



31/03/2023

NICHE
ASSET MANAGEMENT

Pharus **Electric Mobility Value** Niche

Portfolio Update

31st December 2022– 31st March 2023



Launch date: 10.06.2019

Total Net Asset as of 31.03.23: € 20,079,290.09

Currency: EUR

Net Asset Value
per share
as of 31. 03.23:

Class A – ISIN: LU1867072149 € 153.25

Class B – ISIN: LU1867072222 € 165.49

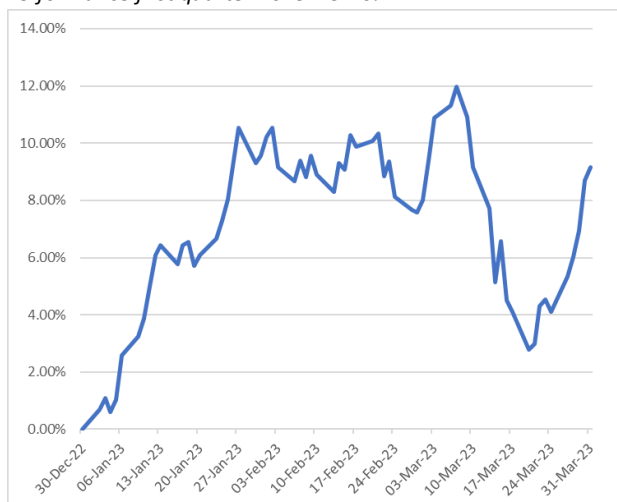
Class Q – ISIN: LU1867072495 € 165.31

Class A GBP – ISIN: LU2526377374 £ 98.19

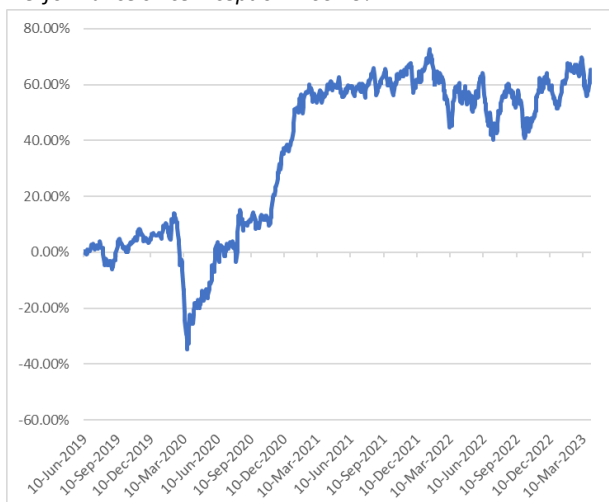
	Q1	Year to Date	1 Year	Since inception
Performance (Class B)	+9,16%	+9,16%	3.78%	+65.49%

Net Asset Value per share

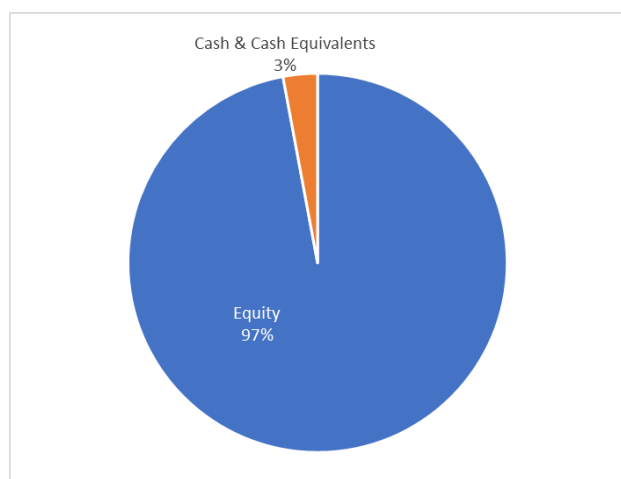
Performance first quarter 2023: +9.16%



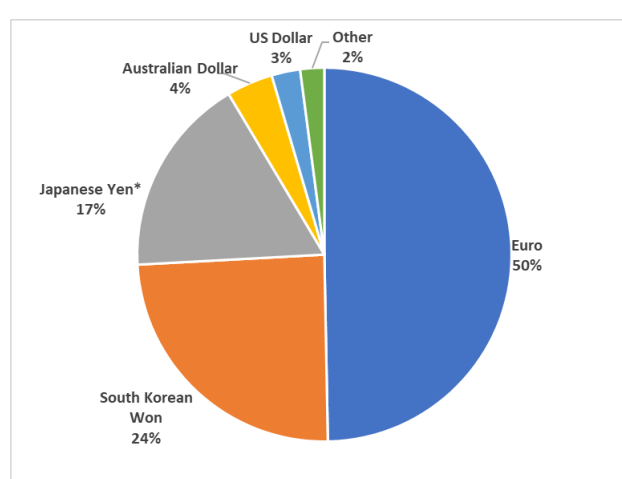
Performance since inception: +65.49%



Portfolio breakdown by asset class



Portfolio breakdown by currency



*net of JPY hedging

The Fund appreciated 9.16% over the quarter, thanks to positive performance from most of the holdings in the portfolio.

Electric car sales continue to show strong growth (+49% in February), with a penetration rate of around 13%, up from 9.6% in February 2022). The sector continues to grow fast driven by subsidies, longer range, better charging networks and increasing choice.

