



29/12/2023

NICHE
ASSET MANAGEMENT

Pharus **Electric Mobility Value** Niche

Portfolio Update

30th September 2023 – 29th December 2023



Launch date: 10.06.2019

Total Net Asset as of 29.12.23: € 19,721,301.37

Currency: EUR

Net Asset Value
per share
as of 29.12.23:

Class A - ISIN: LU1867072149 € 149.42

Class B - ISIN: LU1867072222 € 162.93

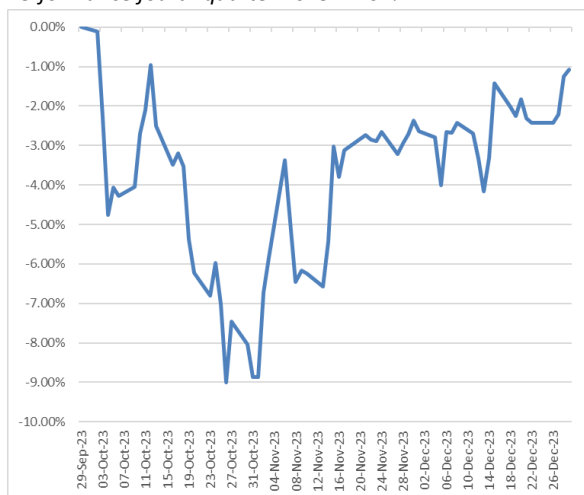
Class Q - ISIN: LU1867072495 € 162.71

Class A GBP - ISIN: LU2526377374 £ 95.63

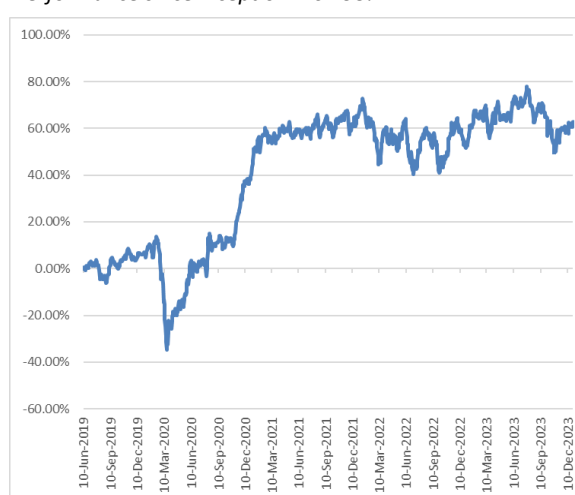
	Q4	Year to Date	1 Year	Since inception
Performance (Class B)	-1,07%	+7,47%	+7.47%	+62.93%

Net Asset Value per share

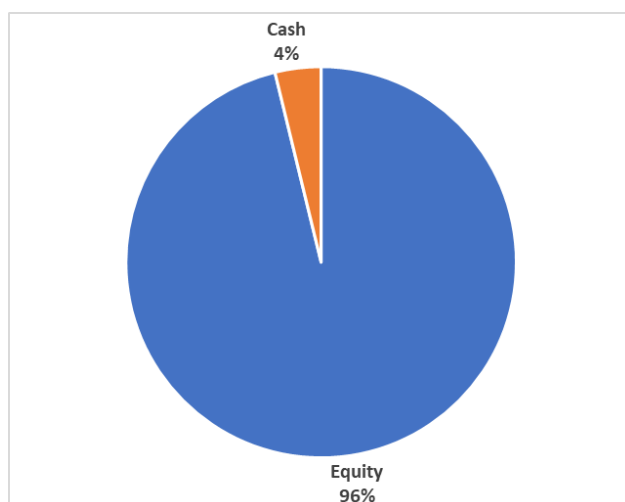
Performance fourth quarter 2023: -1.07%.



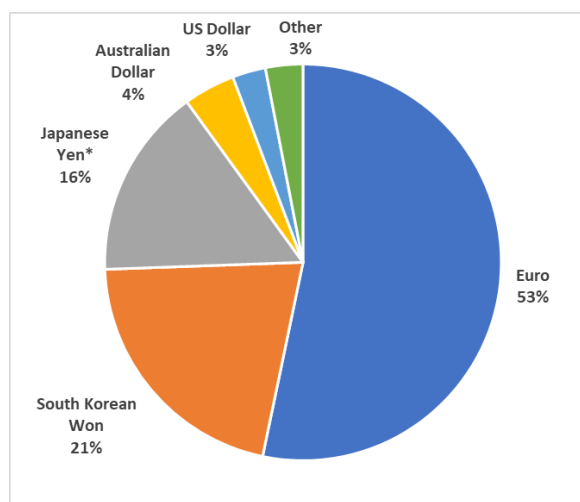
Performance since inception: +62.93%.



Portfolio breakdown by asset class



Portfolio breakdown by currency



*net of JPY hedging

Quarterly comment

During the fourth quarter, the Fund recorded a negative performance of -1.07%, recovering much of the negative performance recorded in October.

The year ended with a positive performance of +7.47%, outperforming the main ETFs exposed to electric mobility, which fell between 12% and 15%. The fund therefore benefited from its deep value approach (P/E '24 of around 8.5x, P/BVT 1.0x), which reduces the long-term risk of permanent capital loss, while maintaining exposure to the significant upside resulting from the mass adoption of electric cars.

A certain heterogeneity in terms of performance was observed at the level of the niches making up the fund. Three of the eight niches achieved a positive performance. *Electrolytes & Elecfoils* (+26.2%) particularly stood out, thanks mainly to the rerating of Soulbrain Holdings. This Korean company benefited from regulatory clarifications regarding the *Inflation Reduction Act* (IRA), the incentive plan for the development of the electric car industry in the US, as it represents one of the main alternatives to Chinese electrolyte producers. The Commodities Niche was also positive, following the rebound of stocks exposed to copper and lithium from particularly depressed levels, despite the still negative contribution of companies exposed to graphite.

