







# Pharus Electric Mobility Value Niche

# Portfolio Update 30 June 2023– 30 September 2023

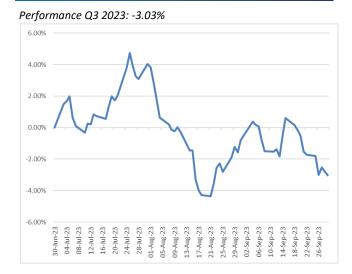


Launch date:10.06.2019	
Total Net Asset as of 30.09.23: € 19,784	,052.32
Currency: EUR	

052.32	Net Asset Value per share as of 30.09.23:	Class A – ISIN: LU186 Class B – ISIN: LU186 Class Q – ISIN: LU186 Class A GBP – ISIN: LU2	57072222 57072495	€ 151.53 € 164.70 € 164.49 £ 96.66
Q3	Year to Date	1 Year	Since in	ception
-3,03%	+8,64%	+16.86%	+64.	70%

# Net Asset Value per share

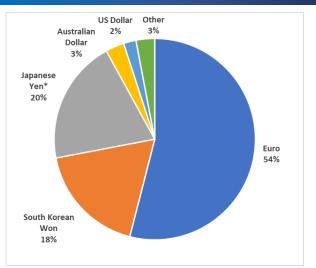
Performance (Class B)



#### Performance since inception: +64.70%

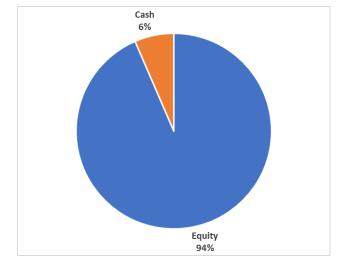


# Portfolio breakdown by currency



\*net of JPY hedging

# Portfolio breakdown by asset class



# Quarterly Comment

During the quarter, the fund generated a negative performance of 3.03%.

This result was driven by profit-taking on Japanese and Korean electric car battery manufacturers, mainly on expectations of a possible slowdown in demand in 2024, due, on the one hand, to the reduction of purchase incentives in some markets and, on the other hand, to the negative volume effect of the changed interest rate scenario. In this context, some car manufacturers have announced that they will slow down new investments to increase battery production capacity. We do not think this dynamic is destined to last long, given that the major improvements in battery performance and their lower cost, also due to the significant drop in the cost of raw materials, are rapidly closing the price differential between traditional internal combustion cars and electric cars, even in the lower-middle range of the market (in the upper-middle range this differential is negative).

Not to be forgotten is how the world's leading market, China, is on its way to gaining a market share close to 40% (39% in August, 36% in the first eight months of the year), following an exponential growth pattern typical of 'S' curves. The European market continues to grow in terms of penetration (30% in August, 23% in the first eight months). The US market, supported by the huge investments promoted by the Inflation Reduction Act, will see the penetration of electric cars grow very rapidly (9.5% in August). The postponement of the construction of some new gigafactories in this country was offset by the capacity expansion announcements made by Stellantis, Toyota and Hyundai.

Finally, no car manufacturer is scaling back its pipeline of new electric cars, which will account for almost all new models coming in the next few years. The consumer already has, and will have, more and more choice.

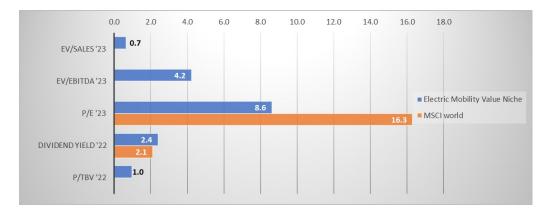
Diversification increased during the quarter, with the introduction of nine new stocks in various sub-niches, most notably in cathode manufacturers (Umicore), alternative anode materials (Stora Enso) and companies exposed to the development of the revolutionary solid-state battery (Quantum Scape and Idemitsu Kosan). On the other hand, profits were taken on Korea's Posco, following the major rerating.

The Fund offers exposure to mass adoption of electric vehicles at attractive valuations (P/E 8.6x, P/BVT 1.1x) due to its deep value approach.

