

## Evolve Innovation Index Fund

EDGE provides investors with access to global companies that are involved in innovative or disruptive trends across a broad range of industries.

TSX  
EDGE

ETF TICKERS: EDGE (HEDGED); EDGE.U (USD)

MUTUAL FUND FUNDSERV CODE: EVF160 (CLASS F); EVF161 (CLASS A)

**Investment Thesis:** Innovation is a long-term, key driver of global economic growth. Access 8 themes that are reshaping our world. Data and AI are at the center of technological innovation.

### 8 Themes

- 1. Automobile Innovation:** The car is becoming digital: Autonomous, Connected & Electric
- 2. Cybersecurity:** Non-discretionary need to protect our data infrastructure
- 3. Cloud Computing:** Store and access data through the internet
- 4. E-Gaming:** Largest and fastest-growing entertainment sector

- 5. 5G:** Increasing wireless delivery speeds and efficiencies to connect the world
- 6. Robotics and Automation:** The rise of robots will boost productivity and economic growth
- 7. Fintech:** Transforming how financial services are delivered and consumed
- 8. Genomics:** Better drugs, developed in a fraction of the time at lower costs

## GENERAL INDUSTRY UPDATE

### Automobile Innovation

Transportation is transforming in a big way globally. Electric vehicles are gaining a lot of traction, and there's plenty of data that says the future looks bright.

Particularly, electric vehicle sales have surged in China, as automakers look to establish themselves beyond their home market. Between January and September 2022, 342,000 passenger electric vehicles were exported from the country—up 29% when compared to 2019. These vehicles were also one of the biggest contributors to the overall increase in car exports from China. Furthermore, 314,000 low-speed electric vehicles and 4,000 electric buses were also exported out of China.<sup>1</sup>

Globally, electric vehicle sales are also surging. More EVs were sold in the first half of 2022 alone than any previous year. According to data from BloombergNEF, 13% of global vehicle sales were battery electric, plug-in hybrids, or fuel cell vehicles.

In Germany, electric vehicles amounted to 26% of total car sales in the first half of 2022. In the UK and China, this figure was 24% and 23%, respectively. In the U.S., electric vehicles made up just 7% of all vehicles sold.<sup>2</sup>

### Cybersecurity

Cyberattacks are becoming the norm as more and more businesses report cybersecurity-related incidents.

In December, FuboTV, a live-TV bundle streaming service, reported a cyberattack that affected customers that were trying to access the World Cup semifinals between France and Morocco. The company said that it took immediate action to contain the cybersecurity incident and was able to restore service for its customers.

FuboTV reported the cyberattack to law enforcement and hired Mandiant—a cybersecurity firm, to help with the investigation and response.<sup>3</sup>

In addition, The Guardian, a British daily newspaper, recently revealed that it was hit with a suspected ransomware hack that impacted parts of its digital infrastructure in December as well. The news outlet deemed the attack a serious IT incident.

Ransomware hacks essentially make networks and applications unworkable. The hackers then demand payment to let go of the system. Over the years, ransomware attacks have gotten faster and more sophisticated. Even the Biden Administration warned about these attacks a few months ago.<sup>4</sup>

## Cloud Computing

Despite facing some challenges with consumer spending, AWS is making headwinds in the healthcare sector. Recently, the cloud computing business launched general availability for Amazon Omics—a service that helps researchers store and analyze omic data like sequences of DNA, RNA, and proteins. This service offers the infrastructure customers need when working with large amounts of data. According to a report from Straits Research, the global genomic data analysis market could reach \$2.15 billion by 2030.<sup>5</sup>

On the other hand, Microsoft is planning to buy four percent ownership in the London Stock Exchange Group (LSEG) for \$2.0 billion in hopes of expanding its cloud business among European financial institutions.

