



## AI ASSET BUILDERS

Navigating the AI Revolution Through Informed Analysis

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### References:

Website: [KITCO Charts](#)

Date: September 29, 2025

Ticker: XAGUSD

Market: Commodity



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## Primary Driver: Structural Supply Deficit

The most significant factor is silver's persistent structural supply deficit - now in its 7th consecutive year, with 2025 marking the 5th consecutive year of market imbalance. The cumulative shortfall for 2021-2025 totals almost 800 million ounces, creating historically tight market conditions. The projected 206 million ounce supply deficit for 2025 marks the eighth consecutive year of market imbalance, according to CPM Group.

## Key Supporting Factors:

### 1. Explosive Industrial Demand

Industrial demand accounts for 59% of usage for silver, which is essential to;

1. Solar panels
2. EVs
3. Other consumer electronics.

According to the Silver Institute, photovoltaics alone are projected to account for 19% of global silver demand in 2024, equivalent to 232 million ounces. This represents almost a 20% increase from 2023 and a substantial 96% surge from 2022 levels.

### 2. Supply Constraints

Silver mine supply has declined by 7% since 2016. With approximately 70% of silver production coming as a byproduct, price signals alone are not sufficient to prompt fast supply response, especially as base metal producers continue to prioritize copper, lead, and zinc.

### 3. Green Energy Transition

Solar and EV manufacturers remain relentless buyers. Unlike past cycles, this structural demand is growing regardless of investor sentiment. Silver demand for solar panels could increase by almost 169% by 2030 to roughly 273 million ounces, or about one-fifth of total silver demand based on trend projections.

### 4. Safe-Haven and Investment Demand

Trade wars, conflicts in mining regions, and political pressure on central banks all heighten safe-haven flows — a tailwind that can amplify silver's industrial strength. With \$40 billion in exchange-traded product assets under management and over 95 million ounces of inflows in 2025, institutional sentiment toward silver is accelerating at unprecedented levels.

## Market Performance Impact

The silver spot price has surged over 50 percent in the first nine months of 2025, reaching a 14 year high above US\$44 on September 22. Silver began 2025 at \$28.92 an ounce. By September 8th, it had rocketed to \$41.38 — its highest level in more than a decade. That's a 43% year-to-date gain.

This combination of structural demand growth from renewable energy technologies, constrained supply response, and heightened investment interest has created what many analysts view as the strongest fundamental setup for silver prices in over a decade.

## AI Implications

### AI's Direct Impact on Silver Demand

Demand was further boosted by end-uses related to artificial intelligence (AI), which drove growth in consumer electronics shipments *Silver Industrial Demand Reached a Record 680.5 Moz in 2024*. Industrial demand for silver has grown by 51% since 2016, driven by solar photovoltaic (PV) installations, electric vehicles (EVs), and consumer electronics *Silver's Strategic Relevance: Industrial Demand and Sectoral Shifts in 2025*.

### Semiconductor Manufacturing for AI

In 2025, silver in semiconductors has become more than just a supporting element. It's essential in: 5nm and below nodes, where tiny interconnects demand high conductivity. High Bandwidth Memory (HBM) setups for AI models that need fast data access. 3D chip stacking, where vertical layers rely on silver for inter-layer communication *Silver and AI: The Surprising Link Fueling Next-Gen Chips - Edge-Forex*.

The electronics sector currently consumes approximately 250 million ounces of silver annually, with AI-related applications accounting for the fastest-growing segment of this demand *Industrial Silver Demand Drives Record Prices in 2025*.

### Explosive AI Infrastructure Growth

The scale of AI-driven demand is staggering:

The total semiconductor market for data centers is projected to grow from \$209 billion in 2024 to \$492 billion by 2030. It is fueled by generative AI, high-performance computing, and hyperscaler demand *Data center semiconductor trends 2025: Artificial Intelligence reshapes compute and memory markets*.

Goldman Sachs Research forecasts data center demand to grow by about 50% to 92 GW by 2027, with a compound annual growth rate of 17% between 2025 and 2028. Goldman Sachs Research forecasts global power demand from data centers will increase 50% by 2027 and by as much as 165% by the end of the decade *Goldman SachsGoldman Sachs*.

## Why Silver is Critical for AI Hardware

Silver is the most conductive element in nature. This makes it the top choice for high-speed connections within semiconductor devices. Here's how it fits into the AI chip supply chain: Conductive Wiring: Silver interconnects allow faster data movement within AI processors [Silver and AI: The Surprising Link Fueling Next-Gen Chips - Edge-Forex](#).

The rise of artificial intelligence adds yet another dimension to electronics demand. AI applications require specialized semiconductors, high-performance computing infrastructure, and massive data centers—all silver-intensive technologies. Market analysts project the AI economy will contribute \$15.7 trillion globally by 2030, with corresponding increases in silver consumption for the computing power required [Industrial Demand for Silver: Why It Matters to Investors](#).

## Specific AI Applications Driving Demand

AI semiconductor production is projected to double by 2027. Each high-end AI chip uses more silver than a traditional processor. Edge devices, wearables, and smart infrastructure all require silver-infused components [Silver and AI: The Surprising Link Fueling Next-Gen Chips - Edge-Forex](#).

AI - The need for semiconductors in artificial intelligence and machine learning applications is a significant conduit for silver industrial use [What's Prompting Silver's Surge in 2024 and What Lies Ahead](#).

## Strategic Implications

A 50% increase in silver prices could add \$150–\$200 to the cost of an AI server, prompting firms to hedge via long-term contracts or alternative materials [Silver's Strategic Relevance: Industrial Demand and Sectoral Shifts in 2025](#). However, the trend is clear: as AI chips grow more complex, the industrial silver demand follows suit [Silver and AI: The Surprising Link Fueling Next-Gen Chips - Edge-Forex](#).

The AI boom represents a **structural shift** in silver demand that goes beyond cyclical technology upgrades. Unlike previous technology transitions, AI requires massive computational infrastructure that is silver-intensive at every level - from individual processors to data center networking equipment to cooling systems. This creates a sustained, growing demand base that reinforces the other major drivers (solar, EVs) you mentioned in your research.

## Final Thoughts

I have followed the silver market for over twenty years, and the current growth trajectory is genuinely unprecedented in my experience. The confluence of factors driving demand—from renewable energy technologies to artificial intelligence infrastructure—represents a fundamental shift in the metal's market dynamics.

## Why Silver Over Gold?

My preference for silver stems from its dual nature as both a precious metal and an essential industrial commodity. Unlike gold, silver plays a critical role in countless industrial processes, many of which result in the permanent consumption of the metal. This creates consistent, renewable demand that extends far beyond investment portfolios.

Consider the key distinction: virtually every ounce of gold ever mined remains in circulation today, primarily serving as a store of value for investors and collectors. While gold certainly functions as an effective hedge against currency devaluation, its practical applications remain relatively limited.

Silver operates under entirely different market fundamentals. A substantial portion of annual silver production is consumed in industrial applications—from solar panels and electronics to medical devices and catalytic processes. Once used in these applications, much of this silver is effectively removed from the market, either destroyed or rendered economically unfeasible to recover. This consumption creates perpetual demand that must be met through continued mining production, establishing a floor beneath the market that gold simply doesn't have.

This industrial consumption, combined with silver's monetary characteristics, creates a unique investment profile that I find compelling for long-term positioning.

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