# Niche Performance Q3 2023

NICHE	Performance
Lithium Cells	-6.27%
Cathodes	-6.55%
Anodes	15.37%
Electrolytes & Elecfoils	1.12%
Separators	-2.04%
Commodities	-13.25%
Powertrains & Ultracapacitors	-6.80%
Satellite Areas	-2.73%

# Portfolio valuation



Source: Niche AM, Thomson Reuters, MSCI

# Top holdings

ISIN	SECURITY	%	NICHE	SUB-NICHE
JP3866800000	Panasonic Holdings	7.16%	Lithium Cells (LC)	NCA
JP3402600005	Sumitomo Metal Mining	4.64%	Cathodes (CM)	NCA
KR7051911006	LG Chem Preferred Stock	4.64%	Lithium Cells (LC)	NMC
JP3544000007	Teijin	4.14%	Separators (SM)	WET
JP3368000000	Resonac Holdings	3.70%	Anodes (AM)	ANODES
FR0013176526	Valeo	3.47%	Power Trains & Ultracapacitors (PTU)	POWER TRAINS
KR7096771001	SK Innovation Pref Shs	3.27%	Lithium Cells (LC)	NMC
JP3627400009	Toda Kogyo	3.27%	Cathodes (CM)	NCA
FR0000131757	Eramet	2.52%	Commodities (C)	NICKEL SULPHATE
DE0007664039	Volkswagen Pref Shs	2.31%	Satellite Areas (SA)	CARS

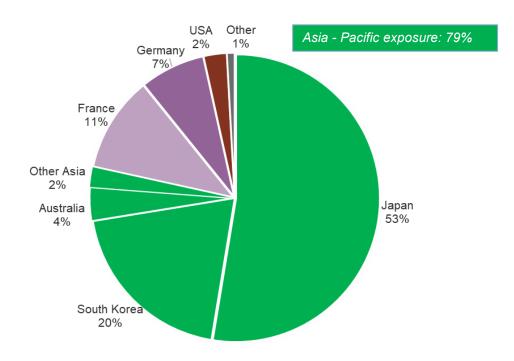
# Main increases in weight

Holdings	Weight at 30/06/23	Weight at 30/09/23
Stora Enso	0.0%	1.3%
ALD	0.0%	0.8%
Umicore	0.0%	0.8%
Idemitsu Kosan	0.0%	0.8%
Hyundai Mobis	0.0%	0.7%

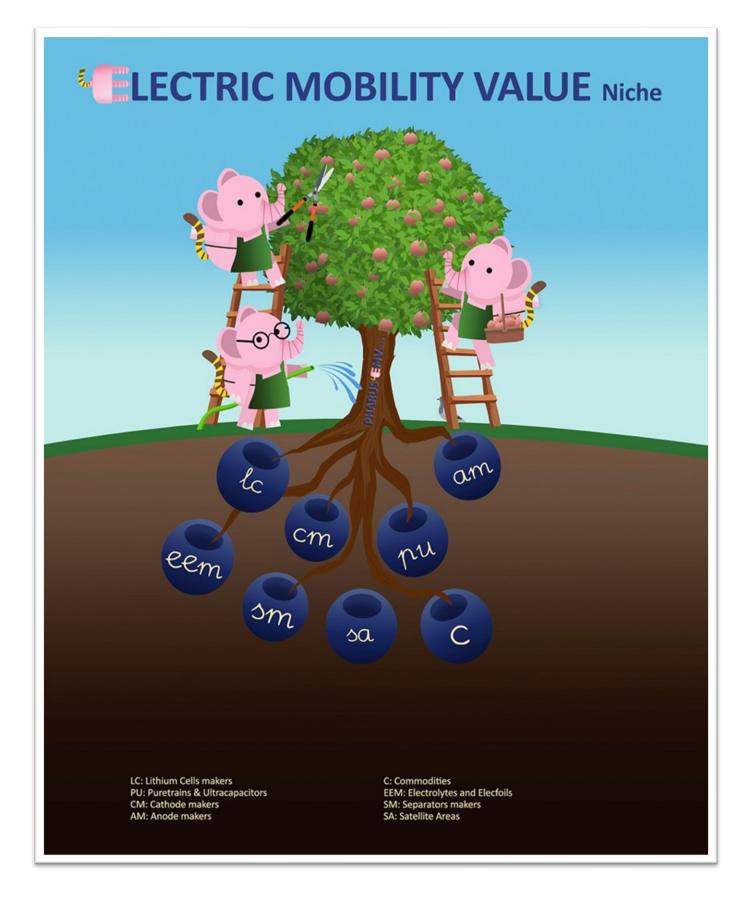
## Main decreases in weight

Holdings	Weight at 30/06/23	Weight at 30/09/23	Total Return
Posco Holdings	3.0%	0.8%	+129.77%
Vitesco Technologies Group	2.5%	0.8%	+69.02%