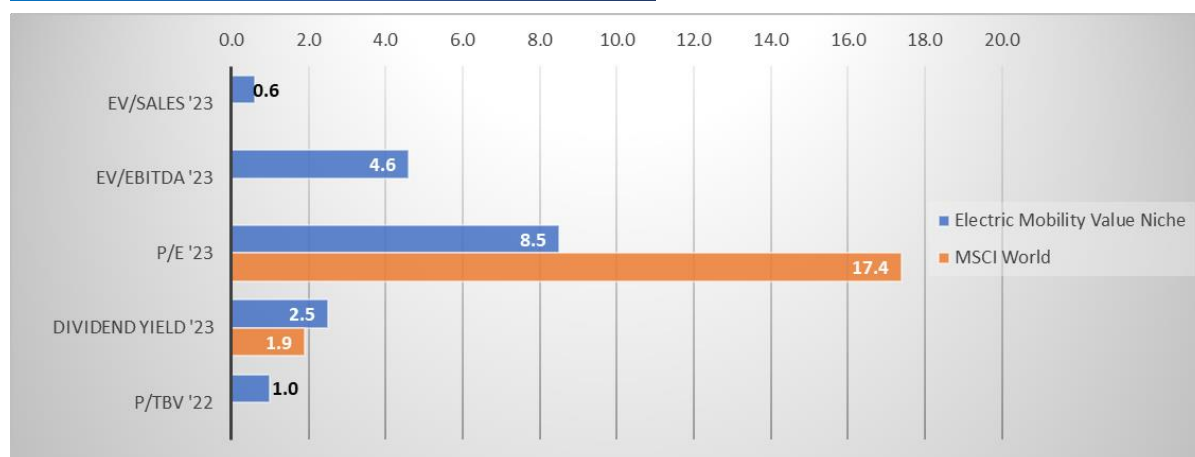
Among the most negative contributors at the niche level was *Lithium Cells* (-7.9%), one of the most important within the fund with a weight of 17%. This niche has struggled due to uncertainty over a potential slowdown in sales of electric vehicles in 2024, with respect to which we believe the market has an overly cautious attitude, especially given the arrival of new models on the market and the expected reduction in prices made possible by the lower cost of raw materials used in the manufacture of batteries for electric cars. The cost of the battery, in fact, accounts for about 40 per cent of the total cost of an electric car. If we look at the cathode, one of the main components of the battery, we can see that it has dropped by more than 25% over the course of 2023 (cost of the higher-performance and more expensive NMC cathode, made with a high percentage of nickel), leaving room for a lowering of prices that should facilitate an acceleration of volumes.

The worst contributor to the niche was Panasonic, despite depressed valuation levels (P/E around 8x) and strong know-how in EV batteries, one of Tesla's first suppliers. This company is among those most advanced in the launch of the new 4680 cylindrical batteries that will enable a strong increase in EV performance (significant increase in energy density implying a longer range). Korean battery manufacturers also underperformed, also characterised by low valuations that do not discount their leading position and the direct benefit of the *IRA*, positioning themselves together with Japanese operators as the main alternative to Chinese suppliers.

Performance by niche - fourth quarter 2023

NICHE	Performance
Lithium Cells	-7.85%
Cathodes	-2.61%
Anodes	-3.80%
Electrolytes & Elecfoils	26.16%
Separators	-6.56%
Commodities	9.93%
Powertrains & Ultracapacitors	4.35%
Satellite Areas	-2.45%

Portfolio valuation



Source: Niche AM, Thomson Reuters, MSCI

Top holdings

ISIN	SECURITY	%	NICHE	SUB-NICHE
JP3866800000	Panasonic Holdings	6.05%	Lithium Cells (LC)	NCA
KR7051911006	LG Chem Preferred Stock	4.66%	Lithium Cells (LC)	NMC
JP3402600005	Sumitomo Metal Mining	4.56%	Cathodes (CM)	NCA
JP3544000007	Teijin	3.87%	Separators (SM)	WET
KR7096771001	SK Innovation Pref Shs	3.00%	Lithium Cells (LC)	NMC
FR0013176526	Valeo	2.96%	Power Trains & Ultracapacitors (PTU)	POWER TRAINS
JP3627400009	Toda Kogyo	2.72%	Cathodes (CM)	NCA
FR0000131757	Eramet	2.50%	Commodities (C)	NICKEL SULPHATE
JP3538800008	TDK	2.41%	Power Trains & Ultracapacitors (PTU)	ULTRACAPACITORS
KR7036830008	Soulbrain Holdings	2.40%	Electrolytes and Elecfoils (EEM)	ELECTROLYTE

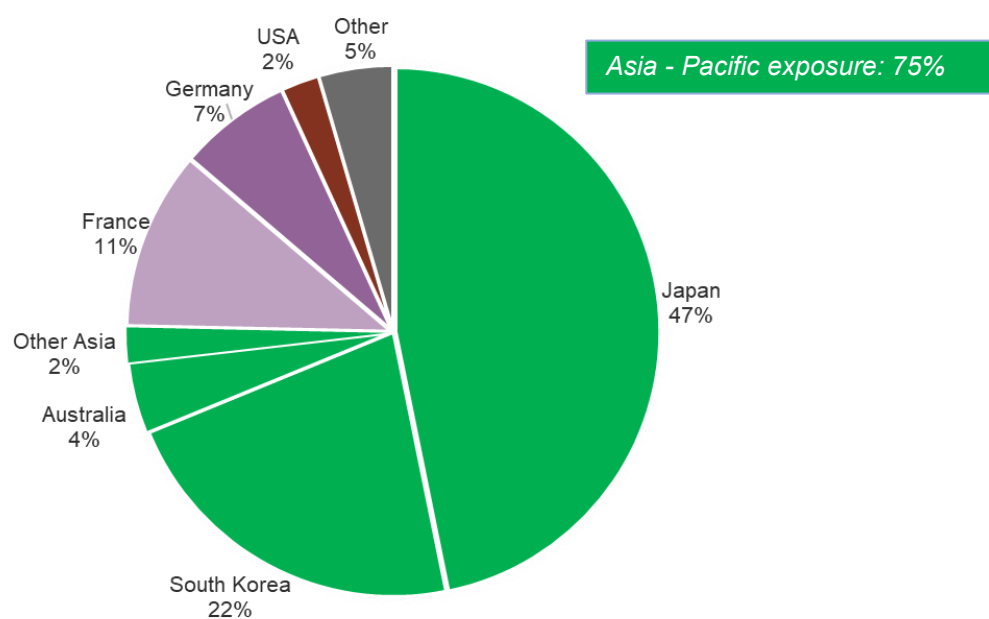
Main increases in the quarter

Holdings	Weight at 30/09/23	Weight at 31/12/23
HI Mando	0.0%	0.9%
Samsung SDI Pref Shs	0.6%	1.5%
Imerys	0.9%	1.6%
Eurogroup Laminations	0.0%	0.7%
SNT MOTIV	1.4%	2.0%

