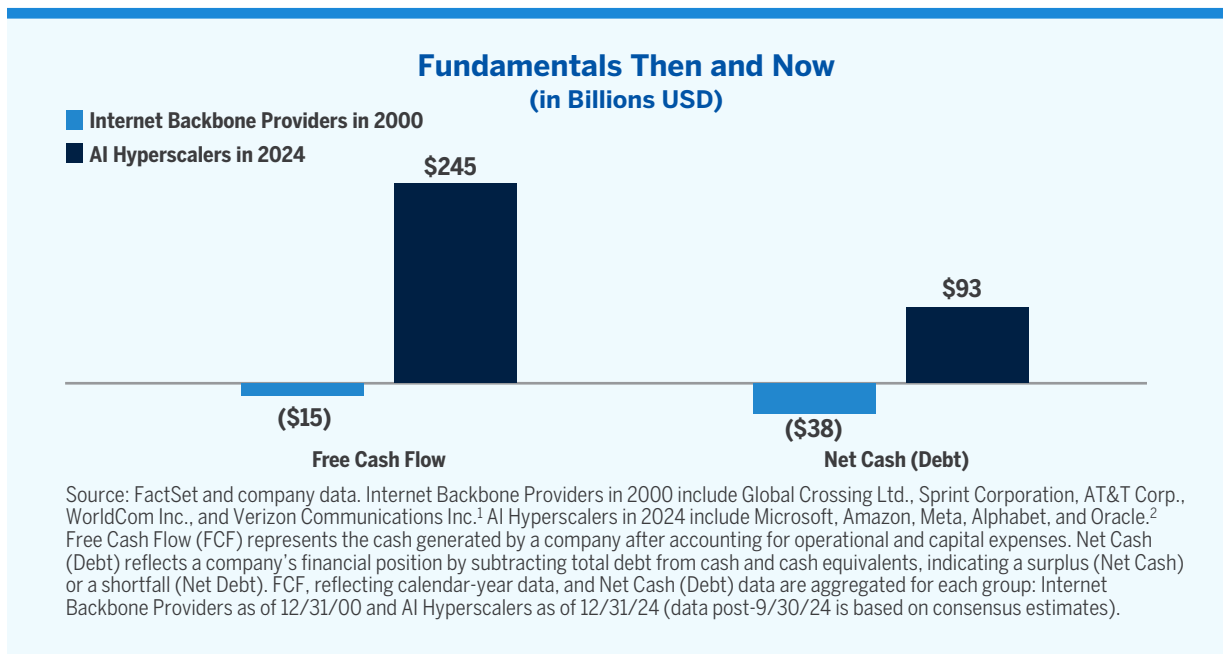


AI vs. the Internet Bubble

Does the internet bubble of the late 1990s/early 2000s, which included strong investor sentiment and elevated valuations, bear some resemblance to the current enthusiasm around artificial intelligence (AI)? We believe there are significant differences between the two periods, and that today's AI investment landscape appears much more sustainable.



- One key difference between today's AI infrastructure build-out and the capital expenditures made in the late 1990s/early 2000s internet bubble is the degree of investment sustainability, in our view. During the internet bubble, companies that were building out the telecommunication infrastructure (e.g., fiber-optic cables, communications equipment), such as WorldCom, were often free cash flow negative (capital expenditures exceeded operating cash flow) and took on considerable amounts of debt to fund the internet build-out.³ However, overinvestment relative to demand created an oversupply of bandwidth, resulting in low capacity utilization (unused cables and equipment). As a result, many companies with unsustainable debt burdens and no viable path to profitability eventually went bankrupt.
- Things are quite different today. In the chart above, companies providing the necessary AI infrastructure (i.e., hyperscalers) are generating substantial free cash flow—a trend that is estimated to continue through 2026.⁴ Moreover, AI hyperscalers' balance sheets appear much stronger, with excess cash reserves compared to the internet backbone providers of the 2000s.
- In addition, AI infrastructure providers (see our [AI Investment Map](#)) are achieving higher capacity utilization, with data center operators reporting record-low vacancy rates throughout the U.S.⁵ Accordingly, we believe today's AI build-out is more sustainable because it is driven by internal cash flow rather than the debt-fueled internet roll-out. In our view, companies supporting today's AI infrastructure through sustainable cash flow generation give us greater confidence that the current AI deployment is more durable than the internet build-out at the turn of the millennium.

¹ The five internet backbone providers mentioned were, in our view, the largest companies by market cap specifically focused on fiber optic cable networks during the late 1990s/early 2000s.

² AI Hyperscalers are defined as providers of scalable AI cloud infrastructure and services for large-scale digital applications. The five AI Hyperscalers mentioned were, in our view, the largest companies by market cap specifically focused on providing AI cloud services in 2024.

³ WorldCom, Inc. was a major telecommunications company that collapsed in 2002 due to industry overcapacity, excessive debt from aggressive acquisitions, and an \$11 billion accounting fraud that masked its financial struggles, leading to bankruptcy. Executives achieved this by misclassifying routine operating expenses, such as network maintenance costs, as capital expenditures, artificially boosting earnings and masking financial troubles, leading to one of the largest bankruptcies in U.S. history.

⁴ Consensus estimates of AI Hyperscalers' FCF through 2026 are from FactSet as of 12/31/2024.

