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## The Next Big Theme – Monthly

### The Next Big Theme

A Regular Pulse on  
Disruptive Trends by Global X ETFs



#### Electric Vehicles

##### *Carmakers Ready to Electrify 2024*

Strong 2023 sales from Tesla and BYD along with breakthroughs from Honda in early 2024 set the tone for another promising year for the electric vehicle (EV) sector. Tesla delivered a robust 1.8 million vehicles in 2023 and BYD continued its ascent by delivering 1.5 million, including a record 526,409 in Q4 2023.<sup>1</sup> At the 2024 Consumer Electronics Show (CES), Honda made a significant splash with the unveiling of its innovative 0 Series, including the Saloon sedan and Space-Hub minivan, scheduled for a North American launch in 2026.<sup>2</sup> This series represents Honda's pivot to in-house EV development and features advancements such as e-axles, steer-by-wire systems, and over 300 miles of range per charge.<sup>3</sup> Potentially adding to the impact of milestones like these is a revision to U.S. policy that introduces enhanced tax credits, including instant rebates to facilitate easier consumer access to EVs.<sup>4</sup> This legislative shift is anticipated to catalyse further growth in the EV market.

#### Artificial Intelligence

##### *AI Makes its Way to the Keyboard*

Microsoft is redefining the relationship between artificial intelligence (AI) and personal computing by introducing a dedicated Copilot key on Windows 11 laptops.<sup>5</sup> This key, which replaces the Menu key, provides users with direct access to Microsoft's Copilot AI service, highlighting the company's deep integration of AI, from its Azure servers to individual PCs. Google introduced an advanced version of its Bard AI service, expected to be available through a paid subscription to Google One.<sup>6</sup> Powered by the cutting-edge large language model Gemini Ultra, Bard Advanced is a significant upgrade over the current Gemini Pro version.<sup>7</sup> Notably, it offers advanced math and reasoning skills. Other recent AI innovations from Google include a feature codenamed Motoko, which might allow users to create custom bots, and a "power up" feature that augments user prompts in Bard. Additionally, a new "tasks" tab and customisable backgrounds for Bard prompts may be forthcoming. Features like these highlight the evolution of AI services in an increasingly competitive market.

#### Metaverse & Internet of Things

##### *Mixed Reality Aims for Accessibility*

Qualcomm announced its Snapdragon XR2+ Gen 2 chip, which will be used in Samsung and Google's forthcoming mixed reality (MR) devices.<sup>8</sup> The Snapdragon XR2+ Gen 2, an evolved version of the XR2 Gen 2 chip used in Meta's Quest 3, offers advanced features like 4.3K resolution, a major leap forward in XR productivity and immersive entertainment.<sup>9</sup> The chip can support Android applications, which suggests the devices may be offered at a more accessible price point than Apple's \$3,499 Vision Pro

headset.<sup>10</sup> In response to these new market dynamics, Meta reduced the price of its Quest 2 virtual reality (VR) headset to \$250.<sup>11</sup> This pricing strategy extends to the 128GB and 256GB models, including refurbished units and accessories.<sup>12</sup> With its already favorable initial launch price, the Quest 2's new price point may solidify its appeal to VR newcomers, bolstered by a vast array of VR titles.

## Aging Population

### *Digital Solutions Reshaping Patient Care*

The launch of Eli Lilly's digital platform LillyDirect is expected to enhance patient access to the company's medications, including Zepbound™, which recently received Food and Drug Administration (FDA) approval.<sup>13</sup> Part of the GLP-1 agonists class, Zepbound™ is a weight management therapy.<sup>14</sup> LillyDirect's debut, along with the company's partnership with weight loss telehealth service Form Health, aligns with the broader shift of healthcare embracing digital solutions for better patient care. Medtronic's advancements in cardiac care represent another aspect of technology-driven innovation in healthcare. The European approval of the company's latest leadless pacemakers, Micra AV2 and VR2, heralds a new era in cardiac treatment.<sup>15</sup> These devices, distinguished by their compact size, extended battery life, and minimally invasive implantation, are tailored to enhance patient comfort and improve clinical outcomes.

