GLOBAL X
by Mirae Asset

A Value-Chain Approach
Artificial Intelligence Investing

Investing Across Every Layer of the AI Build-out

The story of artificial intelligence is usually told through a handful of headline generating names. But those companies occupy just one or two links in a chain that runs from the power stations feeding data centres all the way to the software on a phone. Value is created, and captured, at every link in that chain.

For investors, that means the AI opportunity may extend well beyond the companies dominating today's headlines. A value-chain approach can broaden that lens by:

- Providing exposure across different stages of the AI build-out, rather than focusing on a single company or layer.
- Looking beyond today's headline names to the broader ecosystem supporting AI's development and adoption.

FIVE ESSENTIAL LAYERS. ENDLESS POSSIBILITIES.

Five interconnected layers take AI from physical infrastructure and computing power to real-world applications.

1. **POWER THE COMPUTE:** AI is extraordinarily power-hungry, and the data-centre build-out behind it ranks among the decade's largest infrastructure undertakings. Before a single calculation runs, the electricity has to be generated and the facility built
2. **BUILD THE CHIPS:** Chips turn raw power into computation. The most advanced AI chips are designed largely by U.S.-listed firms but manufactured in Asia. A world-class design is worthless without a foundry advanced enough to build it.
3. **STORE THE DATA:** AI's most overlooked bottleneck. A processor is only as fast as the memory feeding it, and high-bandwidth memory (HBM) has become one of the scarcest, highest-value components in the entire AI value-chain.
4. **MANAGE AND MOVE THE DATA:** The most powerful AI models are only as good as the data behind them. An entire layer of data infrastructure turns raw compute and memory into usable intelligence — the highways, hubs and pipelines that feed the large language models (LLMs) and other AI models at the heart of every real-world application.
5. **APPLY THE INTELLIGENCE:** Every layer exists to enable this one. Applications and robotics are where AI generates end-user value and ultimately proves its worth. Robotics is AI made physical: machines that sense, decide, and act.

> **AI applications may grab the headlines. But an interconnected ecosystem is needed to make AI possible.**

INVESTING ACROSS EVERY LAYER OF THE AI BUILD-OUT

	PURE PLAY	
01. POWER **Power & Compute Infrastructure:** The foundation of AI.	**Global X Artificial Intelligence Infrastructure Index ETF:** Global companies supporting the physical infrastructure required to power and scale AI operations.	MTRX
02. CHIPS **Semiconductors: Design & Manufacturing:** The brains of AI.	**Global X Artificial Intelligence Semiconductor Index ETF:** U.S.-listed companies across the AI semiconductor value chain, from chip design to manufacturing & enabling technologies.	CHPS
	Global X Asia Semiconductor Index ETF: Leading semiconductor designers & manufacturers across developed & emerging Asian markets.	ACHP
03. MEMORY **Memory & Storage:** The short-term and long-term memory of AI.	**Global X Artificial Intelligence Memory Index ETF:** Companies developing the memory technologies and data-storage solutions needed to support the continued buildout of AI infrastructure.	DRAM
04. DATA **Data, Cloud & Connectivity:** The highways and hubs of AI.	**Global X Big Data & Hardware Index ETF:** Global companies developing, storing and managing data, alongside the hardware supporting data-intensive applications.	HBGD
05. APPLICATIONS **Applications & Robotics:** AI in action.	**Global X Robotics & AI Index ETF:** Global companies developing robotics and artificial intelligence technologies that bring automation and intelligent systems into real-world use.	RBOT
	Global X Defence Tech Index ETF: Global companies applying artificial intelligence, big data, autonomous systems and cybersecurity to modern defence — where advanced software and hardware are put to work solving real-world security challenges.	SHLD
AIQ **A SINGLE-TICKER. BROAD VALUE-CHAIN EXPOSURE.**	**Global X Artificial Intelligence & Technology Index ETF:** Spanning the hardware that powers AI (semiconductors, memory and data-centre systems) through to the developers, cloud platforms and applications putting it to work. One holding, the whole chain, from infrastructure to intelligence.	

> One AI revolution. Many ways to participate across the value chain.