The specific details of this partnership have yet to be announced by the LSEG, but the exchange wants to use Microsoft products such as Azure, AI, and Teams to boost profit. Microsoft's executive vice president, Scott Guthrie, will be made a non-executive director of LSEG, and the exchange will invest \$2.8 billion in Microsoft's cloud products over the next decade.<sup>6</sup>

## E-Gaming

According to Newzoo's analysis for 2022, the video game market was expected to only generate \$184.4 billion, which indicates a year-over-year decline of 4.3% in revenue. In addition, the mobile game market was only expected to generate revenue of \$92.2 billion, representing a decline of 6.4% from the year prior.

The mobile game market was largely affected by privacy developments for iOS users, as well as a shift in consumer priorities in 2022 after the lockdowns ended and disposable income becoming tighter with heightened inflation.

But it isn't all negative: the sweetest spot within the video game market was Virtual Reality (VR) installs and cloud gaming.

In 2022, the VR install base grew to 27.7 million and is expected reach 46.0 million by 2024. Revenue for this portion of the video game market is expected to surge from \$1.8 billion to \$3.2 billion.

Cloud gaming is also seeing some encouraging developments with 20 million paying users that spent an estimated \$2.4 billion on cloud gaming services in 2022.<sup>7</sup>

## 5G

According to a report from ResearchandMarkets.com, the 5G chipset market size is expected to see robust growth in the coming years. The report states that the 5G chipset market size was valued at \$13.26 billion in 2022 and could reach \$92.05 billion by 2030. This would mean a compound annual growth rate (CAGR) of 21.8% between 2021 and 2030.

Some of the primary factors driving the growth of the 5G chipsets market is the increase in demand for high-speed internet, large network coverage, and a large number of M2M/IoT connections.<sup>8</sup>

## Robotics & Automation

OpenAI has released a new artificial intelligence (AI) tool called ChatGPT. This tool has the ability to replace tasks/roles traditionally held by humans, such as copywriting, answering customer service inquiries, writing news reports, and others.

While ChatGPT has gained a lot of attention in the headlines, it isn't the only AI tool designed to perform creative tasks faster and better than humans. In recent years, OpenAI also introduced another AI tool, called DALL-E. This tool is designed to increase the speed of graphic design.

As it stands, it's relatively unknown what impacts these AI tools will have, but they certainly have the ability to empower millions of people. Obviously, their impact on the economy could be immense as well.<sup>9</sup>

## Fintech

2022 wasn't the greatest for fintech companies. They witnessed their valuations deflate significantly as investors started questioning their future due to a rise in interest rates and the odds of an economic slowdown increasing.

This was particularly seen with fintech companies that deal directly with retail borrowers. Many startup companies are running out of funding and are expected to shut down or sell themselves in the coming years. One of the main reasons these particular set of fintech companies are losing money, and may never be profitable, is because they started off on the wrong assumptions, thinking interest rates would remain low in the long term.

The future is bright, however, for fintech firms that have three to four years of funding. Analysts believe these companies may be able to weather the storm.<sup>10</sup>

## Genomics

In December, a Chinese healthcare platform began selling Pfizer’s oral COVID-19 treatment, Paxlovid—the first retail sale of the drug in the country.

The number of COVID-19 cases in China has surged over the last number of months. The official data from China suggests that less than 20 people have died from COVID-19 but the World Health Organization believes China is downplaying the data.<sup>11</sup>

Pfizer’s COVID-19 vaccine that was jointly developed by BioNTech, using mRNA technology, has not been approved for use in China.

Researchers in the United Kingdom have announced that a 13-year-old leukaemia patient at Great Ormon Street Hospital (GOSH) saw her cancer, that was previously thought incurable, go into remission, just one month after taking a new treatment.

The patient, Alyssa, became the first person ever to receive genetically modified immune cells called Chimeric Antigen Receptor (CAR) T-cells, that originally came from a healthy donor, in May 2022. The cells were edited using new base-editing technology, which allowed them to track down and kill the cancerous T-cells.<sup>12</sup>

## PORTFOLIO STRATEGY AND ACTIVITY

For the month, Seagen Inc., made the largest contribution to the Fund, followed by VMware Inc. and Verizon Communications Inc. On last rebalance, these securities were added to the portfolio: Danaher Corp., Thermo Fisher Scientific Inc., Fortinet Inc., and Marvell Technology Inc.

