Introducing VistaShares

Unrivaled Pure Exposure™ to the World of Supercycles™

December 2024

Executive Summary

The global economy is entering a new era of growth, driven by Artificial Intelligence (AI) and increased energy abundance. As businesses mature and innovative technologies become more widely adopted, we believe that technology supercycles present a unique investment opportunity with immense value creation potential.

To capitalize on this potential, we have developed the BITA VistaShares Artificial Intelligence Supercycle™ (Ticker: BVSAIS) and Electrification Supercycle™ (Ticker: BVSEVS) indexes. These indexes provide a comprehensive, "Bill of Materials" approach to thematic investing. By combining a rigorous methodology with in-depth value chain analysis, we have sought to ensure true thematic exposure that responds to a changing world.

BITA and VistaShares approach the problems of thematic exposure in a unique way: by leaning on the vision of top industry leaders who have shaped these Supercycle™ industries from their earliest days. Those leaders have now in turn applied their first hand knowledge to design investment strategies that we believe more accurately capture the growth potential of these Supercycles™.

What are Supercycles™?

Understanding and analyzing supercycles is crucial for navigating markets and making informed investment decisions. Supercycles are prolonged periods of structural growth in particular industries or sectors, driven by transformational factors like technological advancements, global demand, or major shifts in policy and consumer behavior. Supercycles can span years or even decades, as they represent deeper, macroeconomic trends that transcend typical market cycles (although they are accelerating along with innovation and technology). Whether it was the invention of the printing press, combustion engine, or the creation of the internet, supercycle technologies have a massive impact on our daily lives, and have enabled value creation on a global scale.

By identifying and anticipating these trends, investors can seek to position themselves to capitalize on emerging opportunities. At VistaShares, we've identified two primary supercycles where our unique approach can be successful. AI and Electric Vehicles (EVs) are prime examples of industries experiencing such supercycles, with innovation driving waves of opportunity throughout their value chains:

- **Electric Vehicles**: The EV boom is extending beyond automakers, driving demand for a wide range of critical components. Battery manufacturers, electric drivetrains, and charging infrastructure providers are all essential in enabling the production and adoption of EVs.
- **Artificial Intelligence**: Similarly, AI innovation is underpinned by hardware and software infrastructure, necessitating the development of a vast new data center infrastructure, semiconductors, AI-specific chips, and cloud computing to support the processing power and storage needs of AI systems. Advances in AI will be the catalyst to enormous changes to our critical infrastructure and pillars of our economy.

Traditional Thematics: An Overview

The thematic ETF market has experienced rapid growth as investors seek targeted exposure to emerging trends like AI and EVs, generally with the intent to capture assets chasing headlines. However, we believe that current approaches often struggle with suboptimal exposure, reduced diversification, and lower returns on their targeted thematic investments.

Several factors contribute to these failings:

- **Misaligned exposure**: Many thematic ETFs don't offer pure thematic exposure. Their constituents often include large-cap, widely-held companies like Apple, Amazon, and Facebook, which – while significant tech players – may not accurately represent the core of the thematic trend.[1] These "filler" stocks dilute the thematic focus for investors seeking pure thematic investments.

- **Overconcentration in end-of-value-chain companies**: Traditional ETFs often prioritize well-known companies at the consumer-facing end of the value chain while overlooking the suppliers and innovators driving the theme's growth.

- **Missed supply chain opportunities**: While focusing primarily on end-user companies, many ETFs overlook substantial profit opportunities available in the upstream supply chain, where margins can be higher, and growth potential is often underestimated.

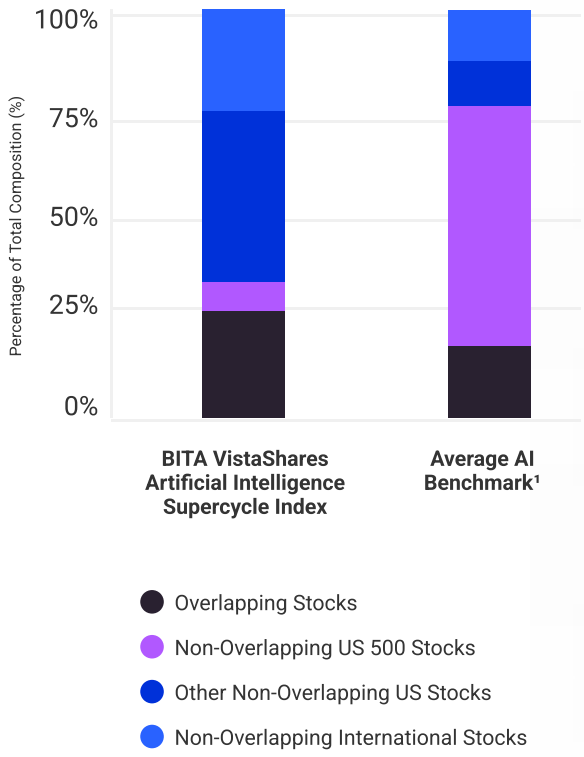
- **Overlooked innovation**: Hidden gems driving industry innovation may be overlooked due to a focus on established, well-known companies.

