN | Global X Data Center REITs & Digital Infrastructure UCITS ETF | \$2.15 | \$2.83 | -\$0.54 | Disruptive Technology | Connectivity | Digital infrastructure | |
| WTRE | WisdomTree New Economy Real Estate UCITS ETF | \$0.74 | \$0.77 | \$0.00 | Disruptive Technology | Connectivity | Digital Infrastructure | |
| ESPO | VanEck Vectors Video Gaming & eSports UCITS ETF | \$569.94 | \$669.52 | -\$7.22 | Disruptive Technology | Digital Experiences | Video Games | E-sports |
| HERU | Global X Video Games & Esports UCITS ETF | \$18.01 | \$29.48 | -\$8.08 | Disruptive Technology | Digital Experiences | Video Games | E-sports |
| FXES | FinEx Video Gaming & Esports UCITS ETF | \$8.29 | \$9.63 | \$0.00 | Disruptive Technology | Digital Experiences | Video Games | E-sports |

Source: Global X ETFs, Bloomberg. Mar 2022 as of 03/31/2022; Apr 2022 as of 04/29/2022.

Appendix – Classification of UCITS Thematic ETFs

| Ticker | Name | Apr 2022 (\$M) | Mar 2022 (\$M) | MoM Flows (\$M) | Category | Mega-Theme | Theme | Sub-Theme |
|--------|--|----------------|----------------|-----------------|-----------------------|-----------------------|------------------------------|--------------------|
| METR | ETC Group Global Metaverse UCITS ETF | \$1.94 | \$1.11 | \$1.07 | Disruptive Technology | Digital Experiences | | |
| ITEK | HAN-GINS Innovative Technologies UCITS ETF | \$85.68 | \$100.74 | \$0.00 | Disruptive Technology | Disruptive Technology | | |
| DGTL | Shares Digitalisation UCITS ETF | \$1,191.52 | \$1,334.48 | \$12.53 | Disruptive Technology | Disruptive Technology | | |
| EBUY | Lyxor MSCI Digital Economy ESG Filtered DR UCITS ETF | \$137.30 | \$157.60 | \$0.00 | Disruptive Technology | Disruptive Technology | | |
| UNIC | Lyxor MSCI Disruptive Technology ESG Filtered DR UCITS ETF | \$192.03 | \$221.87 | -\$3.38 | Disruptive Technology | Disruptive Technology | | |
| BLOK | First Trust Indxx Innovative Transaction & Process UCITS ETF | \$130.30 | \$141.64 | \$0.00 | Disruptive Technology | FinTech | Blockchain | |
| BCHN | Invesco Elwood Global Blockchain UCITS ETF | \$748.18 | \$900.02 | -\$2.13 | Disruptive Technology | FinTech | Blockchain | |
| DAPP | Vaneck Vectors Digital Assets Equity UCITS ETF | \$24.94 | \$36.25 | \$1.32 | Disruptive Technology | FinTech | Blockchain | |
| FTEK | Invesco KBW NASDAQ Fintech UCITS ETF | \$74.84 | \$86.80 | -\$1.60 | Disruptive Technology | FinTech | | |
| DPAY | L&G Digital Payments UCITS ETF | \$13.42 | \$15.04 | \$0.00 | Disruptive Technology | FinTech | Mobile Payments | |
| FINX | Global X Fintech UCITS ETF | \$1.84 | \$2.20 | \$0.09 | Disruptive Technology | FinTech | | |
| FXBC | FinEx Blockchain UCITS ETF | \$1.40 | \$1.90 | \$0.00 | Disruptive Technology | Fintech | Blockchain | |