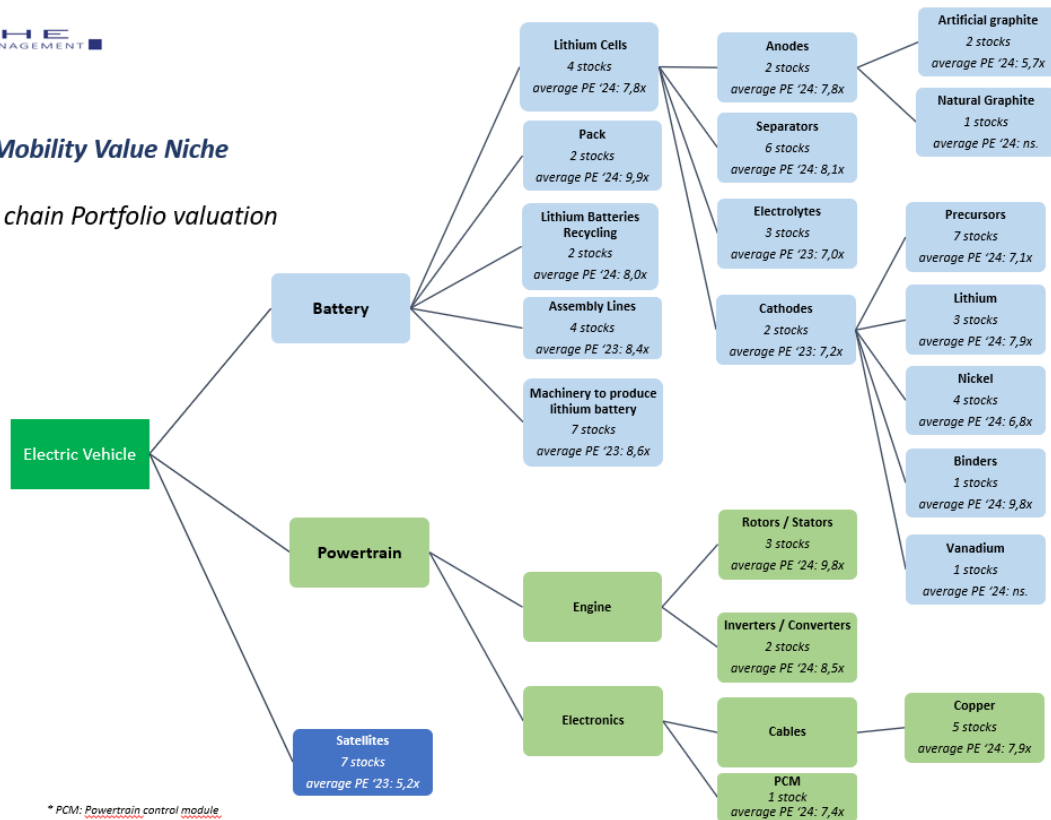
However, another emerging factor could further accelerate the penetration of electric cars. Tesla has in fact decided to significantly cut the prices of its cars, bringing them below the level of comparable internal combustion cars (before fuel economy). This leads to three consequences: 1) more people will opt for a Tesla rather than an internal combustion car; 2) other manufacturers will have to lower the price of their electric cars to prevent Tesla from achieving complete hegemony in the sector; 3) this will further increase the penetration of electric cars by increasing the number of affordable electric models. While this may put pressure on car manufacturers, it may also create significant bottlenecks with regard to batteries, an area on which the fund is focused.

The Fund is also exposed to the expected significant growth in investments in electric mobility in the US market as a result of the Inflation Reduction Act (IRA). This Act will allow high tax credits for a decade for investments in battery production in the US. Korean players SK Innovation and LG Chemical are among the main beneficiaries. In particular, the projected credits that SK Innovation is expected to collect from the creation of new production capacity represent an important share of its current capitalization. This group has low valuations (around 5 times EBITDA), despite the rapid growth prospects of its electric battery division, both in terms of turnover and profitability. SK Innovation's margins are still lower than peers, due to the high costs incurred in the start-up phase of new production facilities but should now start to improve significantly. Panasonic is another company also characterized by low valuations (around 10 times '24 earnings), which should benefit from the construction of a new gigafactory in the US, following the one built for Tesla, with which it has a ten-year relationship (expected investment estimated for the new factory at around USD 4 bln).

The fund provides exposure to the mass adoption of electric mobility, but with limited risk of permanent capital loss due to its value approach: the portfolio has a P/E '24 ratio close to 8x and a price to tangible book value close to 1x.

Electric Mobility Value Niche

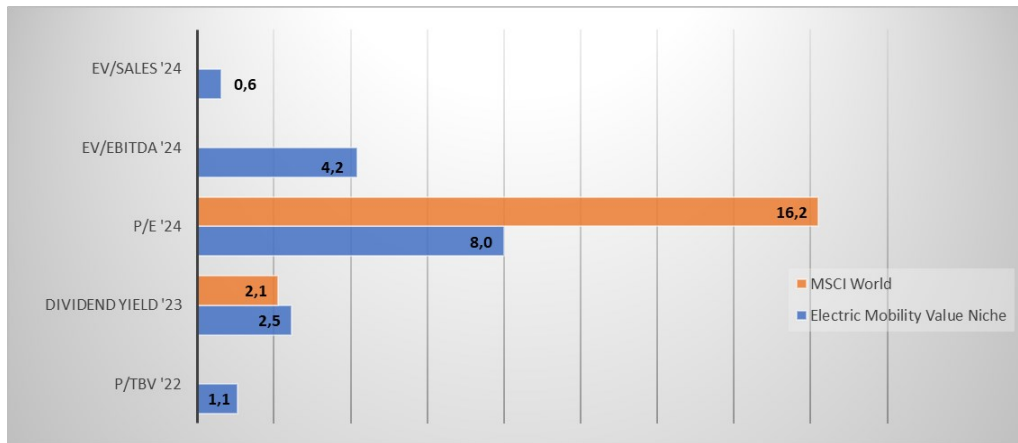
EV value chain Portfolio valuation analysis



Niche Performance Q1 2023

NICHE	Performance
Lithium Cells	+9,23%
Cathodes	+5,97%
Anodes	+10,46%
Electrolytes & Elecfoils	+9,49%
Separators	+4,16%
Commodities	+3,31%
Powertrains & Ultracapacitors	+16,22%
Satellite Areas	+10,40%

Portfolio valuation



Source: Niche AM, Thomson Reuters, MSCI

Top holdings

ISIN	SECURITY	%	NICHE	SUB-NICHE
JP3866800000	PANASONIC	7.33%	Lithium Cells (LC)	NCA
KR7051911006	LG CHEMICAL LTD PREF	7.33%	Lithium Cells (LC)	NMC
JP3402600005	SUMITOMO METAL MINING	5.74%	Cathodes (CM)	NCA
JP3627400009	TODA KOGYO	4.66%	Cathodes (CM)	NCA
JP3544000007	TEIJIN	4.28%	Separators (SM)	WET
KR7005490008	POSCO HOLDINGS	4.28%	Anodes (AM)	ARTIFICIAL GRAPHITE
FR0013176526	VALEO	3.96%	Power Trains & Ultracapacitors (PTU)	POWER TRAINS
KR7096771001	SK INNOVATION	3.77%	Lithium Cells (LC)	NMC
JP3368000000	RESONAC HOLDINGS	3.46%	Anodes (AM)	ANODES
FR0000131757	ERAMET	3.31%	Commodities (C)	NICKEL SULPHATE