These issues have contributed to a negative perception of thematic ETFs, hindering their adoption. Investors often fail to capitalize on the supercycles and trends they seek due to increased concentration in household names.

---

[1] For top ten holdings visit: https://www.vistashares.com/etf/ais/#holdings.

AI Supercycle Index vs. Average AI Benchmark



Overlapping Stocks
Non-Overlapping US 500 Stocks
Other Non-Overlapping US Stocks
Non-Overlapping International Stocks

Overlapping Stocks

The BITA VISTAShares Artificial Intelligence Supercycle Index and the average AI benchmark share only a small number of stocks.

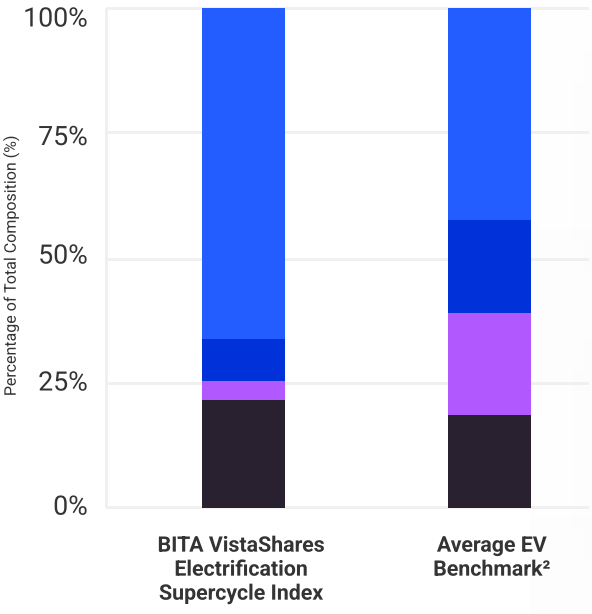
Non-Overlapping US 500 Stocks

The average AI benchmark is heavily weighted towards large-cap US 500 stocks, which may reduce its thematic focus.

Other Non-Overlapping Stocks

The BITA VISTAShares Artificial Intelligence Supercycle Index includes a broader range of US and international stocks, capturing deeper and more diverse opportunities within the AI theme.

Electrification Supercycle Index vs. Average EV Benchmark



Overlapping Stocks
Non-Overlapping US 500 Stocks
Other Non-Overlapping US Stocks
Non-Overlapping International Stocks

Overlapping Stocks

The BITA VISTAShares Electrification Supercycle Index and the average EV benchmark share only a small amount of company exposure.

Non-Overlapping US 500 Stocks

The average EV benchmark relies more on large-cap US 500 stocks, that primarily focus on household names.

Other Non-Overlapping Stocks

The BITA VISTAShares Electrification Supercycle Index captures a broader range of US and international based upstream supply chain companies and innovators, offering deeper thematic exposure.

[1] **The average includes:**
Indxx Artificial Intelligence & Big Data Index
Nasdaq Global AI and Big Data Index

[2] **The average includes:**
Bloomberg Electric Vehicles Index
Solactive Autonomous & Electric Vehicles Index

Our Solution: The Value Chain-Focused Thematic Index

Unlike traditional solutions, our innovative index construction approach focuses on comprehensive supply chain analysis to ensure accurate portfolio representation and pure exposure to targeted themes.