Main decreases in the quarter

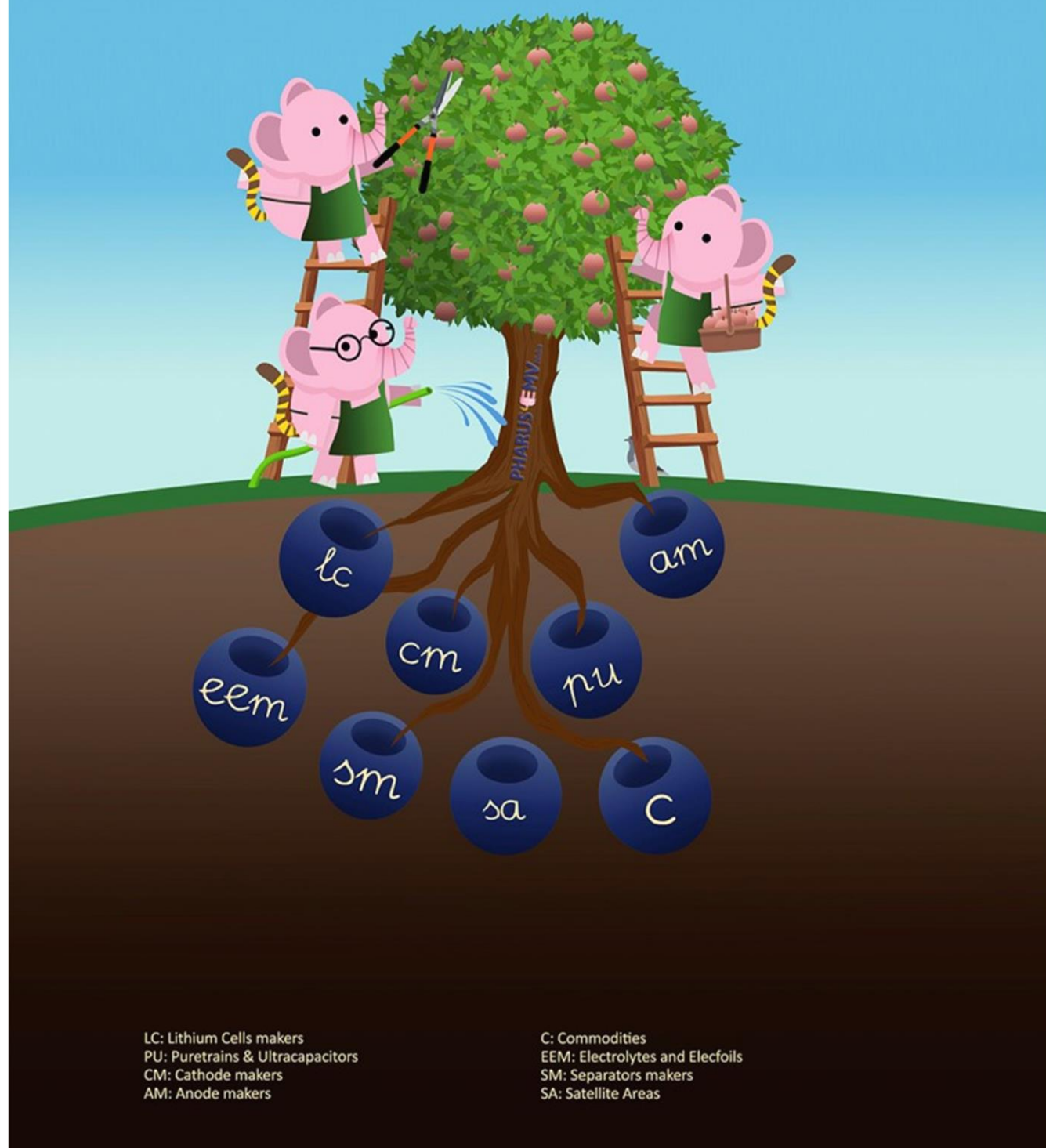
Holdings	Weight at 30/09/23	Weight at 31/12/23	Total Return
Resonac Holdings	3.7%	1.0%	+20.44%
Vitesco Technologies Group	0.8%	0.2%	+58.80%

Geographical Composition



Source: Niche AM

ELECTRIC MOBILITY VALUE Niche



Lithium cells



stocks: 7

Average Market Cap (mln €) 8.858

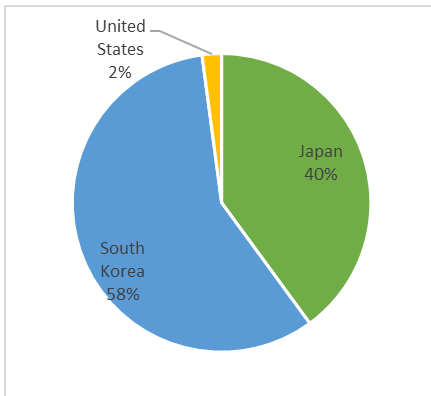
Median Market Cap (mln €): 1.680

Lithium cells - segment breakdown

		EM Fund	Lithium Niche
Lithium Cells	LC	16.7%	100.0%
Nickel Manganese & Cobalt	NMC	10.3%	61.7%
Nickel Cobalt & Aluminium	NCA	6.4%	38.3%