| BKCH | Global X Blockchain UCITS ETF | \$0.44 | \$0.68 | -\$0.27 | Disruptive Technology | Fintech | Blockchain | |
| ECAR | Shares Electric Vehicles & Driving Technology UCITS ETF | \$688.14 | \$757.68 | \$0.00 | Disruptive Technology | Mobility | Autonomous/Electric Vehicles | |
| BATT | L&G Battery Value-Chain UCITS ETF | \$891.70 | \$952.71 | \$21.01 | Disruptive Technology | Mobility | Autonomous/Electric Vehicles | Lithium/ Batteries |
| VOLT | WisdomTree Battery Solutions UCITS ETF | \$416.58 | \$567.81 | -\$80.09 | Disruptive Technology | Mobility | Autonomous/Electric Vehicles | Lithium/ Batteries |
| ELCR | Lyxor MSCI Future Mobility ESG Filtered DR UCITS ETF | \$337.88 | \$387.65 | \$0.00 | Disruptive Technology | Mobility | | |
| XMOV | Xtrackers Future Mobility UCITS ETF | \$114.23 | \$106.53 | \$16.28 | Disruptive Technology | Mobility | | |
| DRVE | Global X Autonomous & Electric Vehicles UCITS ETF | \$4.04 | \$4.22 | -\$0.45 | Disruptive Technology | Mobility | | |
| LITU | Global X Lithium & Battery Tech UCITS ETF | \$8.35 | \$6.88 | \$2.82 | Disruptive Technology | Mobility | Autonomous/Electric Vehicles | Lithium/ Batteries |
| CAUT | Global X China Electric Vehicle and Battery UCITS ETF | \$1.87 | \$2.31 | \$0.00 | Disruptive Technology | Mobility | Electric Vehicles | Lithium/Batteries |
| RBOT | Shares Automation & Robotics UCITS ETF | \$3,110.62 | \$3,541.16 | \$16.98 | Disruptive Technology | Robotics | AI/ Automation | |
| ROBO | L&G ROBO Global Robotics and Automation UCITS ETF | \$936.98 | \$1,094.58 | -\$10.58 | Disruptive Technology | Robotics | AI/ Automation | |
| ROAI | Lyxor Robotics & AI UCITS ETF | \$278.75 | \$333.98 | -\$3.97 | Disruptive Technology | Robotics | AI/ Automation | |
| SFTRY | Amundi Smart Factory UCITS ETF | \$33.93 | \$38.16 | \$0.00 | Disruptive Technology | Robotics | AI/ Automation | |
| BOTZ | Global X Robotics & Artificial Intelligence UCITS ETF | \$0.63 | \$2.67 | -\$1.42 | Disruptive Technology | Robotics | AI/Automation | |
| GCLE | Invesco Global Clean Energy UCITS ETF | \$58.63 | \$64.93 | \$2.47 | Physical Environment | Climate Change | Clean & Renewable Energy | |
| INRG | Shares Global Clean Energy UCITS ETF | \$5,608.74 | \$6,095.40 | \$293.65 | Physical Environment | Climate Change | CleanTech | |
| RENG | L&G Clean Energy UCITS ETF | \$178.60 | \$183.04 | \$14.75 | Physical Environment | Climate Change | Clean & Renewable Energy | |
| HTWO | L&G Hydrogen Economy UCITS ETF | \$552.49 | \$582.11 | \$35.86 | Physical Environment | Climate Change | Clean & Renewable Energy | Hydrogen |

Source: Global X ETFs, Bloomberg. Mar 2022 as of 03/31/2022; Apr 2022 as of 04/29/2022.