Both of our initial investment products leverage in-depth Bills of Materials analysis and a rigorous rules-based methodology. This approach was developed and implemented by leading technology visionaries who helped shape the leading companies and products within the supercycle themes we are seeking to capture:

- **Accurate economic representation**: Our comprehensive approach identifies key players throughout the supply chain, selecting securities that truly reflect the economic essence of the targeted theme. This allows us to capture opportunities often missed by traditional indexes.
- **Diversified exposure**: We offer a broader range of companies across the supply chain, reducing concentration risk and avoiding the common issue of over-representation of large-cap stocks that dominate many thematic indexes.
- **Enhanced profit potential**: By targeting companies across various supply chain segments, we help investors tap into less recognized yet profitable areas of the industry and capture value from both established players and emerging disruptors.
- **Hidden opportunities**: Our bill of materials approach highlights overlooked, high-growth companies that are integral to the theme but often excluded from traditional indexes. This expands the investment universe and uncovers hidden gems.

While traditional thematic indexes often lag behind actual industry trends due to diluted exposure, our approach focuses on identifying companies with true thematic exposure and promising long-term growth potential, allowing investors to unlock significant value:

- **Short-term**: We focus on capturing value from emerging players with high growth potential to reduce reliance on large-cap stocks whose growth may be overvalued.
- **Long-term**: We invest in companies with pure exposure across the value chain to ensure participation in all phases of the industry's supercycle and secure sustainable growth.

Investment Process: Implementing the Strategy

Investment process flowchart

Our structured investment process focuses on the entire value chain of each theme, not just the manufacturers of end-products. This helps capture the dynamics of high-potential supercycles. By leveraging the Bill of Materials (BoM) methodology within a rules-based process, we seek to ensure precision, transparency and consistency in identifying, selecting, and weighting companies across the value chain.

Specifically, our investment process aims to:

Identify Supercycles™

The first step is to identify thematic opportunities that are positioned for long-term growth, driven by structural trends like technological advancements, regulatory shifts, or changing consumer behavior. Examples include AI and electric vehicles, where widespread adoption is expected to fuel a prolonged period of growth – referred to as a supercycle. This phase involves research into macroeconomic trends, emerging technologies, and industries that are undergoing significant transformations.

The focus is on themes that we believe exhibit strong, sustainable growth potential and are positioned at the intersection of innovation and consumer demand. These themes must have enough depth across their value chains to offer diverse investment opportunities.

Analyze the value chain of identified themes

Once a promising Supercycle™ is identified, the next step is to analyze the entire value chain to uncover the sub-industries that contribute to the creation, growth, and delivery of the end product or service. This value chain analysis includes breaking down the process into segments that range from upstream raw material providers to midstream component manufacturers and downstream product assemblers.

For example, in the case of EVs, the value chain might include battery producers, drivetrain manufacturers, and charging infrastructure providers. In AI, it could involve computation and storage infrastructure providers and AI software developers.

Employ a "Bill of Materials" process

The BoM process is used to quantify the economic contribution of each sub-industry segment in the value chain analysis. This methodology breaks down the entire production process, identifying each component or service required to bring the final product or service to market. The BoM helps to map the layers of the value chain and assigns an economic value to each based on its contribution to the final product. By assigning weights to each segment, the BoM provides a forward-looking view of where economic value is being generated. For instance, in the case of AI, the economic contribution of semiconductor chips or datacenters infrastructure would be quantified based on their role in enabling AI technologies.

This process helps ensure that the index captures true economic exposure to the theme, rather than relying on end-product companies that may only partially reflect the underlying supercycle.

Categorize companies and select index constituents

The investment strategies are implemented in the rules-based BITA VistaShares Supercycle indexes. During the initial analysis and universe determination, the goal is to identify profit pools – sub-industries or companies that have significant economic exposure to the theme and stand to benefit from the structural growth trend. This comprehensive universe research ensures that the index captures not only the most visible companies but also those that play crucial roles behind the scenes.

With the BoM framework in place, the next step is to construct the index by selecting constituents that align with the previously identified sub-industries. Each company selected for the index must generate a significant portion of its revenue from the theme, ensuring that only companies with meaningful economic exposure are included.

Companies are categorized based on their revenue contribution to the value chain. For example, a company that primarily manufactures components for electric vehicles will be classified in the corresponding category. In cases where a company's revenue spans multiple sub-industries, it will be assigned to the category where it generates the highest share of its revenue.

This ensures that index constituents are chosen based on their direct economic relevance to the theme, including all relevant layers of the value chain while avoiding "filler" stocks that dilute the theme.

Create a diversified portfolio

The index is designed to create a diversified portfolio that accurately represents the theme. This is achieved through a proprietary tiered weighting methodology that assigns weights to each sub-industry based on its economic importance to the theme. These sub-industry weights ensure that the portfolio accurately reflects the economic importance of each segment and its contribution to the theme's growth.