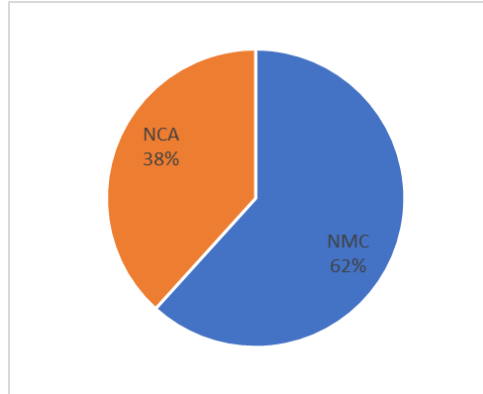
Source: Niche AM

Geographical breakdown

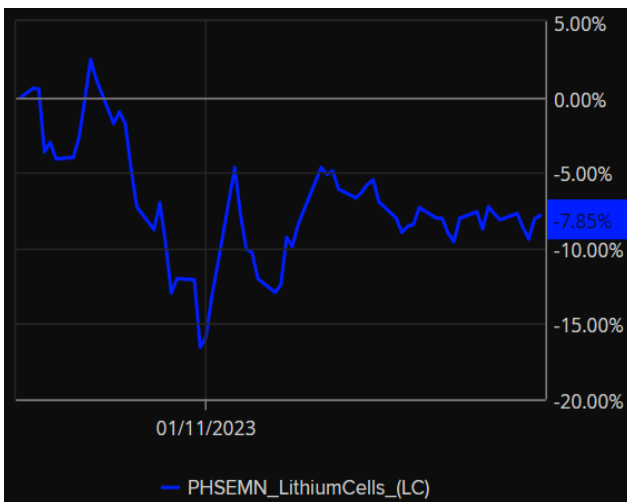


Source: Niche AM

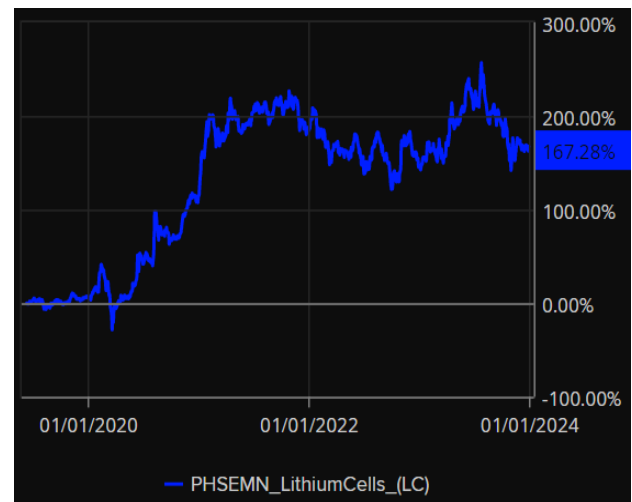
Segment breakdown



Performance fourth quarter 2023 (30/09/23-31/12/23)



Performance since inception (10/06/19 - 31/12/23)

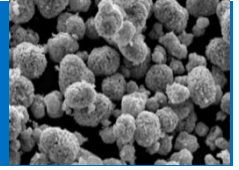


Source: Niche AM, Thomson Reuters

Niche Description

Electric mobility will grow dramatically in the coming years, with a speed still awaited by most, changing the world forever. Electric mobility will be pervasive, encompassing transport on land, water and air. At the heart of the electrification of mobility are lithium batteries, which consist of several lithium cells joined together through a battery management system. Each cell is a small battery with a cathode, an anode, a separator and filled with an electrolyte solution. There are different types of lithium cells, each with its own chemistry, although NCA and NMC are by far the most widely used in the electrification of transport.

Cathodes



stocks: 8

Average Market Cap (mln €): 3.270

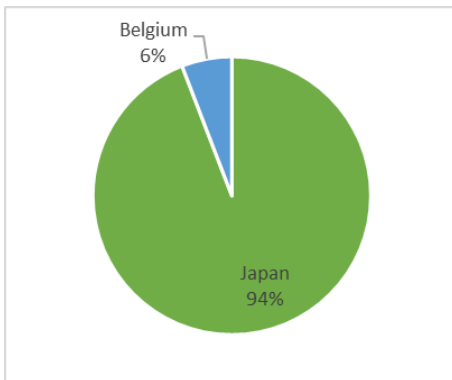
Median Market Cap (mln €): 243

Cathodes - segment breakdown

		EM Fund	Cathodes Niche
Cathodes		14.5%	100.0%
Nickel Manganese & Cobalt	NMC	2.4%	16.3%
Nickel Cobalt & Aluminium	NCA	7.8%	53.5%
Cathodes Material	CM	4.4%	30.2%

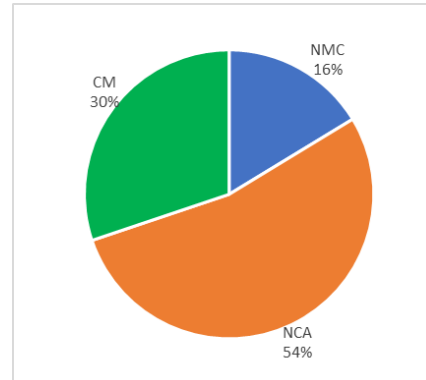
Source: Niche AM

Geographical breakdown

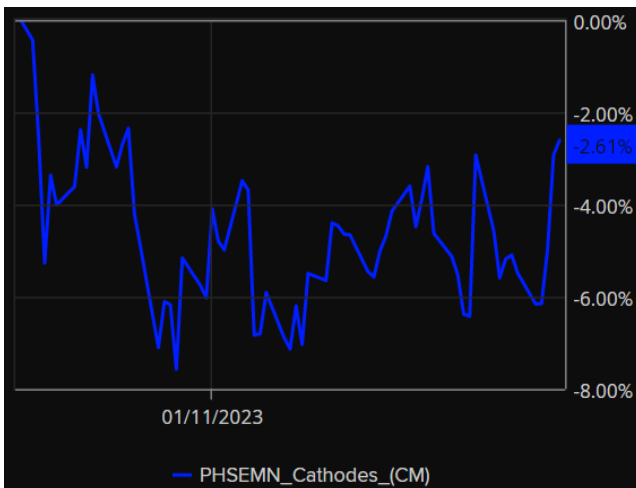


Source: Niche AM

Segment breakdown



Performance fourth quarter 2023 (30/09/23-31/12/23)



Source: Niche AM, Thomson Reuters

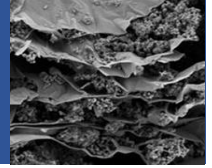
Performance since inception (10/06/19 - 31/12/23)



Niche Description

Cathodes are the most expensive component in lithium-ion batteries for electric vehicles (about 25 per cent of the total cost) and their chemistry is decisive for energy density and thus battery capacity. The composition of these cathodes will, at least for the next 5 to 7 years, be limited to two types of chemistry, NCA (nickel, cobalt and aluminium) and NMC (nickel, manganese and cobalt), as these provide the energy density required to make electric mobility competitive in terms of range with internal combustion vehicles.