## Disruptive Materials

### *Copper and Zinc Exploration Updates*

Disruptive technologies require metals, and recent developments illustrate the continued demand for zinc, copper, and other metals. Canada's Barrick Gold and Chile's Antofagasta formed Minera El Encierro, a joint venture for copper and metal exploration in Chile's Atacama region.<sup>16</sup> The initiative involves a \$95 million investment to set up 60 drilling platforms across 9,400 hectares. Expected to last five years, the project aims to explore an area with promising copper-gold-molybdenum porphyry deposits, only 15% of which has been drilled.<sup>17</sup> Barrick Gold is also looking to expand its copper production through investments in Pakistan's Reko Diq mine and Zambia's Lumwana super pit.<sup>18</sup> The company wants to double its copper output by 2031. Also, the company is considering an acquisition of First Quantum, which recently closed its flagship mine in Panama.<sup>19</sup> Following a pause due to low zinc prices, Sweden's Boliden AB is negotiating to restart its Tara zinc operation in Ireland this year.<sup>20</sup> Also, Boliden is increasing production capacity at its Odda zinc smelter in Norway.<sup>21</sup> In Canada, Amarc Resources, in partnership with Boliden Mineral Canada, is planning a major drilling program expansion at the DUKE Copper-Gold District in British Columbia for 2024.<sup>22</sup>

## Data Centers & Cloud Computing

### *Enterprises Set to Benefit from Hybrid Cloud Partnerships*

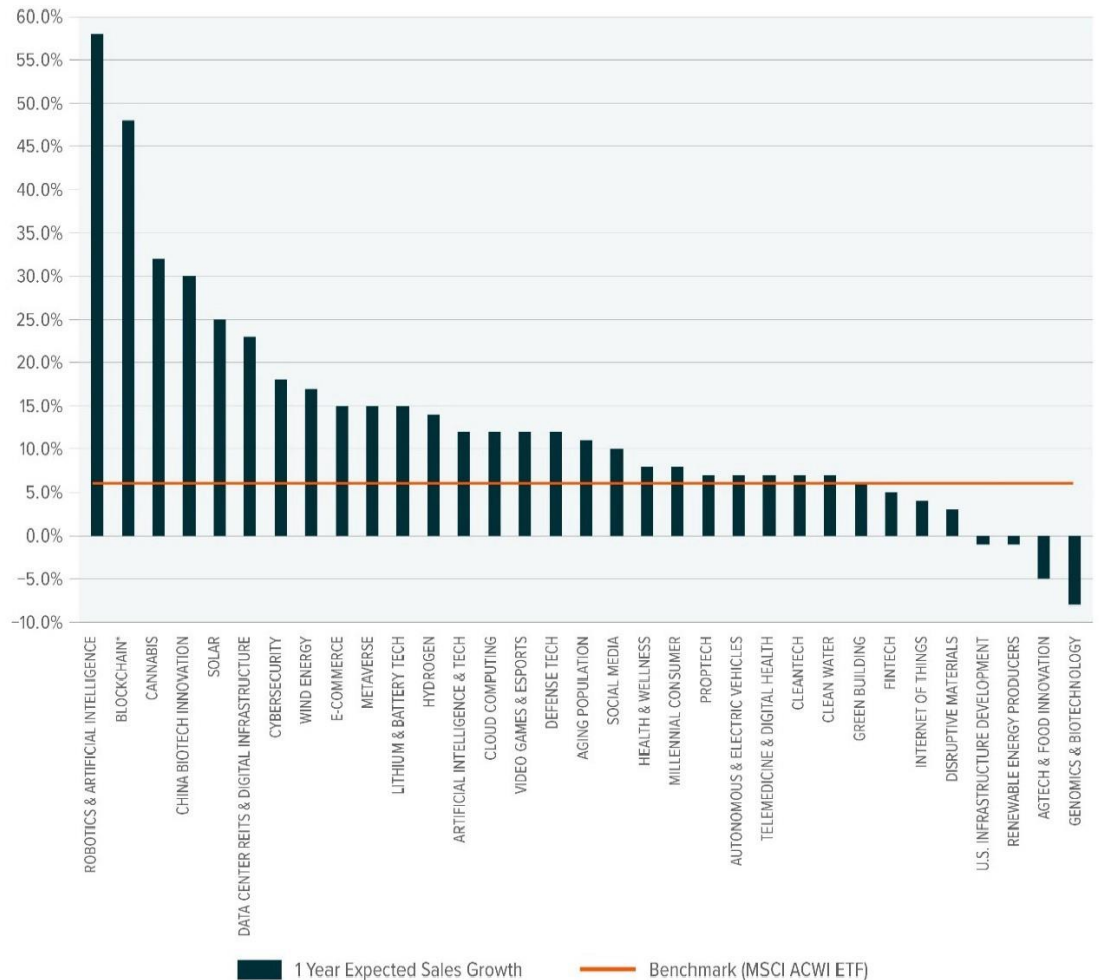
IBM is partnering with American Tower to accelerate the deployment of hybrid, multi-cloud computing at the edge, enhancing cloud capabilities in IBM's Access Edge Data Centers. A leader in communications real estate with a vast network of data centers, American Tower will integrate IBM's hybrid cloud platform and automated systems to create an edge cloud across its locations.<sup>23</sup> This initiative aims to provide enterprises with flexible application deployment options, enabling faster, more secure data processing near the data source. Cirrascale Cloud Services announced a partnership with Qualcomm to incorporate the Qualcomm Cloud AI 100 into its AI Innovation Cloud.<sup>24</sup> This AI inference accelerator is tailored for generative AI, large language models (LLMs), and computer vision applications, a significant advancement in cloud-based AI processing. Qualcomm's introduction of the Cloud AI 100 further strengthens its position in the AI inference market. This move aligns with Qualcomm's strategy to expand into the AI-enabled edge market.