WHY THE WHOLE AI VALUE CHAIN MATTERS

AI investment is unfolding across an interconnected ecosystem of infrastructure, semiconductors, memory, data and applications. Looking across the full value chain can help diversify exposure to the different businesses supporting and benefiting from the build-out.

01 DISTRIBUTED LEADERSHIP

No single company or industry captures every part of the AI opportunity. Semiconductors, memory, infrastructure, data and applications each play a different role, creating multiple sources of participation.

02 SHIFTING SOURCES OF DEMAND

As AI develops, constraints and investment priorities can emerge in different parts of the value chain. Broader exposure reduces reliance on correctly identifying a single beneficiary or opportunity.

03 INTER-CONNECTED GROWTH

More computing capacity can require additional memory, power, data-centre infrastructure and connectivity. Investment in one part of the chain can create demand and opportunities across others.

04 GLOBAL ECOSYSTEM

AI design, manufacturing, memory, infrastructure and applications are distributed across regions. Capturing the broader opportunity requires looking beyond a single market or geography.

A value-chain approach can help reduce reliance on any single company, technology or stage of the AI build-out.

> **One layer can't carry AI alone. The build-out depends on the whole chain working together.**

Two Ways to Access the AI Value Chain

Global X offers a broad value-chain approach for investors seeking simplicity, as well as focused pure play ETFs for those who want greater control over which layers they emphasize.

OPTION 01.

ONE-TICKER EXPOSURE

Broad exposure across multiple areas of the AI ecosystem in a single ETF. A straightforward way to participate in the theme without selecting individual layers.

AIQ

OPTION 02.

CUSTOM AI ALLOCATION

Combine focused, pure-play ETFs to gain exposure to selected areas of the value chain.

MTRX CHPS ACHP
DRAM HBGD RBOT SHLD

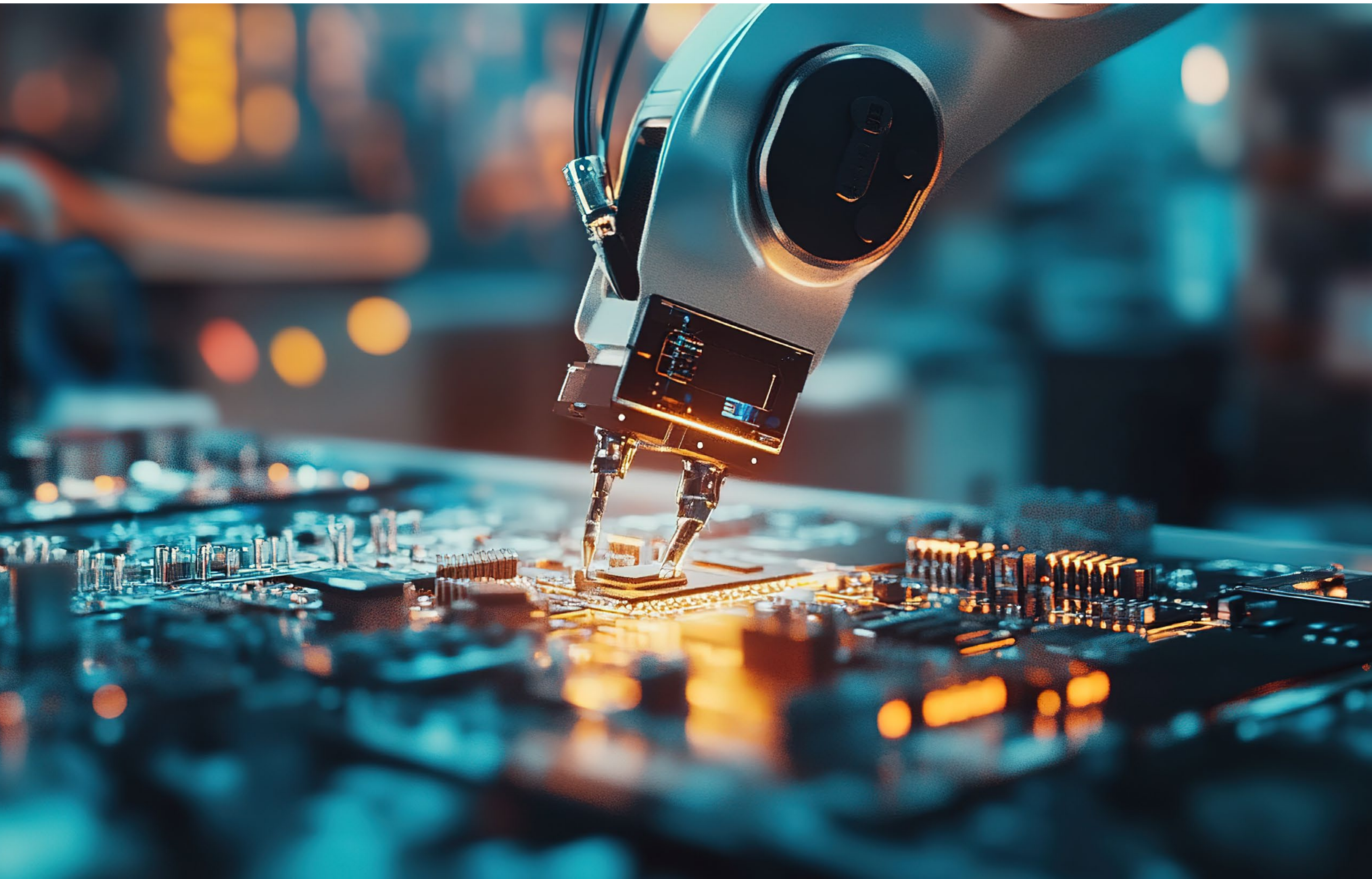
HOW THE TWO APPROACHES DIFFER: THE SAME VALUE CHAIN, A DIFFERENT LEVEL OF CONTROL