Anodes



stocks: 7

Average Market Cap (mln €) 5.770

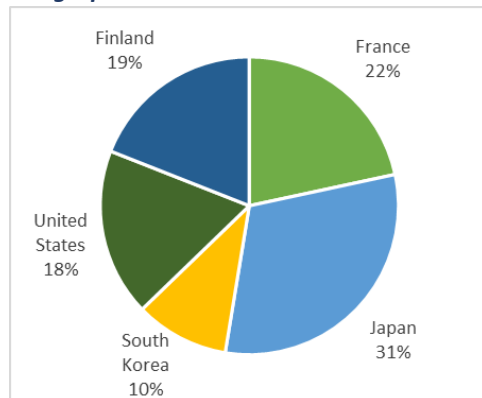
Median Market Cap (mln €): 2.419

Anodes - segment breakdown

	EM Fund	Anodes Niche
Anodes	7.3%	100.0%
Coating	1.6%	21.6%
Anodes	1.5%	21.1%
Artificial Graphite	1.5%	20.1%
Needle Coke	2.7%	37.2%

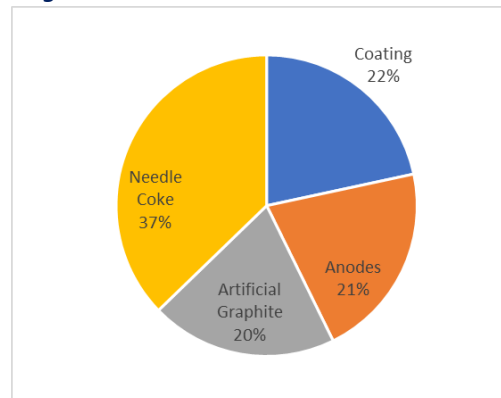
Source: Niche AM

Geographical breakdown

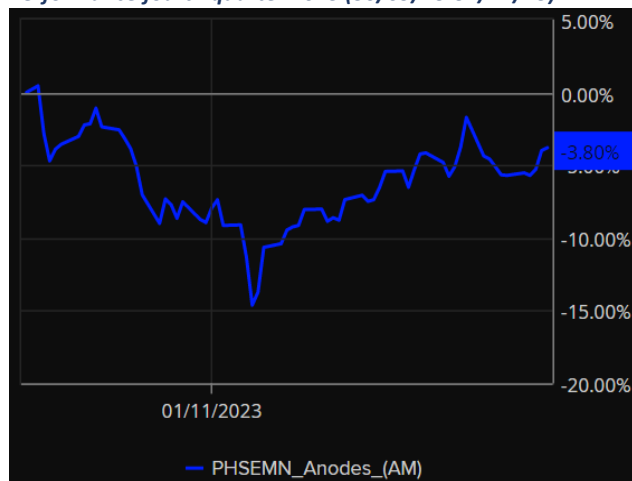


Source: Niche AM

Segment breakdown

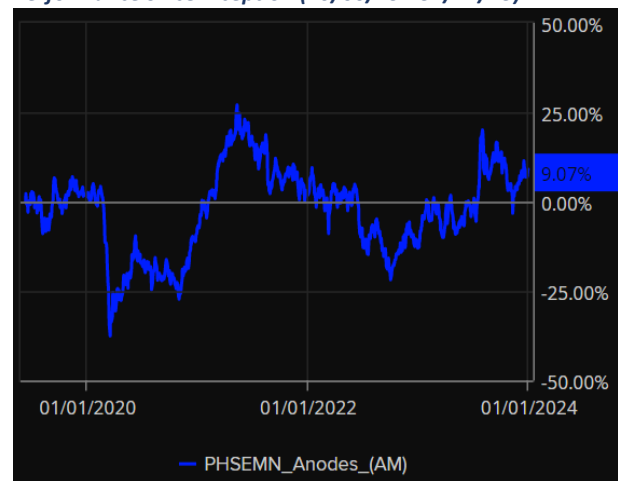


Performance fourth quarter 2023 (30/09/23-31/12/23)



Source: Niche AM, Thomson Reuters

Performance since inception (10/06/19 - 31/12/23)



Niche Description

Anodes also contribute to determining the energy density of the battery, as they are responsible for storing and releasing lithium ions to and from the cathode. Anodes are arranged on copper or aluminium membranes that serve as a current collector for the anode. Selecting high quality materials for the anode enables lithium cells to offer good retention capacity and significant energy efficiency.

Separators



stocks: 5

Average Market Cap (mln €): 2.209

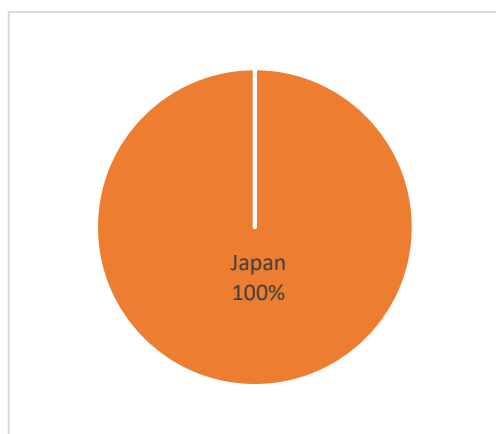
Median Market Cap (mln €): 1.698

Separators - segment breakdown

	EM Fund	Separators
Separator Maker	6.1%	100.0%
Wet Separators	5.2%	84.5%
Dry Separators	1.0%	15.5%