Within each sub-industry, individual companies are weighted based on their market share, calculated as the ratio of their thematic revenue to the total revenue of all companies in the same sub-industry. This ensures that more economically significant companies carry greater weight while maintaining broad exposure across the value chain. The overall approach ties back to the strategy's goal of enhancing profit potential by capturing companies that dominate their segment and are integral to the supercycle's expansion, such as key technology providers or component manufacturers.

This two-layered approach helps to ensure that the portfolio reflects both the individual company's importance within the supercycle and the overall significance of its category. This allows investors to gain exposure to areas and companies driving long-term structural growth rather than focusing solely on the consumer-facing side.

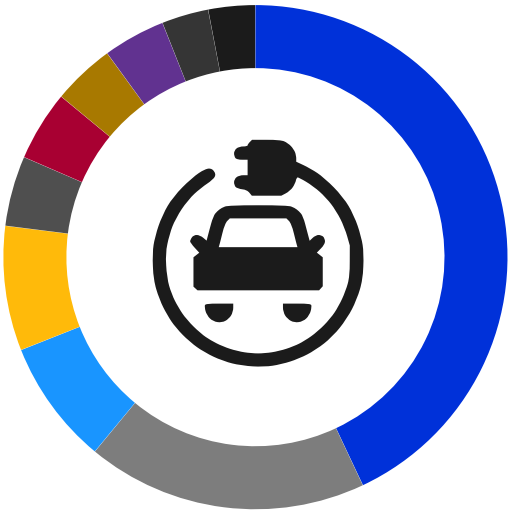
Continuous monitoring with quarterly rebalancing

Finally, the portfolio and the underlying themes are continuously monitored. Regular index reviews ensure that the portfolio remains aligned with the evolving dynamics of the supercycle. During each review cycle, we review and potentially adjust sub-industry and individual constituent weights based on updated data. If a category becomes over- or under-represented, the index is rebalanced to maintain its desired characteristics. This dynamic approach allows the indexes to capture shifts in the industry, such as the emergence of new technologies or changes in demand.

Through continuous monitoring and rebalancing, the strategy remains forward-looking and responsive to market changes, providing investors with a portfolio that evolves alongside the theme.

Electrification Index Bill of Materials (BOM) Breakdown:

The Electrification index Bill of Materials (BOM) Breakdown illustrates the proportional cost contributions of various components in the manufacturing of an electric vehicle (EV).



- Battery Pack: 43%
- Body Structure and External Body Panels: 18%
- Electric Motor: 8%
- Power Electronics: 8%
- Suspension: 5%
- Wheels and Tires: 5%
- ADAS: 4%
- Software/Infotainment: 4%
- Steering: 3%
- Brakes: 3%

BOM Cost Breakdown of Major Sub-Assemblies:

This section provides a cost breakdown of key EV components, with the battery pack being the largest contributor. The total cost for a long-range EV BOM is estimated at $30,000, highlighting major sub-assemblies such as electric motors, power electronics, and body structures.

Battery Pack ≈$15,000
Panasonic CATL

The most expensive part of an EV. Battery packs range from $5,000 to over $15,000 depending on size and technology.

Infotainment (telematic) ≈$1,000

EV-specific displays, controls and driver aids add $1,000 to $3,000 to costs compared to an ICE vehicle.