Source: Niche AM



# Lithium Cells

12.217



# stocks: 7 Average Market Cap (mln €)

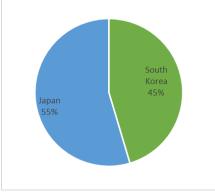
Median Market Cap (mln €): 3.101

## Lithium cells - segment breakdown

		EM Fund	Lithium Niche
Lithium Cells	LC	17.2%	100.0%
Nickel Manganese & Cobalt	NMC	9.7%	56.3%
Nickel Cobalt & Aluminium	NCA	7.5%	43.7%

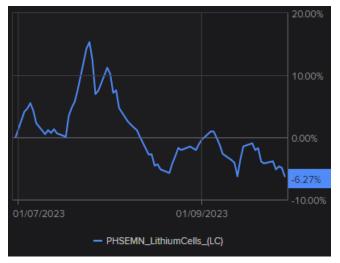
Source: Niche AM



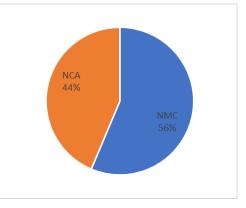


Source: Niche AM

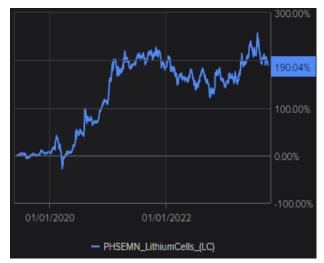
### Performance Q3 2023 (30/06/23-30/09/23)



Segment breakdown



#### Performance since inception (10/06/19 - 30/09/23)

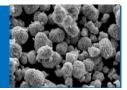


Source: Niche AM, Thomson Reuters

#### 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



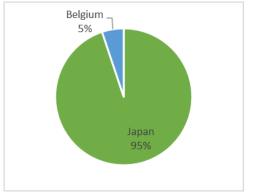
# stocks: 8 Average Market Cap (mln €): 3.166 Median Market Cap (mln €): 264

### Cathodes - segment breakdown

		EM Fund	Cathodes Niche
Cathodes		14.8%	100.0%
Nickel Manganese & Cobalt	NMC	2.2%	15.0%
Nickel Cobalt Aluminium	NCA	8.4%	56.3%
Cathode Materials	СМ	4.2%	28.6%

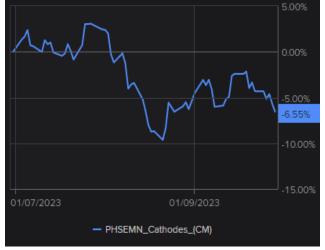
Source: Niche AM

#### Geographical breakdown



Source: Niche AM

### Performance Q3 2023 (30/06/23-30/09/23)

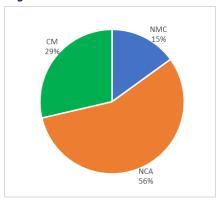


Source: Niche AM, Thomson Reuters

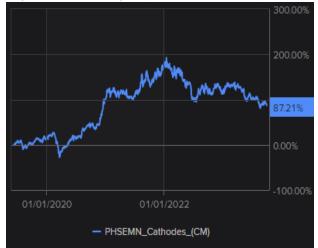
#### Niche description

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).

