



Yardi Matrix

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Data Centers Boom but Questions Remain

- Generative AI has made massive leaps in recent years, driving a demand boom for data centers. Yet AI firms face an array of challenges as the nascent industry moves into the future.
- Tech firms' massive investments in AI have led to a data center surge, with more than 51 million square feet of new data centers (23.6% of stock) breaking ground since the start of 2023. The rush may be slowing, however. In recent months, reports emerged that two tech giants are reducing data center leasing. AWS has paused some lease talks, and Microsoft is holding off on plans totaling \$1 billion across three campuses in Ohio, part of a larger global pullback. Both firms downplayed these pauses as temporary and the result of capacity management, but it marks the first noteworthy slowing that has occurred since the AI boom began.
- Some investors are beginning to question the return on investment for the sector. Last summer, Goldman Sachs made waves when it expressed AI skepticism. In a research paper titled "Too Much Spend, Too Little Benefit," Jim Covello, head of the firm's global equity research, argued that AI will require \$1 trillion in investment over the next few years, with no trillion-dollar problem to solve. Investor skepticism picked up again this year when Chinese startup DeepSeek unveiled a cheaper, less resource-intensive model than Western companies have been able to produce.
- Beyond financial challenges, AI faces other headwinds. Data center power requirements have led to site selection problems and community pushback. The phenomenon in generative AI known as hallucinations—producing false or misleading information—could severely reduce AI's impact in fields like medicine, manufacturing and legal, requiring significant human oversight to avoid critical errors. Critics say hallucinations are inherent to generative AI, and analysis of recent models from OpenAI have shown higher rates of hallucinations than previous ones produced. Additionally, legal challenges around copyright, liability and discrimination pose a serious threat to the growth of the industry.
- Generative AI is here to stay, and it will continue to fuel significant growth of data centers for the foreseeable future. Billions of dollars have already poured into the technology, and the current administration has adopted a favorable stance, offering support and little to no regulation of the industry. However, it is not a given that demand will continue to grow at this pace over the next decade. Issues around resource usage, return on investment, model accuracy and legal challenges will determine if AI reshapes the economy as we know it or if its uses will be more narrow.