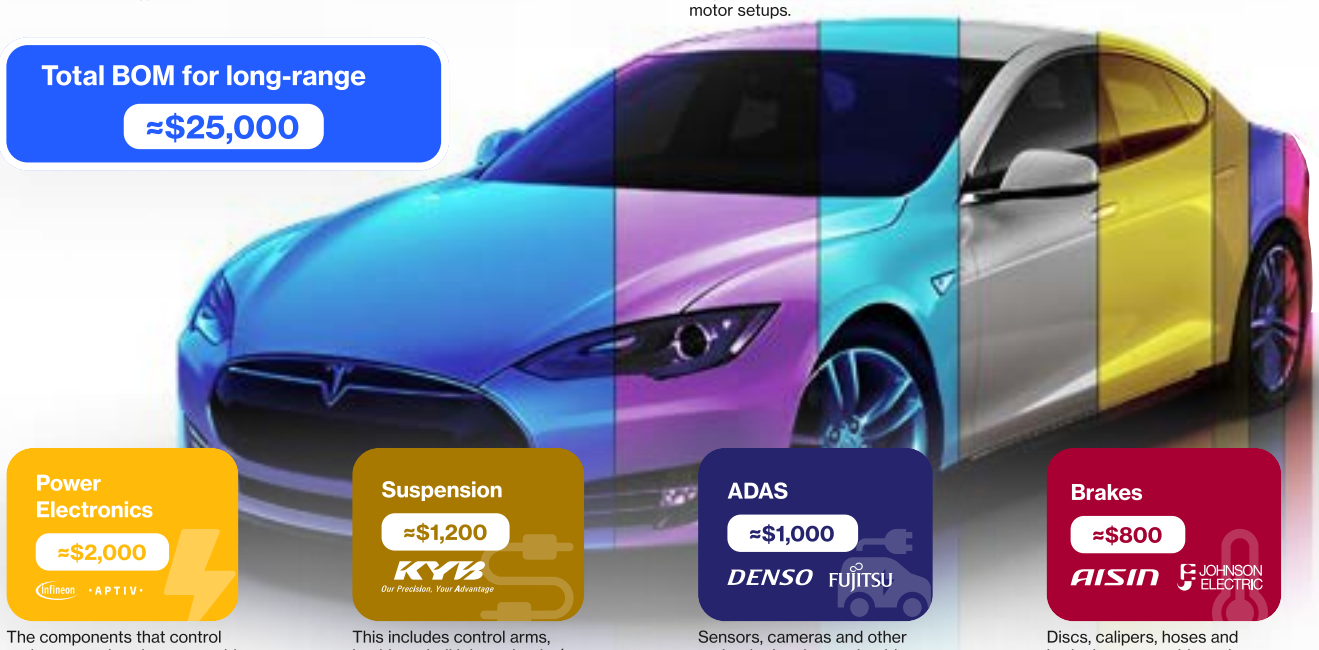
Electric Motors ≈$2,000
AISIN Valeo

High-power permanent magnet synchronous motors range from $500 to $2,000. Some EVs use a single motor, others use dual motor setups.

Body Structures (Chassis) ≈$1,500+
MAGNA DN AUTOMOTIVE

The chassis and body can add an additional $500 to $1,500+ to handle weight management.

Total BOM for long-range ≈$25,000



Power Electronics ≈$2,000
Infineon APTIV

The components that control and convert electric power add $1,000 to $2,500 to the BOM costs. This includes inverters, converters, and charging units.

Suspension ≈$1,200
KYB Our Precision. Your Advantage

This includes control arms, bushings, ball joints, shocks/ struts, springs, and sway bars.

ADAS ≈$1,000
DENSO FUJITSU

Sensors, cameras and other technologies that assist drivers with the safe operation of a vehicle by detecting nearby obstacles or driver errors, and responding accordingly.

Brakes ≈$800
AISIN JOHNSON ELECTRIC

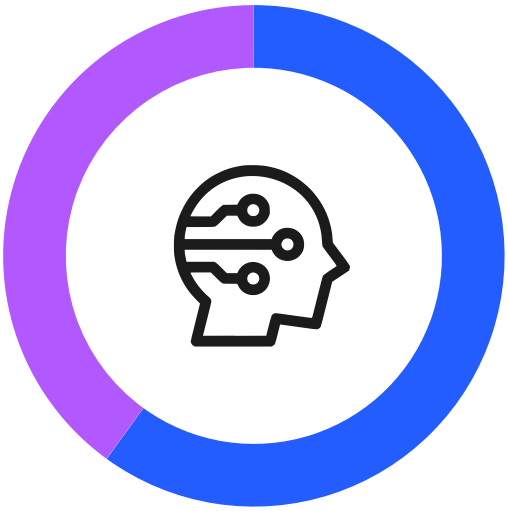
Discs, calipers, hoses and brake boosters add another 2-4% to the BOM costs of an EV. Regenerative braking reduces some consumption.

Artificial Intelligence Index Bill of Material Breakdown:

This highlights the cost contributions of various components involved in building a data center. Major sub-assemblies like power and cooling systems, servers and IT equipment, and network equipment account for the largest portions of the BOM.