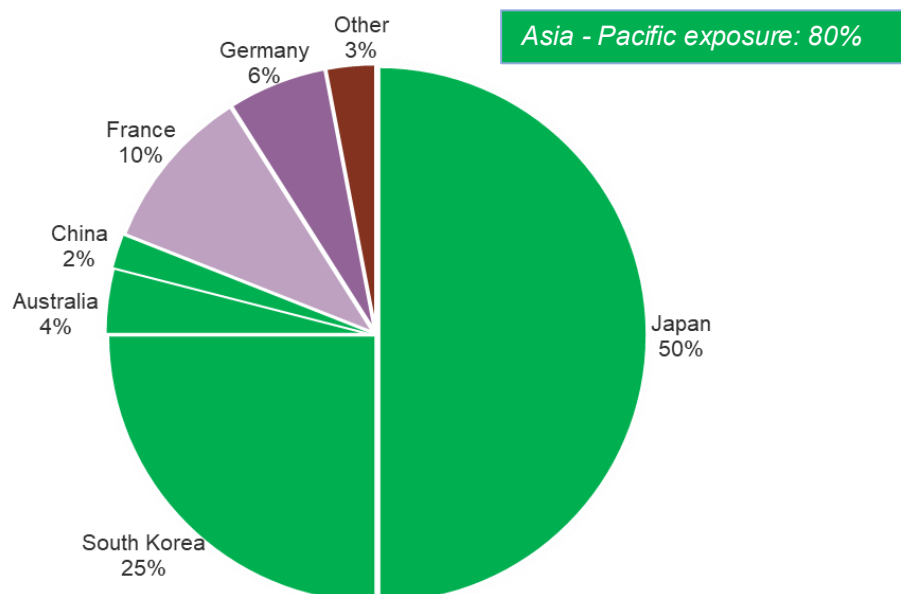
Main increases in weight

Holdings	Weight at 31/12/22	Weight at 31/03/23
N/A	-	-

Main decreases in weight

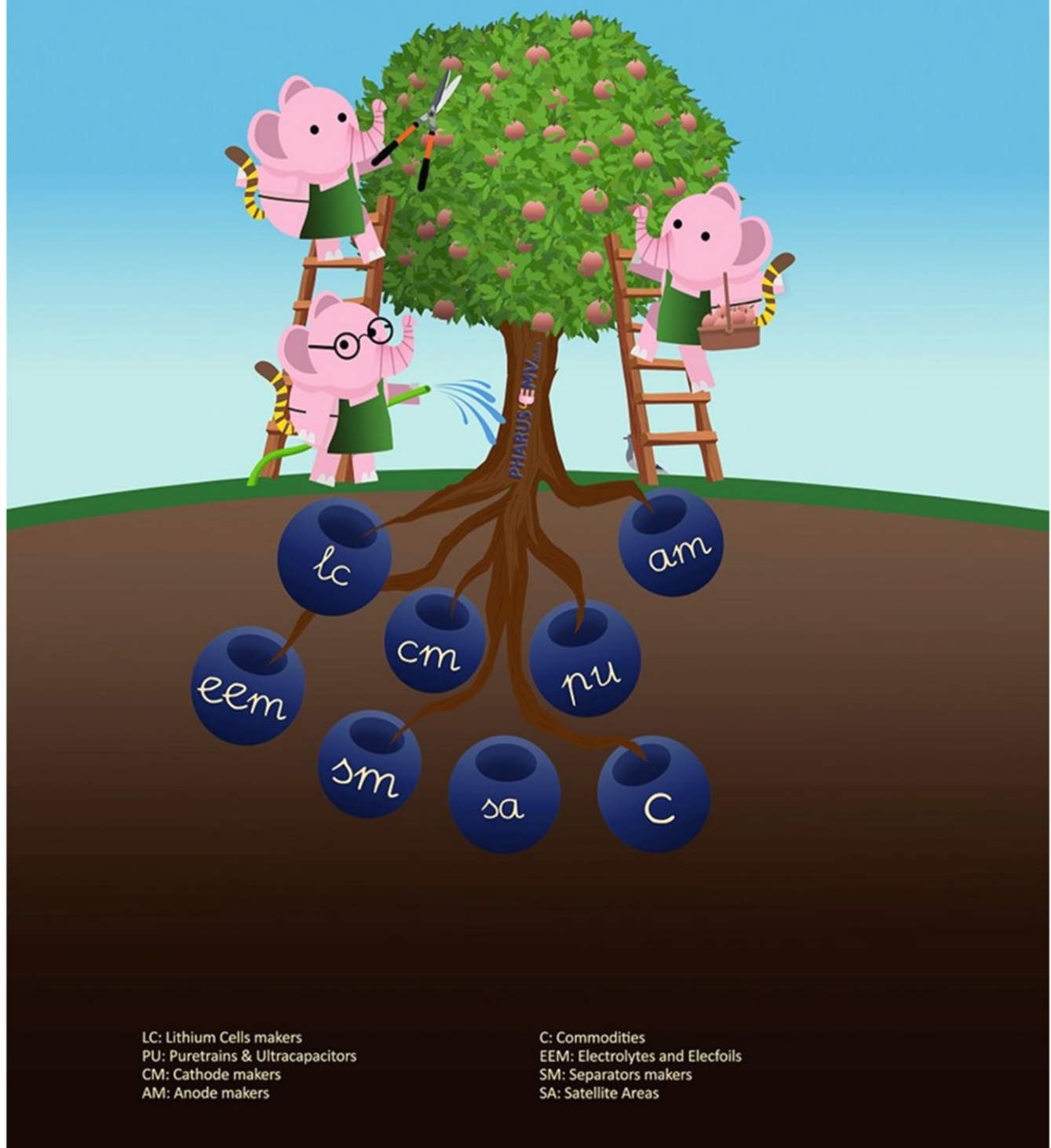
Holdings	Weight at 31/12/22	Weight at 31/03/23	Total Return
Vitesco Technologies Group	3.3%	2.2%	+36.45%

