

# Evolve Automobile Innovation Index Fund

CARS invests primarily in equity securities of companies that directly or indirectly involved in developing electric drivetrains, autonomous driving or network connected services for automobiles.

TSX  
**CARS**

ETF TICKERS: CARS (HEDGED); CARS.B (UNHEDGED); CARS.U (USD)  
MUTUAL FUND FUNDSERV CODE: EVF140 (CLASS F); EVF141 (CLASS A)

## Investment Thesis: The car is becoming digital. Autonomous, Connected and Electric ('ACE')

### Electrification

- Technological advances
- Improved vehicle experiences
- EVs becoming cost competitive with ICE (Internal Combustion Engine) counterparts
- Government mandates on carbon
- Charging network build-out
- Re-charge times
- Battery capacities/range

### Autonomous Technology

- Smarter chips
- Better and cheaper sensors
- Smart infrastructure
- Government mandates for safety
- Only Level 2 (partial automation) is available today
- Advanced Driver Assist ('ADAS') in most cars
- Level 3 (conditional), 4 (high) and 5 (full) years away

## GENERAL INDUSTRY UPDATE



Source: Greencars.com

Global transportation is transforming in a big way. Electric Vehicles (EVs) 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 EVs 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.

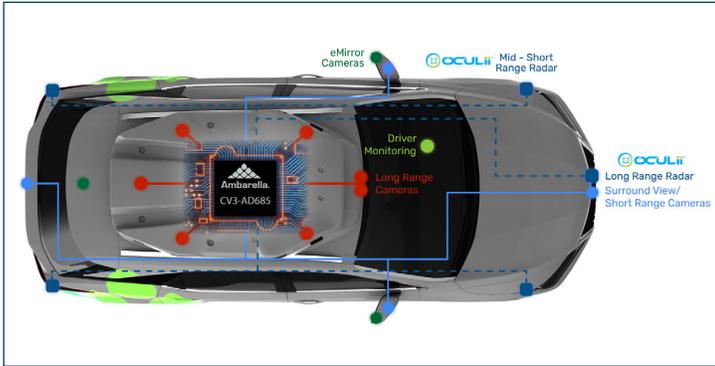
In Germany, Electric Vehicles amounted to 26% of total car sales in the first half of 2022. In the UK and China, this figure was 24% and

23%, respectively. In the U.S., Electric Vehicles made up just 7% of all vehicles sold.<sup>2</sup>

Sales are also expected to increase in Canada over the coming years. According to new regulations by the Canadian government, one-fifth of all passenger cars, SUVs, and trucks sold in Canada in 2026 will need to be electric. By 2030, EVs will amount to 60% of all vehicle sales. By 2035, the Canadian government is mandating that all vehicle sales be electric. Currently, fully electric and plug-in hybrid vehicles only make up 7.2% of all vehicle registration in Canada.<sup>3</sup>

With the robust demand for EVs, demand for charging hardware and installation is also increasing. BloombergNEF recently reported that the cost of global charging and installation amounted to \$62 billion at the end of 2022—up 228% from a year ago. By the end of 2023, this figure could pass \$100 billion, assuming China continues its path of adding significant charging infrastructure in the upcoming years.<sup>4</sup>

COMPANY SPECIFIC UPDATES



Source: Ambarella.com

**Ambarella Inc**

Ambarella Inc., the fund's largest holding and top contributor to the return, is the developer of various semiconductor solutions with a focus on vision and edge AI applications, advanced driver assistance systems, autonomous driving, and robotics applications. At CES, the company introduced the CV3-AD685, the first production version of the CV3 family of automotive AI domain controllers, which targets L2+ to L4 autonomous vehicles.

These CV3-AD domain controllers could transform the advanced driver assistance systems market. They offer highly efficient AI processing, advanced image processing, and ultra-low power consumption.<sup>5</sup>



Fuel Card Sensor

Source: Ctscorp.com/product/sensors

**CTS Corp.**

CTS Corp., a recent addition to the fund, engages in manufacturing and selling sensors, actuators, and connectivity components. These components are used in electric cars and autonomous vehicles, as well. Recently, CTS Corp. reported strong financial performance for its most recent quarters—revenue increased, operations were decent, and profitability surged.

Regarding what's ahead for the company, the CEO of CTS Corp. Kieran O' Sullivan said that the company's advanced materials expertise and commercial teams are helping with diversification in the non-transportation end markets, and this could help even during uncertain economic times.<sup>6</sup>

PORTFOLIO STRATEGY AND ACTIVITY

For the month, Ambarella Inc. made the largest contribution to the Fund, followed by Byd Company Limited and Fluence Energy Inc. The largest detractors to performance for the month were Rivian Automotive Inc., followed by Polestar Automotive Holdings and Microvast Holdings Inc. On last rebalance, this security was added to the portfolio: CTS Corp.

## PERFORMANCE (%)

TOTAL RETURNS*	1 MTH	YTD	1 YR	2 YR	3 YR	4 YR	5 YR	SI**
CARS (HEDGED)	-13.94	-48.72	-48.72	-26.44	1.51	12.27	5.02	5.43
CARS.B (UNHEDGED)	-12.87	-45.68	-45.68	-24.79	4.29	13.07	7.22	7.88
CARS.U (USD)	-13.44	-49.24	-49.24	-27.08	2.84	13.29	5.57	4.65

Source: Bloomberg, as at December 31, 2022.

\*\* Performance since inception of CARS and CARS.B on September 27, 2017.  
Performance since inception of CARS.U on November 1, 2017.

### 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. Rabson, M. "Canada moves to mandate electric vehicle sales starting in 2026," CTV News, December 21, 2022; <https://www.ctvnews.ca/autos/canada-moves-to-mandate-electric-vehicle-sales-starting-in-2026-1.6203478>.
4. Fische, R., "Electric vehicle charging investment approaches the US\$100B mark," BNN Bloomberg, December 20, 2022; <https://www.bnnbloomberg.ca/electric-vehicle-charging-investment-approaches-the-us-100b-mark-1.1861652>.
5. "Ambarella Expands CV3 Family of Automotive AI Domain Controllers With New CV3-AD685," Yahoo! Finance, January 5, 2023; <https://finance.yahoo.com/news/ambarella-expands-cv3-family-automotive-160000459.html>.
6. CTS Corp., <https://investors.ctscorp.com/news-events/news/news-details/2022/CTS-Announces-Third-Quarter-2022-Results/default.aspx>, October 26, 2022.

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\*The indicated rates of return are the historical annual compound total returns net of fees (except for figures of one year or less, which are simple total returns) including changes in per unit value and reinvestment of all dividends or distributions and do not take into account sales, redemption, distribution or optional charges or income taxes payable by any securityholder that would have reduced returns. The rates of return shown in the table are not intended to reflect future values of the ETF or returns on investment in the ETF. ETFs are not guaranteed, their values change frequently, and past performance may not be repeated.

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