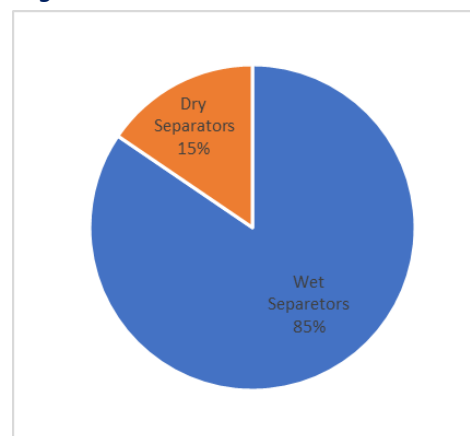
Source: Niche AM

Geographical breakdown

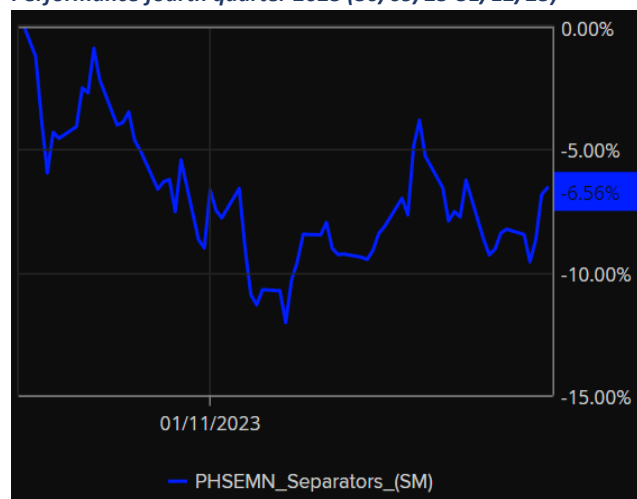


Source: Niche AM

Segment breakdown

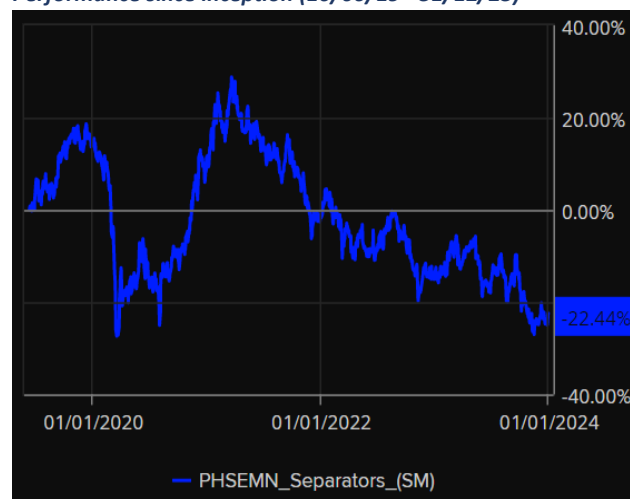


Performance fourth quarter 2023 (30/09/23-31/12/23)



Source: Niche AM, Thomson Reuters

Performance since inception (10/06/19 - 31/12/23)



Niche Description

Separators ensure the safety of lithium cells as they act as a barrier between cathode and anode. Although separators occupy only 5% of the space of a cell, they represent the second most significant cost item after the cathode (around 10% of the total cost). The market for separators for electric vehicles was worth around USD600m in 2015, with a capacity of 0.5bn. This number could grow to over 20bn square metres by 2025, in line with the growth of electric mobility. However, there is a risk that after 2030 this component will no longer be needed if the solid-state battery is developed and adopted...

Electrolytes



stocks: 3

Average Market Cap (mln €): 487

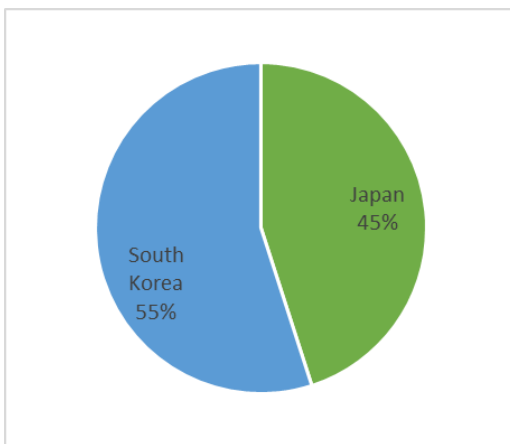
Median Market Cap (mln €): 317

Electrolytes & Elecfoils - segment breakdown

	EM Fund	Electrolytes Niche
Electrolytes & Elecfoils	4.4%	100.0%
Electrofoils	0.0%	0.0%
Electrolytes	4.4%	100.0%

