The Impact of DeepSeek's AI Model

ALGER

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Alger recently hosted a webinar discussing the impact of DeepSeek's artificial intelligence (AI) model with portfolio managers Dan Chung, CFA, and Dr. Ankur Crawford. As a leader in investing in innovation, we wanted to provide clients with insights on today's market environment as it relates to AI. Below are a few of the major takeaways from their conversation.

What is DeepSeek and why should we care?

DeepSeek is a Chinese AI research lab that created an open-source AI model that emulates the most advanced AI models, delivering similar performance at a fraction of the training cost. This shocked equity markets as investors called into question the value of spending hundreds of billions of dollars from major cloud service providers (i.e., hyperscalers) on AI infrastructure, including GPUs, data centers, and power generation. The announcement triggered an abrupt selloff, with shares of AI infrastructure companies hit particularly hard. We believe the market's knee-jerk reaction was unwarranted and actually find DeepSeek's breakthrough an encouraging milestone for AI.

In our view, the cost of AI models is driven by three factors:

1. Compute – Hardware
2. Algorithms – Software
3. Quality of Data

DeepSeek was able to deliver their model at a low cost by optimizing its training data and employing innovative software techniques, effectively compensating for older computing hardware. In contrast to the current market narrative, we believe this achievement is positive for AI and highlights that AI training can be conducted more efficiently than previously thought. As we have previously written about in AI: The Declining Cost to Create, as the pace of AI innovation accelerates, we expect a deflationary shift that may undermine the pricing power and margin structure of incumbent businesses—reshaping industries and creating a rapidly evolving market environment.

Does this mean the projected spending on AI infrastructure will come down?

We believe that the projected spending on AI infrastructure may accelerate as the declining cost to produce AI workloads results in increased usage. In our view, AI adoption was initially hampered by cost and the resulting unattractive enterprise return on investment (ROI). Today, we believe that as the cost to produce and use AI declines, this will lead to increased productivity and, therefore, greater compute requirements for AI training and inference (i.e., when the trained model makes predictions or decisions).

Can you put this in a historical context and relate it to other emerging technologies?

We believe the accelerating advancements in AI are similar to prior technological breakthroughs, such as the build out of wireless communications in the 1980s, the rollout of PCs and the internet in the 1990s, and the cost to sequence the human genome in the 2000s. In the early years of each emerging technology, Wall Street forecasted their long-term market potential well below actual outcomes because analysts failed to account for how innovation dramatically lowers costs and improves utility. As the cost to provide each emerging technology fell, adoption accelerated, driving widespread usage and ultimately leading to a high ROI and overall profitability (See Echoes of the Past in Emerging Technologies).

Today, advances in AI training techniques could dramatically lower training costs going forward, signaling a phase shift that analysts may have underestimated. In our view, ongoing AI innovation may further accelerate demand for AI applications across all industries, where Wall Street analysts may be underestimating AI's long-term market potential (See Understanding DeepSeek's Role in AI Evolution).

What is Alger's investment framework around AI?

Alger categorizes companies as either AI enablers—providers of AI infrastructure—or AI adopters—companies using AI technologies to improve their business operations.

AI enablers are companies that are laying the groundwork for this technological shift, all of which are tied to the data center supply chain. For example, companies like Nvidia and Broadcom provide the necessary GPUs and networking for AI computing, while Taiwan Semiconductor manufactures nearly every AI processing chip globally. AI computing consumes vast amounts of electricity, generating significant heat, where companies like Vertiv play a critical role in thermal management. Further, we are finding opportunities within traditionally non-growth related areas like utilities, where companies like Constellation Energy provide data centers with reliable, low-emission electricity. Additionally, power transmission and distribution companies like Eaton and Quanta Services supply the necessary servicing and electrical components to support data center operations.

On the AI adopters' side, these are companies leveraging AI to improve efficiencies. For example, GFL Environmental is leveraging AI to optimize its waste collection operations to reduce operating expense. By using AI-driven route optimization and automation, GFL can improve fuel efficiency, reduce labor costs, and enhance service reliability. We believe this gives the company a competitive advantage over smaller, less technologically advanced waste management firms, allowing it to either lower prices or maintain strong profit margins.

Is Alger excited about any potential future developments in AI?

While there are many potential opportunities, AI agents and robotics are becoming increasingly compelling. An AI agent is a software-driven system that autonomously perceives, processes, and acts on data to perform tasks, make decisions, and interact with users or environments. For instance, coding bots may soon handle mid-level programming, while humanoid robotics continue advancing—Tesla, for example, expects to deliver 10,000 Optimus robots by the end of 2025.[1] In elderly care, medical robots could assist with daily tasks, enhancing quality of life rather than replacing jobs.

We also see opportunities in materials and mining, where AI leverages vast data to optimize resource extraction. AI-driven robotics are replacing hazardous tasks such as mine inspections, temperature monitoring, and structural assessments, which were traditionally performed manually under dangerous conditions. As AI adoption accelerates and costs decline, industrial integration will expand, driving efficiency gains and investment opportunities, in our view.

What is Alger's competitive edge in navigating AI as it evolves?

We are witnessing a rapid acceleration of innovation across multiple industries, aligning perfectly with our investment philosophy of capitalizing on positive dynamic change. That is, companies experiencing "High Unit Volume Growth," where industry leaders benefit from surging demand, or companies undergoing "Positive Life Cycle Change," typically companies experiencing a growth renaissance driven by transformative events like product innovation or a change in management. Through rigorous proprietary research, such as speaking with industry competitors, suppliers, and customers, we aim to identify businesses poised for sustained growth and adept at navigating market disruption. Ultimately, we believe our time-tested investment approach enables us to effectively distinguish between potential winners and losers, positioning us to potentially seize compelling opportunities in this evolving landscape.

[1] Tesla, Inc. Q4 2024 Earnings Call

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