#### Segment breakdown







# Anodes



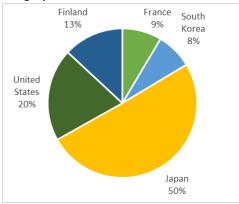
# stocks:	7	Average Market Cap (mln €)	5.112	Median Market Cap (mIn €):	2.378

### Anodes – segment breakdown

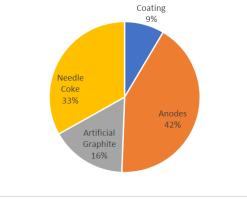
	EM Fund	Anodes Niche
Anodes	10.1%	100.0%
Coating	0.9%	8.5%
Anodes	4.3%	42.1%
Artificial Graphite	1.6%	16.3%
Needle Coke	3.4%	33.1%

Source: Niche AM

#### Geographical breakdown

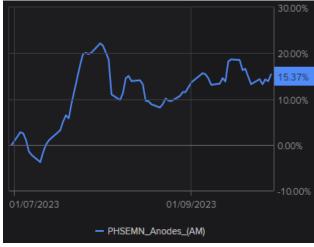


Segment breakdown

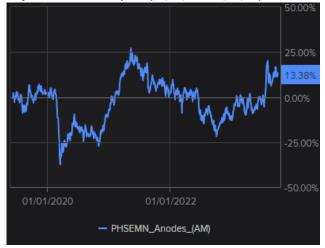


Source: Niche AM

#### Performance Q3 2023 (30/06/23-30/09/23)



*Performance since inception* (10/06/19 – 30/09/23)





## 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: 5

Average Market Cap (mln €): 2.282

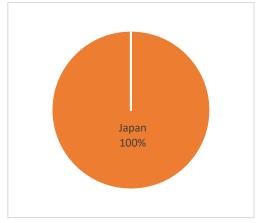
Median Market Cap (mIn €):

p (mln €): 1.820

#### Separators - segment breakdown

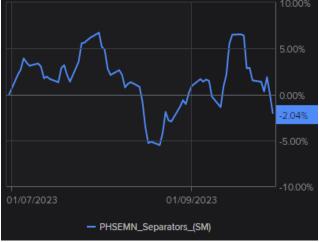
	EM Fund	Separators
Separator Maker	5.5%	100.0%
Wet Separators	4.5%	83.0%
Dry Separators	0.9%	17.0%
Source: Niche AM		

#### Geographical breakdown



Source: Niche AM

### Performance Q3 2023 (30/06/23-30/09/23)

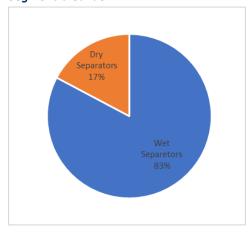




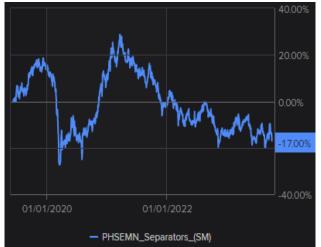
### Niche description

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.

#### Segment breakdown







# **Electrolytes & Electrofoils**



318

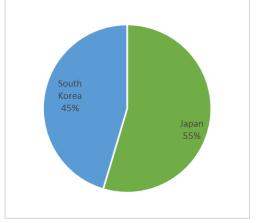
# stocks: 3 Average Market Cap (mln €): 344 Median Market Cap (mln €):

#### Electrolytes & Elecfoils - segment breakdown

	EM Fund	Electrolytes Niche
Electrolytes & Elecfoils	3.5%	100.0%
Electrofoils	0.0%	0.0%
Electrolytes	3.5%	100.0%

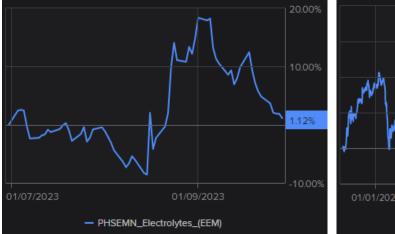
Source: Niche AM

#### Geographical breakdown

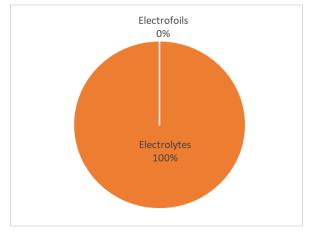


Source: Niche AM

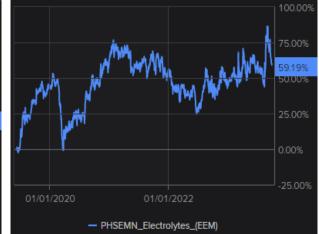
Performance Q3 2023 (30/06/23-30/09/23)



Segment breakdown







Source: Niche AM, Thomson Reuters

## 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: 11

Average Market Cap (mln €):