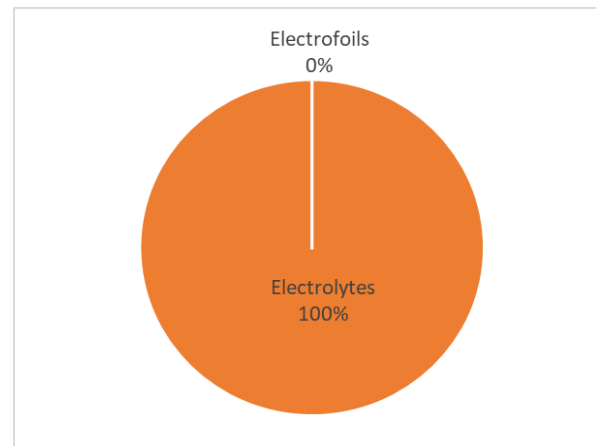
Source: Niche AM

Geographical breakdown

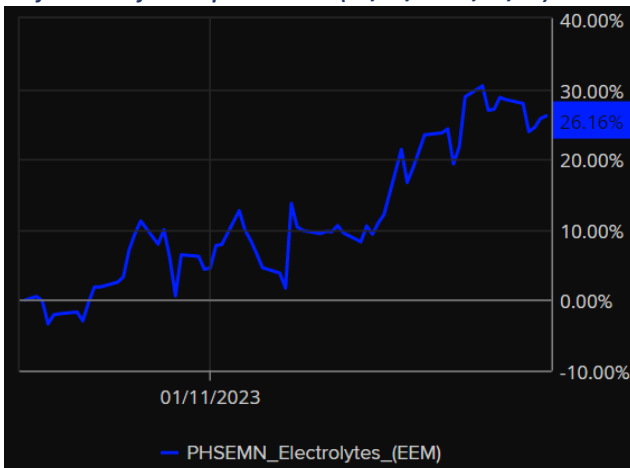


Source: Niche AM

Segment breakdown

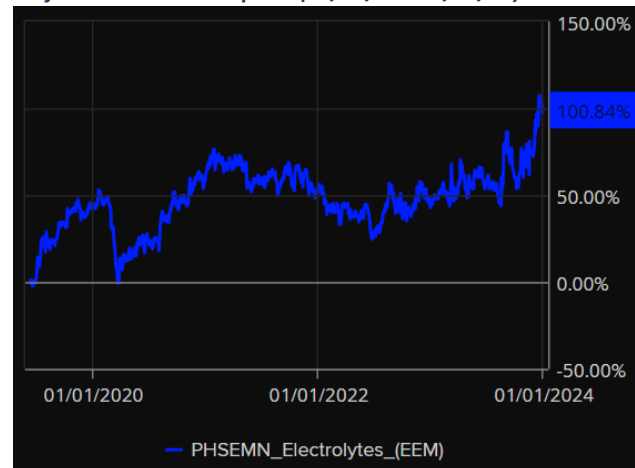


Performance fourth quarter 2023 (30/09/23-31/12/23)



Source: Niche AM, Thomson Reuters

Performance since inception (10/06/19 - 31/12/23)



Niche Description

The electrolyte plays a key role as it enables and promotes the movement of lithium ions between cathode and anode. The electrolyte consists of solvents, salts and additives. The solvents allow the salts to dissolve. The salts allow the ions to pass through. Additives are products that are added to modify and refine the characteristics of the electrolyte. Materials that ensure a high ion-conducting capacity are essential to ensure good performance of the cell.

Commodities for electric mobility



stocks: 13

Average Market Cap (mln €): 1.783

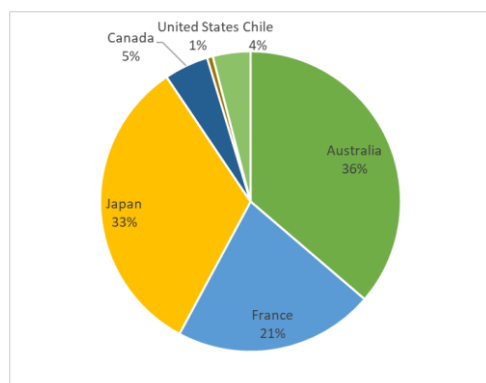
Median Market Cap (mln €): 1.304

Commodities - segment breakdown

	EM Fund	Commodities Niche
Commodities	11.6%	100.0%
Natural Graphite	1.9%	16.5%
Cobalt	1.2%	10.5%
Nickel Sulphate	3.8%	32.5%
Lithium	2.7%	23.5%
Copper	1.9%	16.6%
Vanadium	0.1%	0.4%

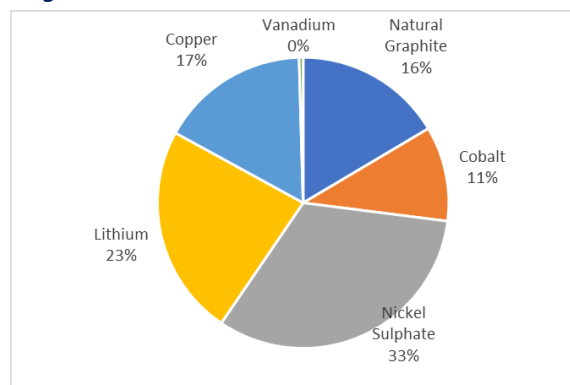
Source: Niche AM

Geographical breakdown



Source: Niche AM

Segment breakdown



Performance fourth quarter 2023 (30/09/23-31/12/23)



Source: Niche AM, Thomson Reuters

Performance since inception (11/06/19 - 31/12/23)



Niche Description

Base Materials are vital for electric mobility. The need for cobalt, lithium and graphite will multiply many times over by 2025, while the need for nickel will almost double. Today, the world seems unprepared for this change, so a gradual increase in the price of these materials is likely once the adoption of e-mobility begins to accelerate dramatically.

Powertrains & Ultra Capacitors



stocks: 10

Average Market Cap (mln €): 8.093

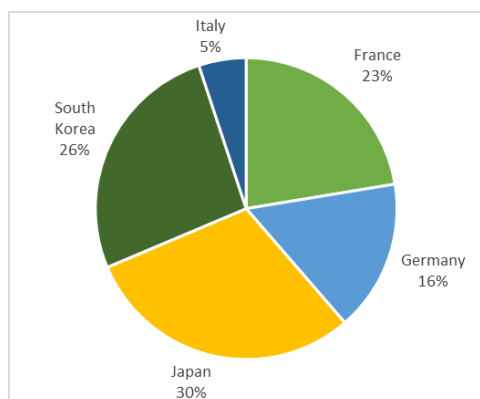
Median Market Cap (mln €): 5.372

PTs & UTs - segment breakdown

	EM Fund	Powertrains & UT
Powertrains & UTs	13.2%	100.0%
Power Trains	9.3%	70.0%
Ultra Capacitors	4.0%	30.0%