	One-Ticker Exposure	Custom AI Allocation
How	Consider AIQ	Combine focused pure play Global X AI ETFs
Approach	Broad exposure across the value chain	Exposure to selected layers of the value chain
Investor Role	Index-based portfolio construction	Choose your own exposures and weights
May Suit Investors Seeking	✓ Simplicity ✓ Broad AI exposure ✓ A core position invested across many phases of the AI build-out ✓ Single trade convenience	✓ Greater control over how much to allocate to each area ✓ More targeted AI exposure ✓ Exposure aligned with their strongest investment views ✓ Flexibility to increase or reduce exposure to selected areas as investment views change

FUND OVERVIEW

Ticker	Value Chain Layer	Index Tracked	Regional Exposure	Management Fee*	Risk Rating
MTRX	Infrastructure & Power	Mirae Asset AI Infrastructure CAD Index	Global	0.49%	Medium to High
CHPS	Semiconductors (US)	PHLX US AI Semiconductor Index	U.S	0.45%	High
ACHP	Semiconductors (Asia)	Mirae Asset Asia Semiconductor Index	Asia	0.49%	High
DRAM	Memory & Storage	Mirae Asset Artificial Intelligence Memory Index	U.S, Japan, South Korea, Taiwan, China, Hong Kong	0.49%	High
HBGD	Data & Systems	Solactive Big Data & Hardware Index	Global	0.45%	High
RBOT	Applications & Robotics	Indxx Global Robotics & Artificial Intelligence Thematic Index	Global	0.45%	High
SHLD	Defense Applications & Robotics	Global X Defence Tech CAD Index	Global	0.49%	Medium
AIQ	Whole Chain	Indxx Artificial Intelligence & Big Data Index	Global	0.49%	Medium to High

*Plus applicable sales tax.



WHERE DEMAND TRANSLATES INTO BUSINESS FUNDAMENTALS

The AI story is compelling, but does the data back it up?

AI investment is spreading across the value chain, yet the economics look different at every layer. Comparing growth, profitability and capital spending side by side reveals where demand is strongest, where companies are turning that demand into earnings, and where today's investment is funding the next phase of the build-out. Viewed together, these metrics provide a more complete picture of how the AI opportunity is translating into underlying business fundamentals.