Data Centers:

- Power and Cooling Systems: **12%**
- Servers and IT equipment: **11%**
- Network Equipment: **6%**
- Storage Devices: **4%**
- Backup and Disaster Recovery Solutions: **3%**
- Software: **2%**
- Racks and Cable Management: **1.5%**
- Remote Hands Support: **0.5%**



High-Performance Semiconductors:

- Graphics Processing Unit (GPU): **15%**
- Video Memory (VRAM): **12.5%**
- Data Processing Unit (DPU): **10%**
- Cooling System: **4.5%**
- Voltage Regulator Module (VRM): **4%**
- Motherboard interface: **4%**
- Interconnection Interface: **4%**
- Network Interface & Controller: **4%**
- Out Interfaces: **2%**

BOM Cost Breakdown of Major Sub-Assemblies:

The total estimated BOM cost for a fully equipped data center is $10 million, covering key components such as servers, networking equipment, and software.

Power and Cooling Systems
$3M 30%
legrand VERTIV.
These systems are critical for maintaining optimal operating conditions. Costs can range from $11,500/kW to $25,000/kW depending on the data center tier.

Servers and IT equipment
$2.8M 28%
cisco
The core of any data center, responsible for data processing and storage. Costs vary widely based on power consumption, but estimates range from $300-$400 per rack unit.

Network Equipment
$1.5M 15%
ARISTA paloalto
Essential for connecting the data center to the wider network. Costs can range from $14,000 for a small Tier I data center to significantly more for higher-tier facilities.

Storage Devices
$1M 10%
Western Digital DELL Technologies
Referring to hardware for storing, accessing, and retrieving data. Includes hard drives, tape drives, and external storage.

Total BOM for a Data Center
≈$10M 100%

Backup (and Disaster Recovery Solutions)
$700K 7%
COMMVAULT NEXTDC
These are solutions for protecting data and minimizing downtime.

Software
$500K 5%
wesco COMMSCOPE
Software is used to manage data center assets, capacity planning, and environmental monitoring.

Racks and Cable (Management)
$400K 4%
ARISTA Hewlett Packard Enterprise
Essential for organizing and maintaining the physical infrastructure.

Remote Hands Support
$100K 1%
NEXTDC
These are services for remote technical tasks and support.

Index Details

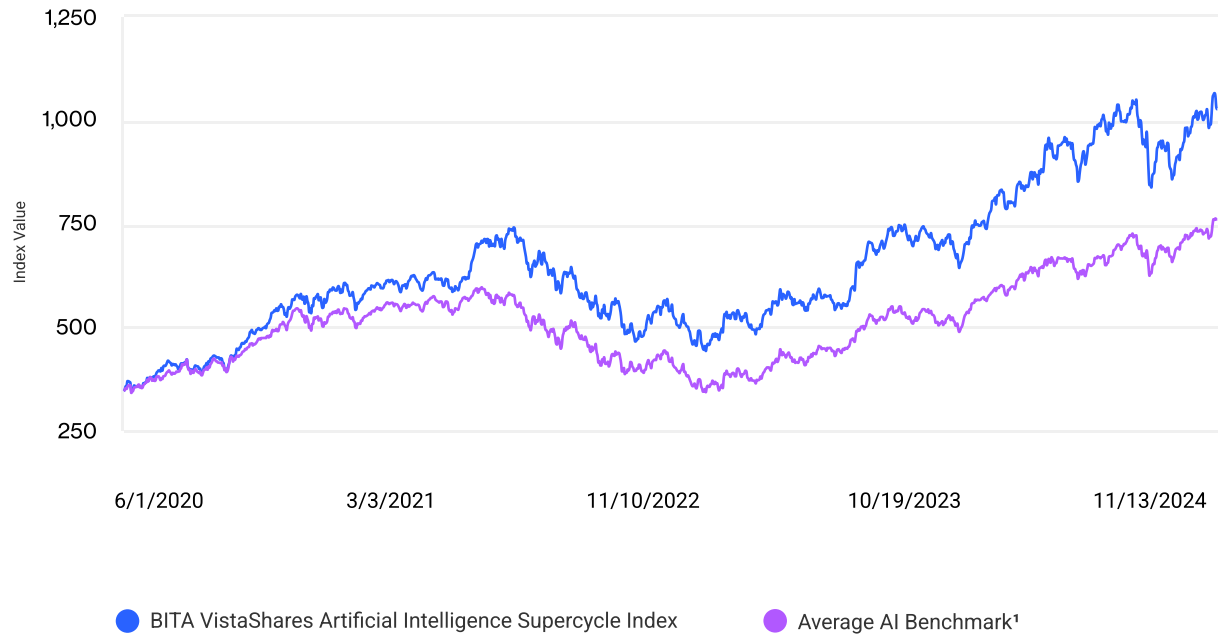
BITA VistaShares Artificial Intelligence Supercycle Index