Appendix – Classification of UCITS Thematic ETFs

| Ticker | Name | Apr 2022 (\$M) | Mar 2022 (\$M) | MoM Flows (\$M) | Category | Mega-Theme | Theme | Sub-Theme |
|--------|--|----------------|----------------|-----------------|-----------------------|----------------------------|--------------------------|-------------------|
| NRJ | Lyxor New Energy DR UCITS ETF | \$1,439.05 | \$1,503.17 | \$137.26 | Physical Environment | Climate Change | Clean & Renewable Energy | |
| ZERO | HANetf S&P Global Clean Energy Select HANzero UCITS ETF | \$3.61 | \$4.25 | \$0.00 | Physical Environment | Climate Change | CleanTech | |
| TANN | Solar Energy UCITS ETF | \$9.31 | \$9.70 | \$1.09 | Physical Environment | Climate Change | Clean & Renewable Energy | Solar |
| DGEN | Clima Distributed Renewable Energy UCITS ETF | \$3.10 | \$3.75 | \$0.00 | Physical Environment | Climate Change | Clean & Renewable Energy | |
| QCLN | First Trust Nasdaq Clean Edge Green Energy UCITS ETF | \$37.20 | \$22.40 | \$21.70 | Physical Environment | Climate Change | CleanTech | |
| IH2O | Shares Global Water UCITS ETF | \$2,127.11 | \$2,297.23 | \$2.21 | Physical Environment | Climate Change | Resource Scarcity | Water |
| GLUG | L&G Clean Water UCITS ETF | \$330.75 | \$343.50 | \$14.59 | Physical Environment | Climate Change | Resource Scarcity | Water |
| AWAT | Lyxor PEA World Water UCITS ETF | \$43.53 | \$47.45 | -\$0.17 | Physical Environment | Climate Change | Resource Scarcity | Water |
| WAT | Lyxor World Water DR UCITS ETF | \$1,311.54 | \$1,404.28 | \$17.23 | Physical Environment | Climate Change | Resource Scarcity | Water |
| F4DE | Ossiam Food For Biodiversity UCITS ETF | \$32.58 | \$34.74 | \$0.00 | Physical Environment | Climate Change | Resource Scarcity | Sustainable Food |
| FOOD | Rize Sustainable Future of Food UCITS ETF | \$266.26 | \$286.33 | \$2.99 | Physical Environment | Climate Change | Resource Scarcity | Sustainable Food |
| REMX | VanEck Vectors Rare Earth and Strategic Metals UCITS ETF | \$101.71 | \$112.25 | \$12.39 | Physical environment | Climate Change | Resource Scarcity | Rare Earth |
| CTEK | Global X Cleantech UCITS ETF | \$1.25 | \$2.03 | -\$0.46 | Physical Environment | Climate Change | CleanTech | |
| RNRG | Global X Renewable Energy Producers UCITS ETF | \$2.34 | \$1.58 | \$0.93 | Physical Environment | Climate Change | Clean & Renewable Energy | |
| AQWA | Global X Clean Water UCITS ETF | \$0.63 | \$0.68 | \$0.00 | Physical Environment | Climate Change | Resource Scarcity | Water |
| WNDY | Global X Wind Energy UCITS ETF | \$1.75 | \$1.72 | \$0.28 | Physical Environment | Climate Change | Clean & Renewable Energy | Wind |
| HYGN | Global X Hydrogen UCITS ETF | \$2.72 | \$3.23 | \$0.18 | Physical Environment | Climate Change | Clean & Renewable Energy | Hydrogen |
| RAYZ | Global X Solar UCITS ETF | \$0.99 | \$1.88 | -\$0.54 | Physical Environment | Climate Change | Clean & Renewable Energy | Solar |
| KROP | Global X AgTech & Food Innovation UCITS ETF | \$2.72 | \$1.90 | \$1.09 | Physical Environment | Climate Change | Resource Scarcity | Sustainable Food |
| CCLN | Global X China Clean Energy UCITS ETF | \$2.23 | \$2.16 | \$0.38 | Physical Environment | Climate Change | Clean & Renewable Energy | |
| PAVE | Global X US Infrastructure Development UCITS ETF | \$178.44 | \$193.79 | -\$2.27 | Physical Environment | Infrastructure Development | | |
| EDOC | Global X Telemedicine & Digital Health UCITS ETF | \$4.87 | \$5.57 | -\$0.08 | People & Demographics | Health | Healthcare Innovation | Telm & Dig Health |
| WELL | HAN-GINS Indxx Healthcare Innovation UCITS ETF | \$10.40 | \$12.37 | \$0.00 | People & Demographics | Health | Healthcare Innovation | |
| HEAL | Shares Healthcare Innovation UCITS ETF | \$1,339.46 | \$1,491.77 | \$24.58 | People & Demographics | Health | Healthcare Innovation | Healthcare innov |
| DOCT | L&G Healthcare Breakthrough UCITS ETF | \$144.78 | \$159.28 | \$10.85 | People & Demographics | Health | Healthcare Innovation | |
| BIOT | L&G Pharma Breakthrough UCITS ETF | \$37.22 | \$37.77 | \$1.79 | People & Demographics | Health | Healthcare Innovation | |
| AGED | Shares Ageing Population UCITS ETF | \$923.47 | \$980.07 | \$27.65 | People & Demographics | Health | Ageing Population | |
| WDNA | Wisdomtree Biorevolution UCITS | \$1.73 | \$1.29 | \$0.63 | People & Demographics | Health | Healthcare Innovation | Genomics |
| GNOM | Global X Genomics & Biotechnology UCITS ETF | \$3.86 | \$3.28 | \$1.26 | People & Demographics | Health | Healthcare Innovation | Genomics |
| CBIO | Global X China Biotech UCITS ETF | \$1.93 | \$2.25 | \$0.00 | People & Demographics | Health | Healthcare Innovation | |