READING THE FUNDAMENTALS ACROSS THE CHAIN

The table below presents index-level metrics calculated as weighted averages of the underlying constituents, alongside a broad-based technology benchmark for comparison.

			GROWTH	PROFITABILITY				INVESTMENT
Ticker	Fund/Layer	Underlying Index	Revenue Growth Forecast (YoY %)*	Forward ROE (%)*	Forward Gross Margin (%)*	Forward Operating Margin (%)*	Forward Operating Margin Change (YoY %)*	CapEx Growth Forecast (YoY %)*
MTRX	Infrastructure & Power	Mirae Asset AI Infrastructure CAD Index	16.7	15.8	39.5	24.4	5.3	9.6
CHPS	Semiconductors (US)	PHLX US AI Semiconductor Index	42.3	40.4	63.9	46.9	9.4	67.0
ACHP	Semiconductors (Asia)	Mirae Asset Asia Semiconductor Index	124.8	54.2	66.8	53.6	11.0	55.1
DRAM	Memory & Storage	Mirae Asset Artificial Intelligence Memory Index	189.0	66.0	78.3	71.3	11.0	69.4
HBGD	Data & Systems	Solactive Big Data & Hardware Index	39.1	-18.5	31.9	-1.4	-10.7	162.8
RBOT	Applications & Robotics	Indxx Global Robotics & Artificial Intelligence Thematic Index	2.9	9.4	41.8	13.6	0.3	19.6
SHLD	Defense Applications & Robotics	Global X Defence Tech CAD Index	3.7	16.2	19.4	10.8	0.7	21.0
AIQ	Whole Chain	Indxx Artificial Intelligence & Big Data Index	50.3	21.7	48.2	21.3	4.0	84.7
Versus Broad Technology Benchmark								
NASDAQ 100			**29.1**	**29.0**	**51.0**	**25.3**	**2.2**	**73.5**

FOUR QUESTIONS THE FUNDAMENTALS HELP ANSWER:

Is the Business Growing?
Revenue Growth

Is it Profitable?
ROE, Gross & Operating Margin

Are Margins Improving?
Operating Margin Change

Is Investment Expanding?
CapEx Growth

Source: Bloomberg, as of August 31, 2026. Figures represent the weighted-average characteristics of the constituents of each underlying index. *Forward-looking metrics represent the highest consensus 12-month analyst estimate among index constituents. Estimates are based on Bloomberg consensus forecasts and are subject to change. Index characteristics are not indicative of fund performance. CapEx means capital expenditures; bps means basis points; FY26E means estimated fiscal-year 2026.

WHY DO THESE METRICS MATTER?

Metric	What it reveals	Why it matters
Return On Equity (ROE)	How efficiently a company generates profit from shareholders' equity.	Provides insight into the quality and efficiency of a business. When considered alongside growth and margins, it can help show whether companies are converting demand into profitability.
Revenue Growth	Year-over-year change in sales.	Helps indicate whether demand is translating into business activity. Comparing growth across the value chain can show which layers are experiencing stronger top-line expansion.
Gross Margin	Share of revenue remaining after the direct costs of producing a company's goods or services.	Helps show how profitable a company's products or services are before operating expenses. It can provide insight into a company's pricing power, product strength and cost pressures. High or rising gross margins may reflect strong demand, differentiated products or constrained supply. Across the AI value chain, margin trends can provide another lens into where supply constraints or bottlenecks may be emerging.
Operating Margin	The share of revenue remaining after operating expenses.	Shows how much of each sales dollar a company retains from its core operations. Considered alongside revenue growth, it can help indicate whether a business is gaining efficiency as it scales.
Operating Margin Expansion (YoY change, bps)	The year-over-year (YoY) increase or decrease in operating margin, expressed in basis points.	Expanding margins may indicate that revenue is growing faster than operating costs. Contracting margins may signal that expenses, competitive pressures or investment requirements are rising more quickly.
CapEx Growth (YoY)	The year-over-year (YoY) change in spending on facilities, equipment, technology and other long-term assets.	Provides an indication of where companies are expanding capacity. Across the AI value chain, investment by one layer may also support other layers by translating into demand for businesses supplying power, chips, memory, data infrastructure or related equipment.

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