⁵ CBRE Group North America Data Center Trends H1 2024.

The views expressed are the views of Fred Alger Management, LLC ("FAM") and its affiliates as of January 2025. These views are subject to change at any time and may not represent the views of all portfolio management teams. These views should not be interpreted as a guarantee of the future performance of the markets, any security or any funds managed by FAM. These views are not meant to provide investment advice and should not be considered a recommendation to purchase or sell securities.

Risk Disclosures: Investing in the stock market involves risks, including the potential loss of principal. Growth stocks may be more volatile than other stocks as their prices tend to be higher in relation to their companies' earnings and may be more sensitive to market, political, and economic developments. **Past performance is not indicative of future performance.** Investors whose reference currency differs from that in which the underlying assets are invested may be subject to exchange rate movements that alter the value of their investments. **Companies involved in, or exposed to, AI-related businesses may have limited product lines, markets, financial resources or personnel as they face intense competition and potentially rapid product obsolescence, and many depend significantly on retaining and growing their consumer base.** These companies may be substantially exposed to the market and business risks of other industries or sectors, and may be adversely affected by negative developments impacting those companies, industries or sectors, as well as by loss or impairment of intellectual property rights or misappropriation of their technology. Companies that utilize AI could face reputational harm, competitive harm, and legal liability, and/or an adverse effect on business operations as content, analyses, or recommendations that AI applications produce may be deficient, inaccurate, biased, misleading or incomplete, may lead to errors, and may be used in negligent or criminal ways. AI companies, especially smaller companies, tend to be more volatile than companies that do not rely heavily on technology.

Important Information for US Investors: This material must be accompanied by the most recent fund fact sheet(s) if used in connection with the sale of mutual fund and ETF shares. Fred Alger & Company, LLC serves as distributor of the Alger mutual funds.

Important Information for UK and EU Investors: This material is directed at investment professionals and qualified investors (as defined by MiFID/FCA regulations). It is for information purposes only and has been prepared and is made available for the benefit investors. This material does not constitute an offer or solicitation to any person in any jurisdiction in which it is not authorized or permitted, or to anyone who would be an unlawful recipient, and is only intended for use by original recipients and addressees. The original recipient is solely responsible for any actions in further distributing this material and should be satisfied in doing so that there is no breach of local legislation or regulation.

Certain products may be subject to restrictions with regard to certain persons or in certain countries under national regulations applicable to such persons or countries.

Alger Management, Ltd. (company house number 8634056, domiciled at 85 Gresham Street, Suite 308, London EC2V 7NQ, UK) is authorised and regulated by the Financial Conduct Authority, for the distribution of regulated financial products and services. FAM, Weatherbie Capital, LLC, and/or Redwood Investments, LLC, U.S. registered investment advisors, serve as sub-portfolio manager to financial products distributed by Alger Management, Ltd.

Alger Group Holdings, LLC (parent company of FAM and Alger Management, Ltd.), FAM, and Fred Alger & Company, LLC are not authorized persons for the purposes of the Financial Services and Markets Act 2000 of the United Kingdom ("FSMA") and this material has not been approved by an authorized person for the purposes of Section 21(2)(b) of the FSMA.

Important information for Investors in Israel: Fred Alger Management, LLC is neither licensed nor insured under the Israeli Regulation of Investment Advice, of Investment Marketing, and of Portfolio Management Law, 1995 (the "Investment Advice Law"). This document is for information purposes only and should not be construed as an offering of Investment Advisory, Investment Marketing or Portfolio Management services (As defined in the Investment Advice Law). Services regulated under the Investment Advice Law are only available to investors that fall within the First Schedule of Investment Advice Law ("Qualified Clients"). It is hereby noted that with respect to Qualified Clients, Fred Alger Management, LLC is not obliged to comply with the following requirements of the Investment Advice Law: (1) ensuring the compatibility of service to the needs of client; (2) engaging in a written agreement with the client, the content of which is as described in section 13 of the Investment Advice Law; (3) providing the client with appropriate disclosure regarding all matters that are material to a proposed transaction or to the advice given; (4) a prohibition on preferring certain Securities or other Financial Assets; (5) providing disclosure about "extraordinary risks" entailed in a transaction (and obtaining the client's approval of such transactions, if applicable); (6) a prohibition on making Portfolio Management fees conditional upon profits or number of transactions; (7) maintaining records of advisory/discretionary actions. This document is directed at and intended for Qualified Clients only.

CBRE is a global leader in commercial real estate services and investments.

Capital expenditure (Capex) refers to the capital a company spends to acquire, upgrade, or maintain long-term assets such as buildings, equipment, or technology to support its operations or growth.

FactSet is an independent source, which Alger believes to be a reliable source. FAM, however, makes no representation that it is complete or accurate.

The following positions represent firm wide assets under management as of October 31, 2024: Amazon.com, Inc., 5.6%, Microsoft Corporation, 9.7%, Alphabet Inc. 1.9%, Meta Platforms Inc. 5.1%, Oracle Corporation, 0.2%, CBRE Group, Inc. 0.0%, Global Crossing Ltd., 0.0%, Sprint Corporation, 0.0%, AT&T Corp., 0.0%, WorldCom Inc., 0.0% and Verizon Communications Inc., 0.0%.

Alger pays compensation to third party marketers to sell various strategies to prospective investors.