India

Neutral *(no change)*

Technology - Overall

DeepSeek, GPU hyperscalers & data centres

- The DeepSeek model demonstrates substantial training efficiency, which, in turn, reduces the potential resource requirements.
- This, coupled with disruptive pricing for training, could change the GPU infrastructure and data centre market growth assumptions.
- Early days, but it could accelerate AI adoption across enterprises.

Recent developments disrupt the AI market

Recent developments, especially the DeepSeek R1 AI model, have managed to disrupt the artificial intelligence (AI) market, given its training efficiency. R1 is an open-source LLM that primarily relies on the 'chain of thought' process. It uses 'reinforcement learning' to achieve outcomes and is a type of machine learning wherein the model decides through a 'reward-based process' vs. large datasets of text and code in GPT, which, in turn, reduces the resource requirements. The design activates a lower number of parameters while the reinforcement learning approach reduces the number of datasets and human feedback.

Disruptive pricing, to say the least…

The DeepSeek discounted model pricing is disruptive, to say the least. Although users enjoy discounted prices of DeepSeek API for a few months, the list input/output costs for processing tokens is US$0.55/US$2.19 per million tokens vs. US$2.50/US$10 for GPT-4o. Various estimates suggest this brings the training costs pricing to ~US$6m vs. US$100m+ as the models use a 8-bit float instead of a 32-bit, leading to substantially lower memory, and read multiple tokens simultaneously.

…which could alter growth assumptions across the value chain

Although the AI market has its roots in the mid-1950's Dartmouth Summer Research Project on Artificial Intelligence (DSRPAI) conference, the creation of Generative Adversarial Networks (GANs) in 2014 and transformer architecture in 2017 led to creation of foundational large language models (LLMs) such as GPT (Generative Pre-Trained Transformer), which, coupled with the rise in computing power {especially Nvidia's graphics processing unit (GPU)}, accelerated the adoption and use cases of AI applications and, in turn, was driving the GPU market's growth. That said, lowering the training costs could alter the GPU market growth assumptions as it could lower the requirement of large clusters. This, in turn, could impact on the demand for AI data centres, and also the associated entire value chain (server, store, power, UPS back-up, cooling, network). Though not an exhaustive list, E2E Networks, Netweb Technologies, Anant Raj, and Tata Communications are some of the listed companies that operate in the data centre infrastructure space.

Contrary claims across media reports

Scale AI and Tesla CEOs believe that DeepSeek has 50,000 H100 Nvidia GPUs but are not being revealed due to the US export controls. Though not verified, it could materially change the cost structure argument discussed above. Further, it could intensify the trade war between the US & China, leading to a material impact on Fortune 500 companies' earnings and, in turn, result in a cautious environment from an IT spending perspective.

Lower costs could kick-start the AI adoption across enterprises

Company reports suggests the global AI market, valued at ~US$137bn in 2022, could reach US$320-380bn by 2027F, growing at a CAGR of 25%-30%, and touch US$1tr by early 2033F. Key trends driving the market growth include democratization of AI, advancements in machine and deep learning, computing power optimization (hardware OEMs are designing powerful AI chips & processors while algorithms are being optimized), and increasing data generation and accuracy (driven by better enterprise data, engineering practices & use case-specific model training). Democratization of AI is driven by substantially lower investments to train models while rising competitive-led pull forwarding of technology investments by global hyperscalers could accelerate the trend further. We believe the recent developments are evolving, and a know-it-all scenario is sometime away, but it could also be the beginning of an accelerated AI adoption curve across enterprises.

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Stock Ratings	Definition:
Add	The stock's total return is expected to exceed 10% over the next 12 months.
Hold	The stock's total return is expected to be between 0% and positive 10% over the next 12 months.
Reduce	The stock's total return is expected to fall below 0% or more over the next 12 months.

The total expected return of a stock is defined as the sum of the: (i) percentage difference between the target price and the current price and (ii) the forward net dividend yields of the stock. Stock price targets have an investment horizon of 12 months.

Sector Ratings	Definition:
Overweight	An Overweight rating means stocks in the sector have, on a market cap-weighted basis, a positive absolute recommendation.
Neutral	A Neutral rating means stocks in the sector have, on a market cap-weighted basis, a neutral absolute recommendation.
Underweight	An Underweight rating means stocks in the sector have, on a market cap-weighted basis, a negative absolute recommendation.

Country Ratings	Definition:
Overweight	An Overweight rating means investors should be positioned with an above-market weight in this country relative to benchmark.
Neutral	A Neutral rating means investors should be positioned with a neutral weight in this country relative to benchmark.
Underweight	An Underweight rating means investors should be positioned with a below-market weight in this country relative to benchmark.