Equity breakdown by geographical exposure



Source: Niche AM

ELECTRIC MOBILITY VALUE Niche



Lithium Cells



stocks: 5

Average Market Cap (mln €) 24.667

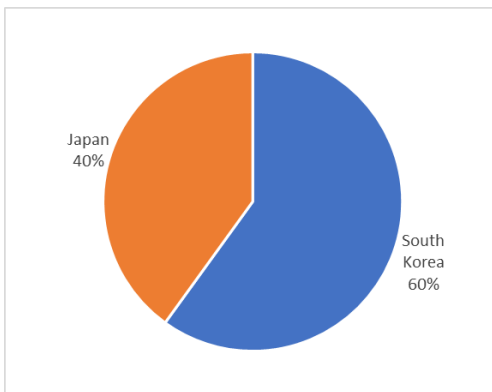
Median Market Cap (mln €): 1.689

Lithium cells – segment breakdown

		EM Fund	Lithium Niche
Lithium Cells	LC	19.9%	100.0%
Nickel Manganese & Cobalt	NMC	12.6%	63.2%
Nickel Cobalt & Aluminium	NCA	7.3%	36.8%

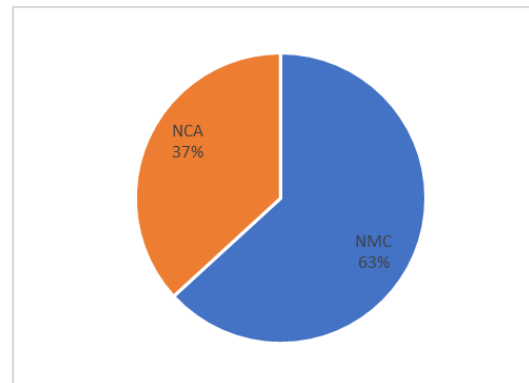
Source: Niche AM

Geographical breakdown

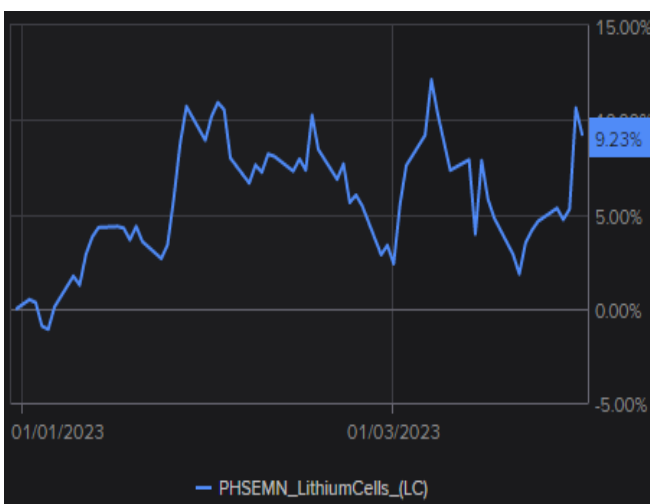


Source: Niche AM

Segment breakdown



Performance first quarter 2023 (31/12/22-31/03/23)



Performance since inception (10/06/19 – 31/03/23)

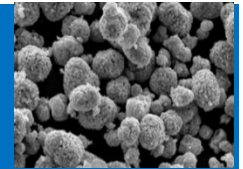


Source: Niche AM, Thomson Reuters

Niche description

Electric mobility will grow dramatically in the next few years, with a speed still unexpected by most and changing the world for good. The electric mobility will be pervasive, affecting land, air and water transportation. At the base of the electrification of mobility we found the lithium batteries that are made up of several lithium cells bundled together. Each lithium cell is a small battery with a cathode, an anode, a separator and filled with electrolyte solution. There are different kinds of lithium cells, depending on the chemistry used, although the NCA and NCM will be those by far most used in the electrification of mobility.

Cathodes



stocks: 7

Average Market Cap (mln €): 3.840

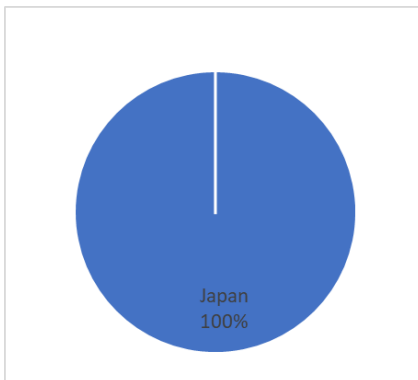
Median Market Cap (mln €): 335

Cathodes – segment breakdown

		EM Fund	Cathodes Niche
Cathodes		16.7%	100.0%
Nickel Manganese & Cobalt	NMC	1.7%	10.0%
Nickel Cobalt Aluminium	NCA	10.4%	62.4%
Cathode Materials	CM	4.6%	27.6%