- **Ticker:** BVSAIS
- **Number of Holdings:** Variable
- **Return Type:** Gross Total Return
- **Index Currency:** USD
- **Rebalancing Frequency:** Semi-annually

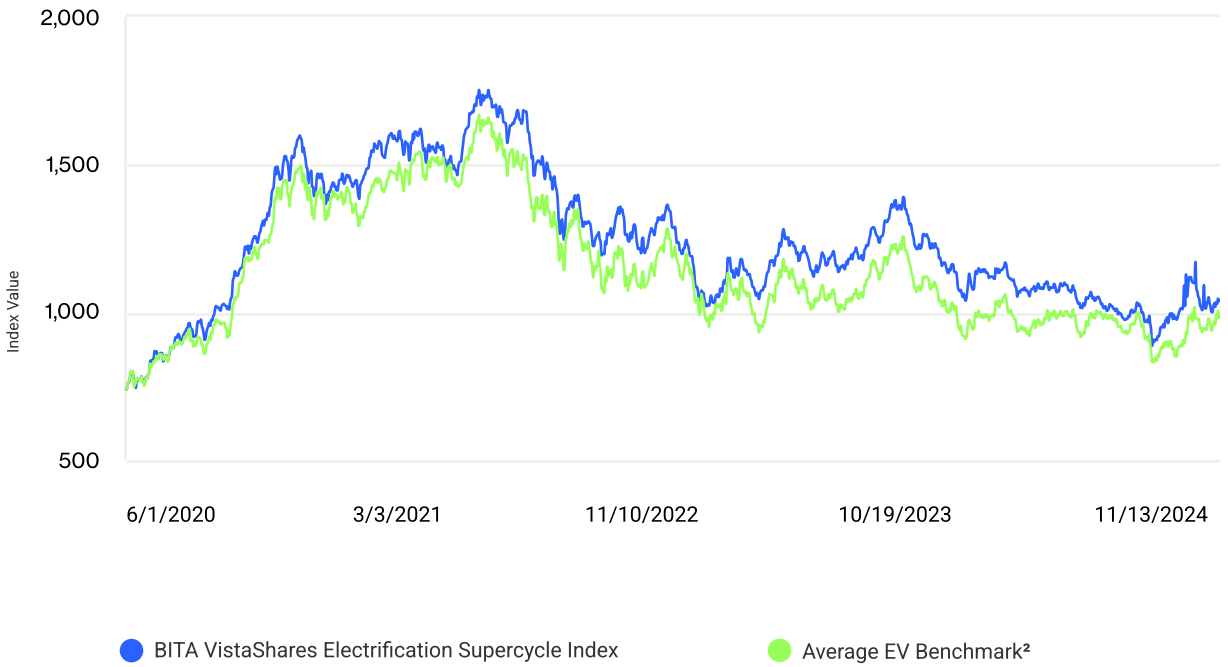
BITA VistaShares Electrification Supercycle Index

- **Ticker:** BVSEVS
- **Number of Holdings:** Variable
- **Return Type:** Gross Total Return
- **Index Currency:** USD
- **Rebalancing Frequency:** Semi-annually

BITA VistaShares Artificial Intelligence Supercycle Index Performance



BITA VistaShares Electrification Supercycle Index Performance



¹ **The average includes:**
Indxx Artificial Intelligence & Big Data Index
Nasdaq Global AI and Big Data Index

² **The average includes:**
Bloomberg Electric Vehicles Index
Solactive Autonomous & Electric Vehicles Index

Conclusion

Our innovative thematic indexes, powered by in-depth Bills of Materials analysis and a rigorous rules-based methodology, offer investors pure exposure to emerging trends like AI and EVs. By going beyond traditional approaches, we have sought to ensure accurate thematic representation and capture of the full value chain. This focus has allowed us to uncover hidden opportunities and identify companies that are driving true innovation and growth.

Index Definitions

The BITA VistaShares Electrification Supercycle Index is a rules-based composite index that tracks the market performance of companies, listed on recognized, global exchanges, that derive their revenues from the production of components and materials used in the assembly and manufacturing of electric vehicles (EVs), as well as those involved in modern energy grids, integrated storage solutions, distributed power systems and other vehicle parts. The Index encompasses companies that contribute to the advancement of electrification infrastructure, ensuring a comprehensive representation of the electric vehicle and energy ecosystem.