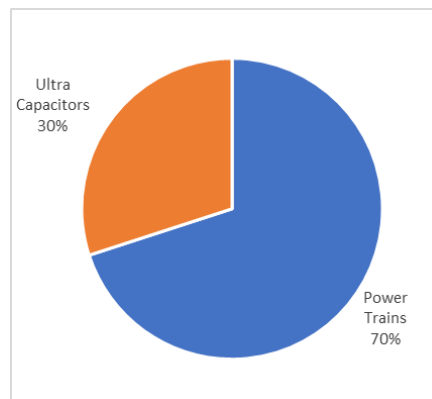
Source: Niche AM

Geographical breakdown

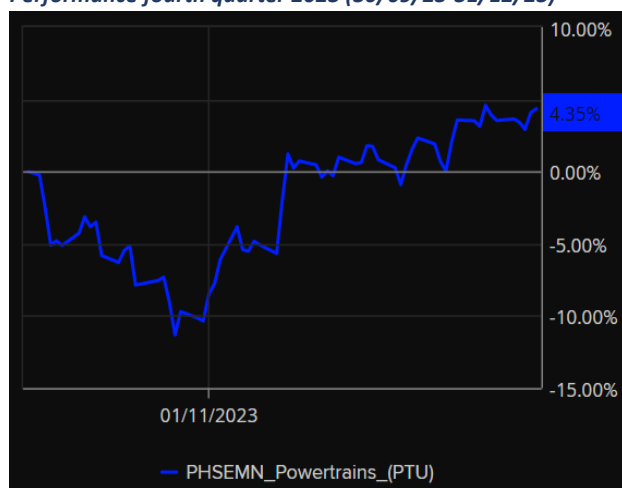


Source: Niche AM

Segment breakdown

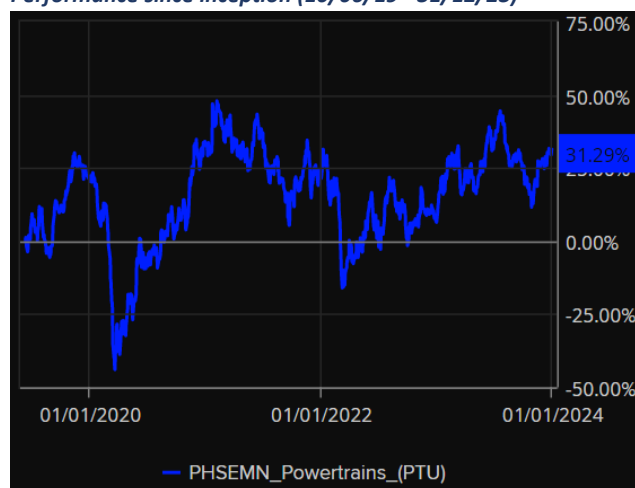


Performance fourth quarter 2023 (30/09/23-31/12/23)



Source: Niche AM, Thomson Reuters

Performance since inception (10/06/19 - 31/12/23)



Niche Description

Electric vehicle powertrains are completely different from conventional ones and will be refined over time to produce solutions that can improve vehicle efficiency. Those companies that are best equipped to handle the change will be able to gain market share and significantly improve margins. At the same time, ultracapacitors can become an important complement to the electric powertrain, providing high energy intensity when needed and, in doing so, increasing vehicle performance and extending battery life.

Satellite Areas



stocks: 22

Average Market Cap (mln €): 4.516

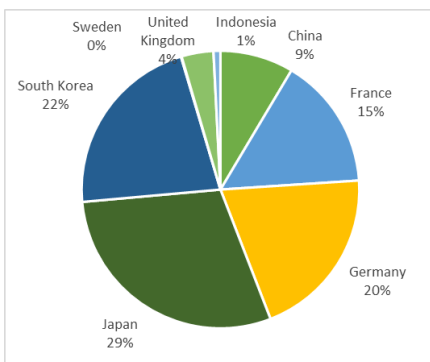
Median Market Cap (mln €): 710

Satellite Areas - segment breakdown

	EM Fund	Satellite Areas Niche
Satellite Areas	22.3%	100.0%
Sensors	1.8%	8.2%
Cars	7.7%	34.7%
Assembly Lines	5.9%	26.4%
Electric Airplanes	0.4%	1.7%
Electrodes Cutting Equipment	2.8%	12.7%
Charging Stations	0.9%	4.0%
New Materials For Mobility	0.4%	1.7%
Lithium Batteries Assembly Machinery	0.4%	2.0%
Thermal Management Systems	0.9%	4.0%
Electric Bus	0.8%	3.7%
Electric Scooters	0.2%	0.8%

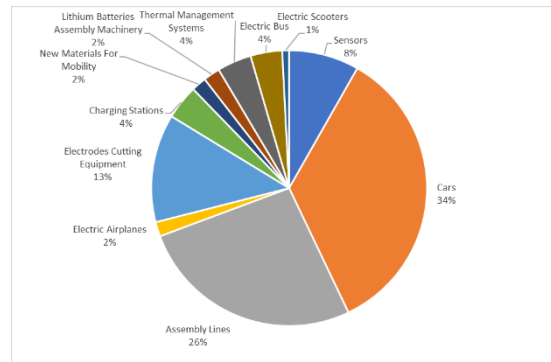
Source: Niche AM

Geographical breakdown

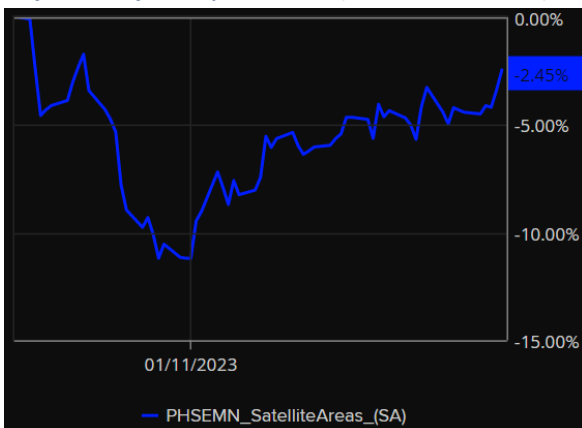


Source: Niche AM

Segment breakdown

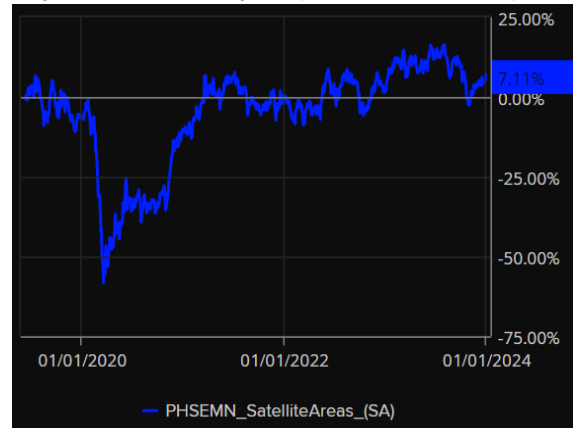


Performance fourth quarter 2023 (30/09/23-31/12/23)



Source: Niche AM, Thomson Reuters

Performance since inception (10/06/19 - 31/12/23)



Niche Description

The transition from internal combustion vehicles to electric vehicles will be epochal, the value of the battery market will multiply by 30 in less than 10 years, reaching that of semiconductors. A billion cars and hundreds of millions of other vehicles will be affected. There is no doubt that this change will have the power to reshape many other adjacent sectors. This Niche seeks to identify the companies that will indirectly benefit from this trend.

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