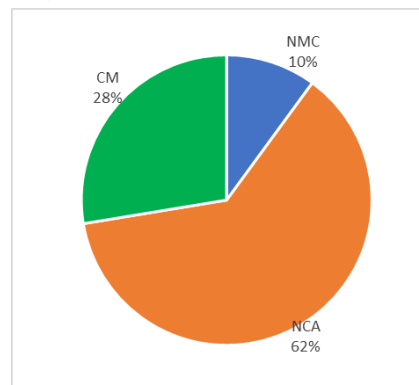
Source: Niche AM

Geographical breakdown

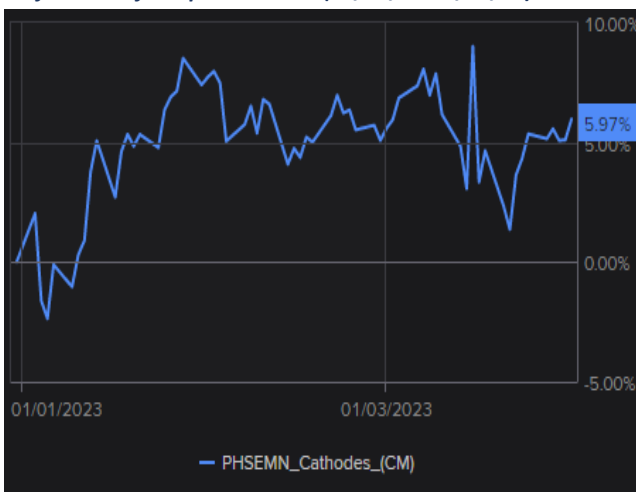


Source: Niche AM

Segment breakdown

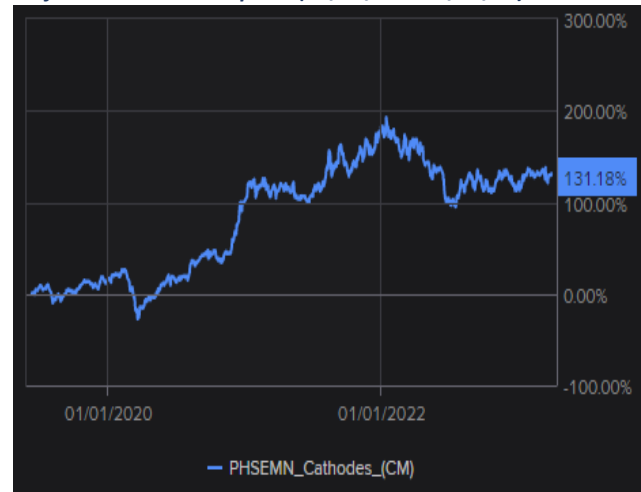


Performance first quarter 2023 (31/12/22-31/03/23)



Source: Niche AM, Thomson Reuters

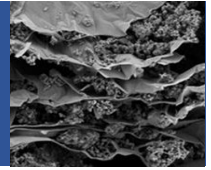
Performance since inception (10/06/19 – 31/03/23)



Niche description

Cathodes represent the most valuable component of EV batteries (making up about 1/4 of the whole cost of the cell) and their chemistry is pivotal in determining energy density and capacity of the battery. Cathodes composition for EVs, for at least the next 5/7 years, will be mainly based on two different chemistries, NCA (nickel, cobalt and aluminium) and NMC (nickel, manganese and cobalt), as they provide the energy density needed to drive the electrification of mobility mass market. Lithium cells are normally named after the chemistry of their cathodes (NCA, NMC, LFP, etc).

Anodes



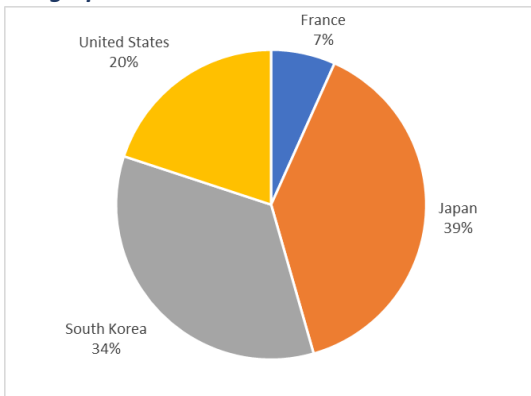
stocks: 6 Average Market Cap (mln €) 8.982 Median Market Cap (mln €): 2.501

Anodes – segment breakdown

	EM Fund	Anodes Niche
Anodes	12.4%	100.0%
Coating	0.8%	6.7%
Anodes	4.0%	32.3%
Artificial Graphite	5.1%	41.1%
Needle Coke	2.5%	19.9%

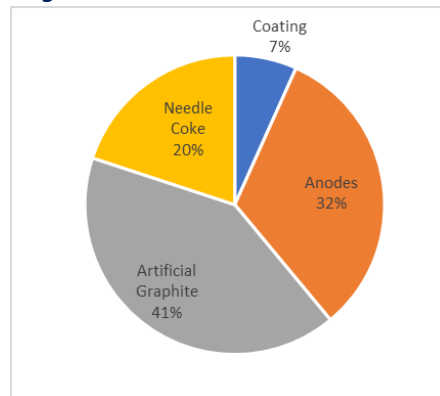
Source: Niche AM

Geographical breakdown

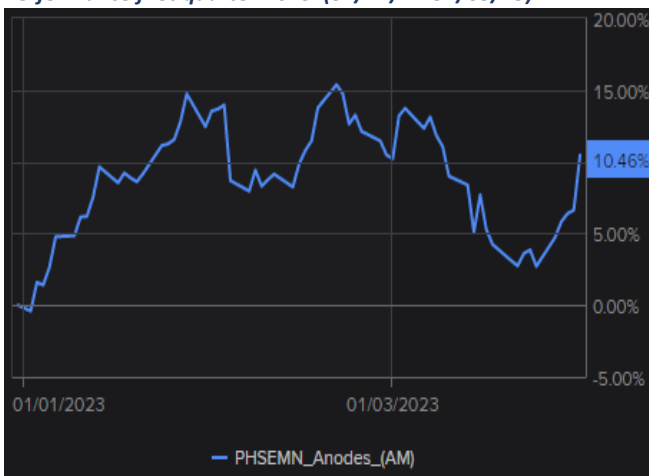


Source: Niche AM

Segment breakdown



Performance first quarter 2023 (31/12/22-31/03/23)



Performance since inception (10/06/19 – 31/03/23)

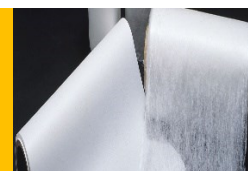


Source: Niche AM, Thomson Reuters

Niche description

Anodes play an important role in determining the energy capacity and density of a battery, as they perform the role of storing and emitting Li-ions to and from the cathode. The anodes are coated on top of a copper foil, a metallic foil which acts as a current collector for the anode. Selecting a high-quality active material for anodes allows Li-ion battery cells to deliver both higher capacity retention and greater power. The selection of materials used in anodes plays a significant role in determining a battery's transmission and lifespan, which is the most important criteria in the material selection process.