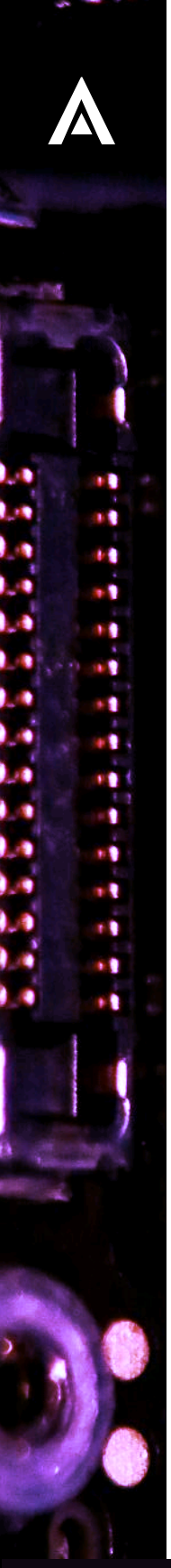
The BITA VistaShares Artificial Intelligence Supercycle Index is a rules-based composite index that tracks the market performance of companies, listed on global stock exchanges, that derive their revenues from producing high-performance semiconductors, and building and operating AI-enabled applications and datacenters.

The Indxx Artificial Intelligence & Big Data Index is designed to track the performance of companies listed or incorporated in developed markets that are positioned to benefit from the development and utilization of Artificial Intelligence (“AI”) technology in their products and services, as well as companies that produce hardware used in Artificial Intelligence applied for the analysis of Big Data.

The Solactive Autonomous & Electric Vehicles Index tracks the price movements in shares of companies which are (or are expected to be in the near future) active in the electric vehicles and autonomous driving segments. This particularly includes electric vehicle manufacturers, electric vehicle component producers, companies that mine or produce raw materials that are relevant to the electric vehicle and autonomous vehicle technology segment, companies that build autonomous vehicles, and suppliers of autonomous vehicle technologies.

The Nasdaq Global Artificial Intelligence and Big Data Index is designed to track the performance of companies engaged in the following themes: Deep Learning, NLP, Image Recognition, Speech Recognition & Chatbots, Cloud Computing, Cybersecurity and Big Data.

The Bloomberg Electric Vehicles Index is designed to track the market performance of companies expected to derive significant revenues from the production and advancement of electric vehicles (EVs), energy storage technologies, autonomous navigation systems, lithium and copper mining, and hydrogen fuel cells. The index incorporates a screening process to exclude companies involved in significant ESG controversies or controversial business activities, ensuring alignment with sustainability and ethical standards.



Disclosure

Investors should consider the investment objectives, risks, charges and expenses carefully before investing. For a prospectus or summary prospectus with this and other information about the Fund, please call (844) 875-2288 or visit www.VistaShares.com. Read the prospectus or summary prospectus carefully before investing.

Investments involve risk, including the loss of principal.

Important Information:

Artificial Intelligence Risk (AIS)

Issuers engaged in artificial intelligence typically have high research and capital expenditures and, as a result, their profitability can vary widely, if they are profitable at all. The space in which they are engaged is highly competitive and issuers' products and services may become obsolete very quickly. These companies are heavily dependent on intellectual property rights and may be adversely affected by loss or impairment of those rights. The issuers are also subject to legal, regulatory and political changes that may have a large impact on their profitability. A failure in an issuer's product or even questions about the safety of the product could be devastating to the issuer, especially if it is the marquee product of the issuer. It can be difficult to accurately capture what qualifies as an artificial intelligence company.

Distributed by Foreside Fund Services, LLC.

About VistaShares

VistaShares ETFs are actively managed to offer Pure Exposure™ to the economic Supercycles™ that we believe are poised for significant growth. Supercycles™ are long-term trends that disrupt current economic models through leading edge technological advancements shaping our world.

About BITA

BITA is a leading technology-enabled Fintech, specializing in providing investment customization infrastructure and indexing solutions to financial institutions across various market segments and applications. From traditional passive investing to direct indexing, BITA's infrastructure is designed to support investment customization at scale.

BITACore, the company's cloud-based index development and investment customization platform, is available in both web-based and API versions, supporting a wide range of applications from traditional institutional indexing to direct indexing.

BITA | vistashares

www.bita.io
info@bita.io
www.vistashares.com
info@vistashares.com