### PERFORMANCE (%)

TOTAL RETURNS*	1 MTH	YTD	1 YR	2 YR	3 YR	4YR	SI**
EDGE (HEDGED)	-7.56	-33.07	-33.07	-13.36	5.28	11.53	6.65
EDGE.U (USD)	-7.80	-36.24	-36.24	-16.52	-	-	-16.64

Source: Bloomberg, as at December 31, 2022.

\*\* Performance of EDGE since inception on April 30, 2018.

Performance of EDGE.U since inception on January 7, 2021.

## Sources:

1. McKerracher, C. "China's EV Exports Won't Be a Mostly Tesla Story for Much Longer," BNN Bloomberg, December 15, 2022; <https://www.bnnbloomberg.ca/china-s-ev-exports-won-t-be-a-mostly-tesla-story-for-much-longer-1.1859750>.
2. Marshall, A. "This Was the Year That Electric Vehicles Took Off," Wired, December 27, 2022; <https://www.wired.com/story/2022-was-the-year-that-electric-vehicles-took-off/>.
3. Rizzo, L. "FuboTV hit with cyberattack during World Cup semifinal match," CNBC, December 15, 2022; <https://www.cnbc.com/2022/12/15/fubotv-hit-with-cyber-attack-during-world-cup-semifinal-match.html>.
4. Stone, J. "Guardian Newspaper Is Hit With Suspected Ransomware Attack," BNN Bloomberg, December 21, 2022; <https://www.bnnbloomberg.ca/guardian-newspaper-is-hit-with-suspected-ransomware-attack-1.1862192>.
5. Capoot, A. "How Amazon's cloud unit is helping researchers analyze genetics," CNBC, December 31, 2022; <https://www.cnbc.com/2022/12/28/how-amazons-cloud-unit-is-helping-researchers-analyze-genetics.html>.
6. Nieto, P., "Microsoft purchases 4% stake in London Stock Exchange for 10-year cloud deal," Fox Business, December 12, 2022; <https://www.foxbusiness.com/technology/microsoft-purchases-stake-london-stock-exchange-year-cloud-deal>.
7. Wijman, T., "The Games Market in 2022: The Year in Numbers," Newzoo, December 21, 2022; <https://newzoo.com/insights/articles/the-games-market-in-2022-the-year-in-numbers>.
8. "5G Chipset Global Market Report 2022: Rising Demand for High Speed Internet and Large Network Coverage Boosts Adoption," GlobeNewswire, December 27, 2022; <https://www.globenewswire.com/news-release/2022/12/27/2579836/0/en/5G-Chipset-Global-Market-Report-2022-Rising-Demand-for-High-Speed-Internet-and-Large-Network-Coverage-Boosts-Adoption.html>.
9. Agrawal, A., Gans, J., and Goldfarb, A., "ChatGPT and How AI Disrupts Industries," Harvard Business Review, December 12, 2022; <https://hbr.org/2022/12/chatgpt-and-how-ai-disrupts-industries>.
10. Son, H., "The fintech reckoning is upon us. Here's what to expect next year," CNBC, December 28, 2022; <https://www.cnbc.com/2022/12/28/fintech-startups-2022-2023-a-reckoning-is-upon-us-heres-what-to-expect.html>.
11. McCarthy, S., "China 'under-representing' true impact of Covid outbreak, WHO says," CNN, January 6, 2023; <https://www.cnn.com/2023/01/05/china/china-covid-outbreak-who-data-intl-hnk/index.html>.
12. "GOSH patient receives world-first treatment for her 'incurable' T-cell leukaemia," Great Ormond Street Hospital, December 11, 2022; <https://www.gosh.nhs.uk/news/gosh-patient-receives-world-first-treatment-for-her-incurable-t-cell-leukaemia/>.

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