Separators



stocks: 4

Average Market Cap (mln €): 2.715

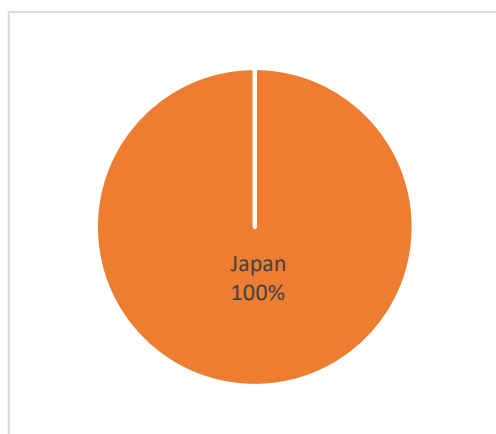
Median Market Cap (mln €): 1.911

Separators – segment breakdown

	EM Fund	Separators
Separator Maker	5.7%	100.0%
Wet Separators	4.8%	82.8%
Dry Separators	1.0%	17.2%

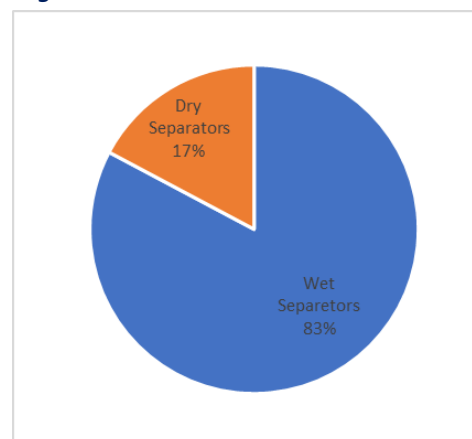
Source: Niche AM

Geographical breakdown

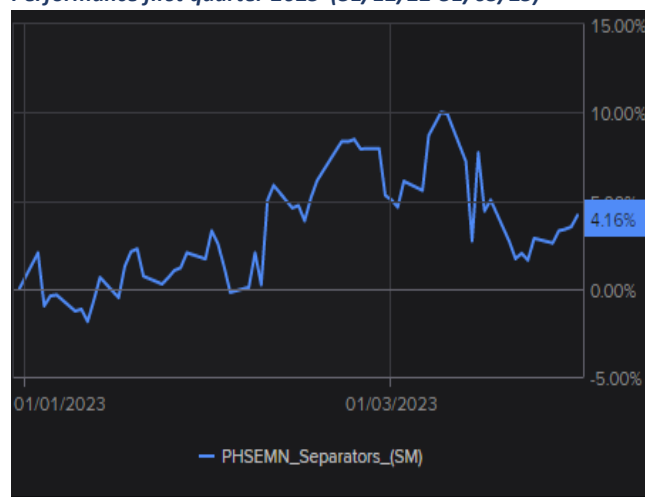


Source: Niche AM

Segment breakdown



Performance first quarter 2023 (31/12/22-31/03/23)



Source: Niche AM, Thomson Reuters

Performance since inception (10/06/19 – 31/03/23)



Niche description

Separators determine the safety of a Li-ion battery as they act as an absolute barrier between the cathode and anode. Although separators account for only 5% of the battery cell content, they are the second-most significant raw material in terms of cost (about 10% of a Li-ion battery cost). The automotive separator market was worth some USD600m in 2015, and in the same year totalled 0.5bn sqm on a surface-area basis. This figure could grow to 20bn sqm by 2025, in line with the growth of the EV battery market. However, there is a risk in the future for this component as separators would be unnecessary if all solid-state batteries replace Li-ion batteries from 2030.

Electrolytes & Elecfoils



stocks: 3

Average Market Cap (mln €): 348

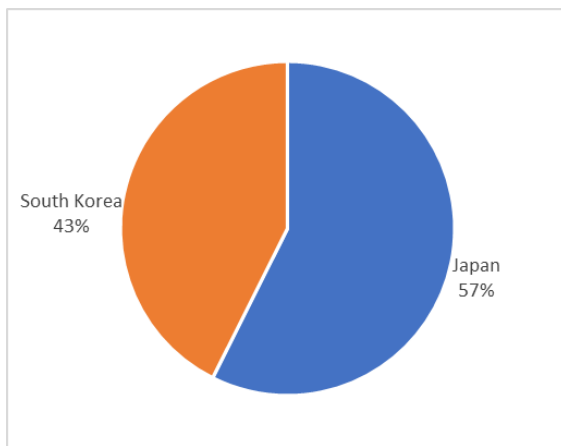
Median Market Cap (mln €): 410

Electrolytes & Elecfoils – segment breakdown

	EM Fund	Electrolytes Niche
Electrolytes & Elecfoils	3.4%	100.0%
Electrofoils	0.0%	0.0%
Electrolytes	3.4%	100.0%