Source: Global X ETFs, Bloomberg. Mar 2022 as of 03/31/2022; Apr 2022 as of 04/29/2022.

Appendix – Classification of UCITS Thematic ETFs

| Ticker | Name | Apr 2022 (\$M) | Mar 2022 (\$M) | MoM Flows (\$M) | Category | Mega-Theme | Theme | Sub-Theme |
|--------|---|----------------|----------------|-----------------|-----------------------|----------------|-------------------------|-----------------|
| CBDX | Medical Cannabis & Wellness UCITS ETF | \$26.14 | \$31.96 | \$0.00 | People & Demographics | New Consumer | Cannabis | |
| FLWR | Rize Medical Cannabis and Life Sciences UCITS ETF | \$30.90 | \$37.51 | \$0.67 | People & Demographics | New Consumer | Cannabis | |
| EMQQ | EMQQ Emerging Markets Internet & Ecommerce UCITS ETF | \$215.84 | \$229.54 | \$0.95 | People & Demographics | New Consumer | E-commerce | |
| ECOM | L&G Ecommerce Logistics UCITS ETF | \$292.88 | \$351.55 | -\$22.45 | People & Demographics | New Consumer | E-commerce | |
| LERN | Rize Education Tech & Digital Learning UCITS ETF | \$11.97 | \$12.83 | \$0.54 | People & Demographics | New Consumer | Education | |
| MILL | Lyxor MSCI Millennials ESG Filtered DR UCITS ETF | \$66.34 | \$72.61 | \$0.00 | People & Demographics | New Consumer | Millenials & Gen Z | |
| BETS | Fischer Sports Betting & iGaming UCITS ETF | \$2.38 | \$2.69 | \$0.00 | People & Demographics | New Consumer | Sports betting | |
| EBIZ | Global X E-Commerce UCITS ETF | \$1.00 | \$1.14 | \$0.00 | People & Demographics | New Consumer | E-Commerce | |
| FMQQ | The Next Frontier Internet & Ecommerce UCITS ETF | \$0.65 | \$0.82 | \$0.00 | People & Demographics | New Consumer | E-Commerce | |
| WRCY | WisdomTree Recycling Decarbonisation UCITS ETF | \$0.93 | \$0.00 | \$0.00 | Physical Environment | Climate Change | Resource Scarcity | Waste/Recycling |
| ELEC | Electric Vehicle Charging Infrastructure UCITS ETF | \$0.92 | \$0.00 | \$0.00 | Disruptive Technology | Mobility | Electric Vehicles | Charging Infra |
| GRDU | First Trust Nasdaq Clean Edge Smart Grid Infrastructure UCITS ETF | \$1.43 | \$0.00 | \$1.46 | Disruptive Technology | Connectivity | 5G & Internet of Things | Smart Cities |

Source: Global X ETFs, Bloomberg. Mar 2022 as of 03/31/2022; Apr 2022 as of 04/29/2022.

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