



CIO expects the AI market to be dominated by an oligopoly of vertically integrated "foundries" and monolithic players along the value chain. (UBS)

## AI: Thinking in terms of a value chain is crucial

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Artificial intelligence (AI) may become one of the most profound innovations and largest investment opportunities in human history.

In our new report, <u>"Artificial intelligence: Sizing and seizing the investment opportunity,"</u> we segment the investable AI universe into a value chain, providing investors with a framework to help them put money to work in the sector.

We believe that thinking in terms of a value chain is crucial. Even in a fast-growing industry, rapid innovation, evolving competitive dynamics, and shifts in investor sentiment will mean that the fortunes of different parts of the value chain are likely to vary.

## We identify three layers in the AI value chain:

- The *enabling* layer—the companies that provide the backbone for AI development, ranging from semiconductor production to chip design, cloud and data centers, and companies involved in power supply.
- The *intelligence* layer—the companies turning the computing and energy resources from the enabling layer into intelligence. This includes those developing large language models, as well as companies that own data assets that can be turned into intelligence.
- The application layer—those companies that embed the tools from the intelligence layer into specific use cases. For now, we believe the most promising applications include copilots, coding assistants, digital advertising, call centers, healthcare R&D, cybersecurity, and fintech.



Value-chain thinking can also help us identify potential opportunities and threats to the success of the overall industry. For example, eventually the application layer must generate enough revenues to "pay for" the intelligence and enabling layers. The ratio of monetization potential of the application layer to the cost of the enabling and intelligence layer is therefore a key metric for future investment returns, in our view.

## What are our expectations, and how to invest today?

**First, investors should make sure they're sufficiently invested.** Many investors have built at least some exposure to Al over recent months. Yet, the sheer pace of growth in the industry means that many investors remain underallocated overall. Given the size of some of the largest Al companies, investors may consider weightings more akin to those of certain country equity markets than to those of other companies.

**Second, tilt toward the enabling layer.** While there is a risk that fears about overcapacity in the enabling layer could trigger volatility, we think the segment currently offers the best mix of attractive and visible earnings growth profiles, strong competitive positioning, reinvestment runway, and reasonable valuations. We favor the semiconductor companies that are driving the investment in Al infrastructure at the data center and at the edge.

**Third, mega-caps are core to the AI story**. The AI rush so far has been highly beneficial for the largest tech firms. But we believe that's a feature of the new AI investment landscape, and not a bug. We expect the AI market to be dominated by an oligopoly of vertically integrated "foundries" and monolithic players along the value chain. So, alongside semiconductors, we also like the oligopolies that are positioned across the tech stack covering chips, cloud computing, and generative AI models and applications.

**Finally, remember it's not only about the US.** China's tech monoliths are still trading at similar valuations as they were prior to the launch of ChatGPT. Yet, they are also investing heavily in artificial intelligence, and ultimately, we expect China to develop an AI ecosystem that is distinct from much of the rest of the world. This should lead to significant monetization potential.

The artificial intelligence market potential is vast—we estimate that AI value creation could amount to USD 1.16 trillion by 2027. We believe now is the time for investors to size, and seize, the investment opportunity.

Read the full report: "Artificial intelligence: Sizing and seizing the investment opportunity" (published 10 June 2024). A companion report, "Investing through the AI platform shift," includes a list of stocks that CIO believes are well positioned to capitalize on this rapidly changing market.

Main contributors - Solita Marcelli, Mark Haefele, Ulrike Hoffmann-Burchardi, Kevin Dennean, Achille Monnet, Alexander Stiehler, Sundeep Gantori

Original report - Sizing and seizing the Al investment opportunity, 11 June 2024.

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