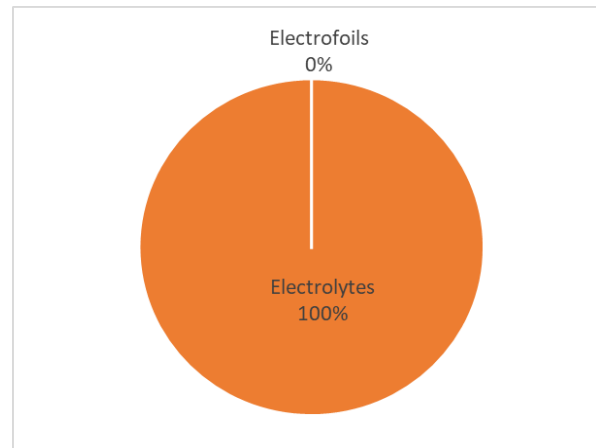
Source: Niche AM

Geographical breakdown

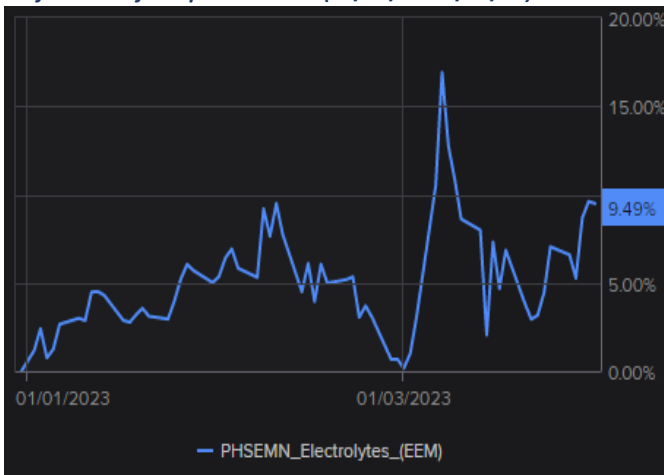


Source: Niche AM

Segment breakdown

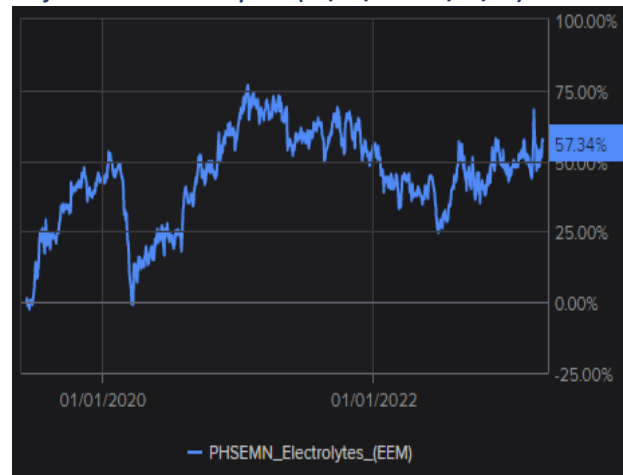


Performance first quarter 2023 (31/12/22-31/03/23)



Source: Niche AM, Thomson Reuters

Performance since inception (10/06/19 – 31/03/23)



Niche description

Electrolytes play a key role in enabling the use of electricity as they promote the movement of Li-ions between the cathode and anode. Electrolytes consist of solvents, salts and additives. Solvents act as dissolvers of the conducting salts. Salts are used as the passage for Li-ions to move and determine the ion conductivity. Additives serve a specific purpose and are usually added to the electrolyte to modify its properties. Materials with high ionic conductivity are essential so that lithium ions can freely move between the anode and the cathode. Therefore, the type of electrolyte used affects the speed of movement of Li-ions and the overall performance of the battery.

Commodities



stocks: 9

Average Market Cap (mln €): 1.726

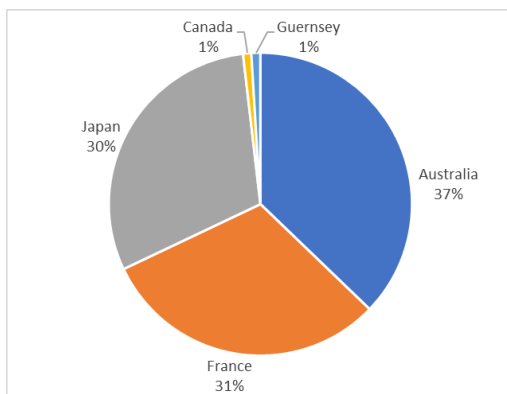
Median Market Cap (mln €): 761

Commodities – segment breakdown

	EM Fund	Commodities Niche
Commodities	10.7%	100.0%
Natural Graphite	2.4%	22.0%
Cobalt	1.1%	10.3%
Nickel Sulphate	4.3%	39.8%
Lithium	1.3%	11.7%
Copper	1.6%	15.2%
Vanadium	0.1%	1.0%

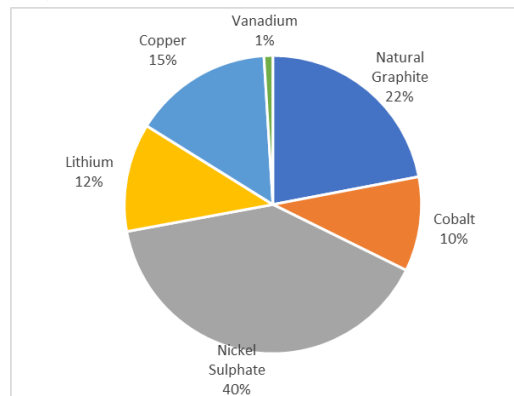
Source: Niche AM

Geographical breakdown



Source: Niche AM

Segment breakdown



Performance first quarter 2023 (31/12/22-31/03/23)



Performance since inception (11/06/19 – 31/03/23)



Source: Niche AM, Thomson Reuters

Niche description

Commodities are vital to electric mobility. The need for cobalt, lithium and graphite will increase many times by 2025 while the need for nickel will almost double. Today the world looks unprepared for such a change and a gradual increase in the price of these commodities is likely. The path will be volatile but potentially highly rewarding.

Powertrains & Supercondensatori



stocks: 5

Average Market Cap (mln €): 6.117

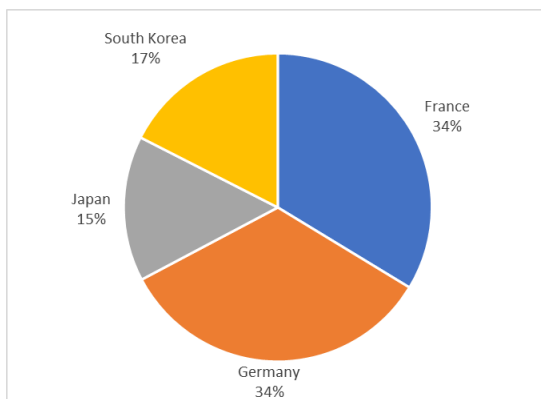
Median Market Cap (mln €): 3.632

PTs & UTs – segment breakdown

	EM Fund	Powertrains & UT
Powertrains & UTs	11.7%	100.0%
Powertrains	10.0%	84.8%
Ultracapacitors	1.8%	15.2%