## THE NUMBERS

The following chart examines sales growth expectations by theme, based on their corresponding ETFs or indices.

### THEMATIC EXPECTED SALES GROWTH

Source: Global X ETFs illustration with information derived from, Bloomberg, December 31, 2023.



Note: Forward looking based on index data and analysis from 12/31/2023.

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.

### 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*

## Footnotes

1. Green Car Reports. (2024, January 3). Tesla led in 2023 global EV sales, but BYD outsold it in Q4.
2. PCMag. (2024, January 9). CES 2024: CES 2024: Honda Previews '0 Series' Concept EVs With 10-Minute Charging.
3. Ibid.
4. NPR. (2024, January 2). The \$7,500 tax credit for electric cars has some big changes in 2024. What to know.
5. AnandTech. (2024, January 4). Microsoft Swaps Menu Key For Copilot AI Key on Windows Keyboards, Directs OEMs To Do The Same.
6. The Verge. (2024, January 4). Google appears to be working on an 'advanced' version of Bard that you have to pay for.
7. Ibid.
8. CNBC. (2024, January 4). Qualcomm announces new chip to power Samsung and Google's competitors to Apple Vision Pro headset.
9. CNET. (2024, January 7). Qualcomm's New VR Chip Gives More Power to Apple Vision Pro Competitors.
10. Ibid.
11. Meta. (2023, December 31). Ring in the New Year With New, Lower Prices on Meta Quest 2 & Accessories.
12. Ibid.
13. Reuters. (2024, January 4). Lilly launches website, home delivery option for weight-loss drug.
14. Ibid.
15. FierceBiotech. (2024, January 5). Medtronic claims European approval of its latest leadless pacemaker implants.
16. Mining.com. (2024, January 4). Barrick, Antofagasta to spend \$95M exploring for copper in Chile.
17. Ibid.
18. Ibid.
19. Ibid.
20. Reuters. (2023, December 12). Boliden plans restart Europe's biggest zinc mine second quarter 2024.
21. Ibid.
22. Yahoo Finance. (2023, December 13). Amarc and Boliden Prepare for 2024 Drilling Program at Duke Copper-Gold District.
23. IBM Newsroom. (2024, January 5). American Tower and IBM to Bring Edge Cloud Services to Enterprises for Enhanced Innovation and Customer Experiences.
24. HPCwire. (2023, November 14). Qualcomm Cloud AI 100 now available in the Cirrascale AI Innovation Cloud.

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