Median M

1.415

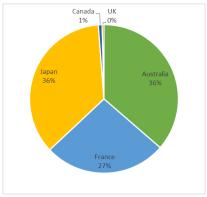
Median Market Cap (mln €): 413

#### Commodities - segment breakdown

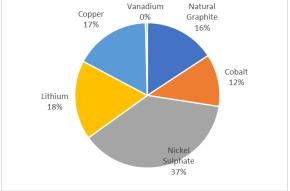
	EM Fund	Commodities Niche
Commodities	9.5%	100.0%
Natural Graphite	1.5%	15.8%
Cobalt	1.1%	11.7%
Nickel Sulphate	3.6%	37.6%
Lithium	1.7%	17.7%
Copper	1.6%	16.8%
Vanadium	0.0%	0.4%

Source: Niche AM

#### Geographical breakdown

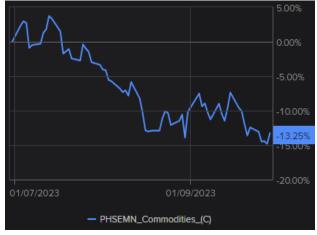


# Segment breakdown

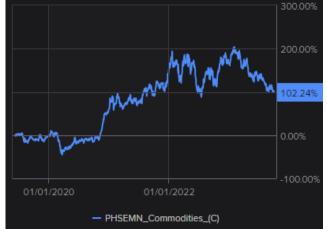


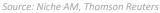
Source: Niche AM

#### Performance Q3 2023 (30/06/23-30/09/23)









## 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.

#### 11

# **Powertrains & Ultracapacitors**



# stocks: 9 Average Market Cap (mln €): 7.307

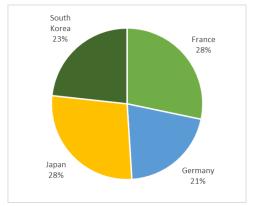
Median Market Cap (mln €): 6.481

#### PTs & UTs – segment breakdown

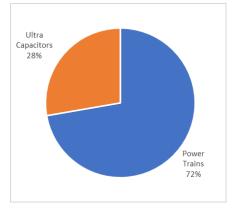
	EM Fund	Powertrains & UT
Powertrains & UTs	12.3%	100.0%
Powertrains	8.9%	72.3%
Ultracapacitors	3.4%	27.7%

Source: Niche AM





Segment breakdown



Performance since inception (10/06/19 - 30/09/23)

Source: Niche AM





Source: Niche AM, Thomson Reuters

#### 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 ultracapacitors 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.

### 12

25.78%

# **Satellite Areas**

4.784



# stocks: 20

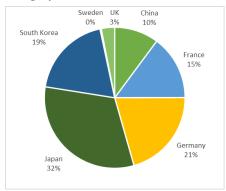
Average Market Cap (mln €):

Median Market Cap (mln €): 712

### Satellite Areas - segment breakdown

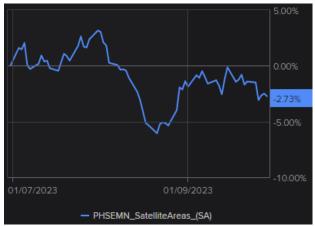
	EM Fund	Satellite Areas Niche
Satellite Areas	20.2%	100.0%
Sensors	2.0%	9.7%
Cars	7.6%	37.4%
Forklifts	0.1%	0.5%
Assembly Lines	4.6%	22.6%
Electric Airplanes	0.4%	2.1%
Electrodes Cutting Equipment	2.9%	14.4%
Charging Stations	0.8%	4.1%
New Materials For Mobility	0.4%	2.1%
Lithium Batteries Assembly Machinery	0.4%	2.1%
Thermal Management Systems	1.0%	5.1%
Electric Bus	0.6%	3.1%
Source: Niche AM		

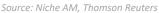
### Geographical breakdown



Source: Niche AM

### Performance Q3 2023 (30/06/23-30/09/23)

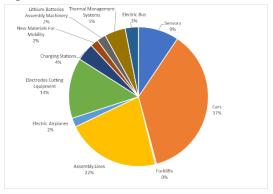




# Niche description

The passage from the internal combustion powered vehicles to battery powered vehicles will 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 spillover 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.

### Segment breakdown





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