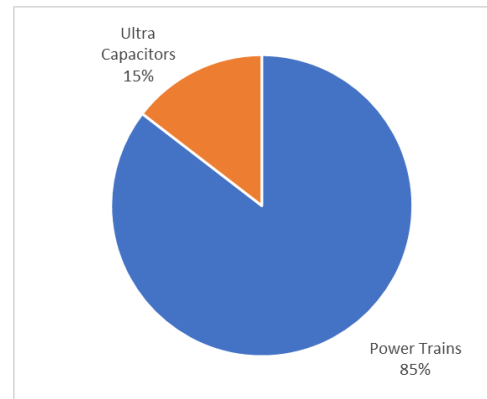
Source: Niche AM

Geographical breakdown

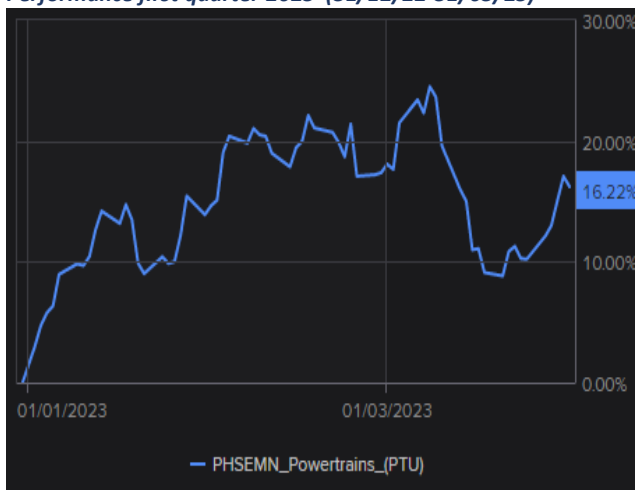


Source: Niche AM

Segment breakdown



Performance first quarter 2023 (31/12/22-31/03/23)



Source: Niche AM, Thomson Reuters

Performance since inception (10/06/19 – 31/03/23)



Niche description

Powertrains will have to adapt to the electrification of mobility and many players are already active in providing new solutions to optimise the functioning of the EVs. Those better equipped to master the change could be able to gain market share and increase margins. At the same time ultra-capacitors could become an important complement of the electric powertrain, providing high power when needed, and in doing so increasing the performance and lengthening the life of the batteries.

Satellite Areas



stocks: 12

Average Market Cap (mln €): 11.628

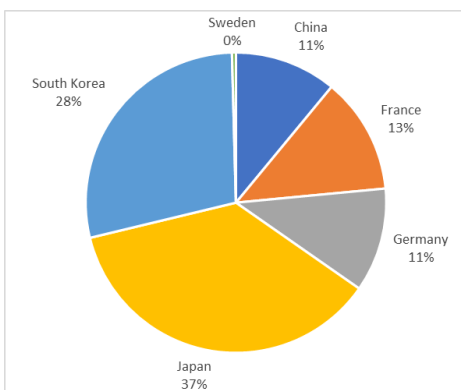
Median Market Cap (mln €): 734

Satellite Areas – segment breakdown

	EM Fund	Satellite Areas Niche
Satellite Areas	16.5%	100.0%
Sensors	2.3%	14.2%
Cars	5.7%	34.7%
Forklifts	0.1%	0.4%
Assembly Lines	2.3%	14.1%
Electric Airplanes	0.5%	2.9%
Electrodes Cutting Equipment	2.7%	16.1%
Charging Stations	0.7%	4.5%
New Materials For Mobility	0.6%	3.4%
Lithium Batteries Assembly Machinery	1.6%	9.7%

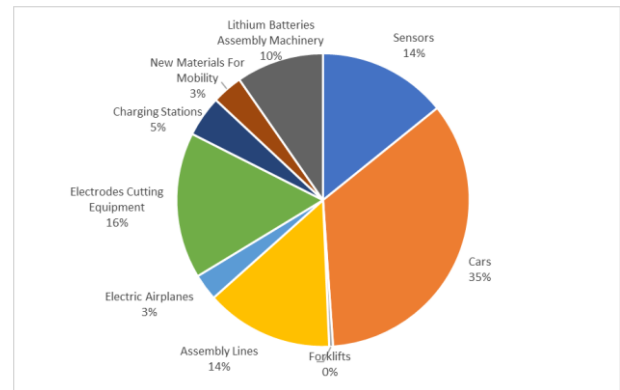
Source: Niche AM

Geographical breakdown

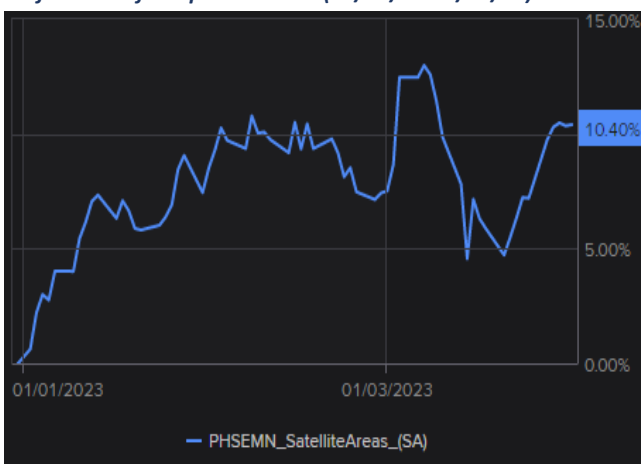


Source: Niche AM

Segment breakdown

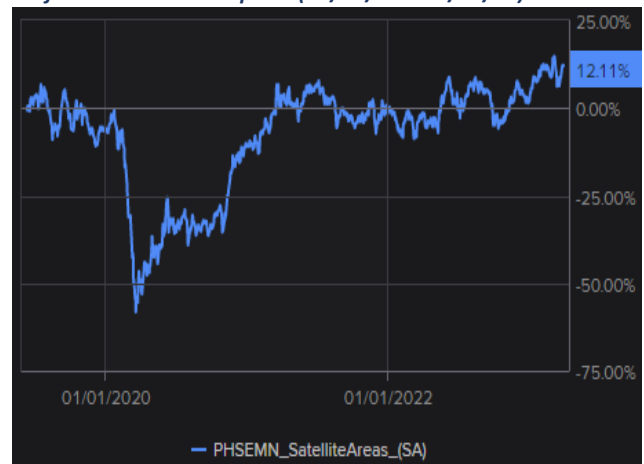


Performance first quarter 2023 (31/12/22-31/03/23)



Source: Niche AM, Thomson Reuters

Performance since inception (10/06/19 – 31/03/23)



Niche description

The passage from the internal combustion powered vehicles to battery powered vehicles will be a seismic shift. The underlining market for batteries is likely to multiply by more than 30 in less than ten years by value, reaching that of semiconductors. One billion of cars and hundreds of millions of other vehicles will be affected. The spill over effect will be massive and many sectors will morph radically. This niche tries to pick the companies that could indirectly benefit from this historical shift.

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