

HBM Memory Market at FMS 2024

Jim Handy and I are presenting at FMS (Future of Memory and Storage) on HBM market, AI datacenters and scenarios on what the future holds.

“Is HBM Memory Headed to New Heights, or is it just Hype?”

DRAM-103-1: Influence of AI on Memory Technology, Tues 3:10-3:40

Spoiler alert: There is excessive hype and it is heading to new heights

We show the impact of AI on the HBM market, Multiple forecasts, and memory scenarios that happen with new and fast growing markets

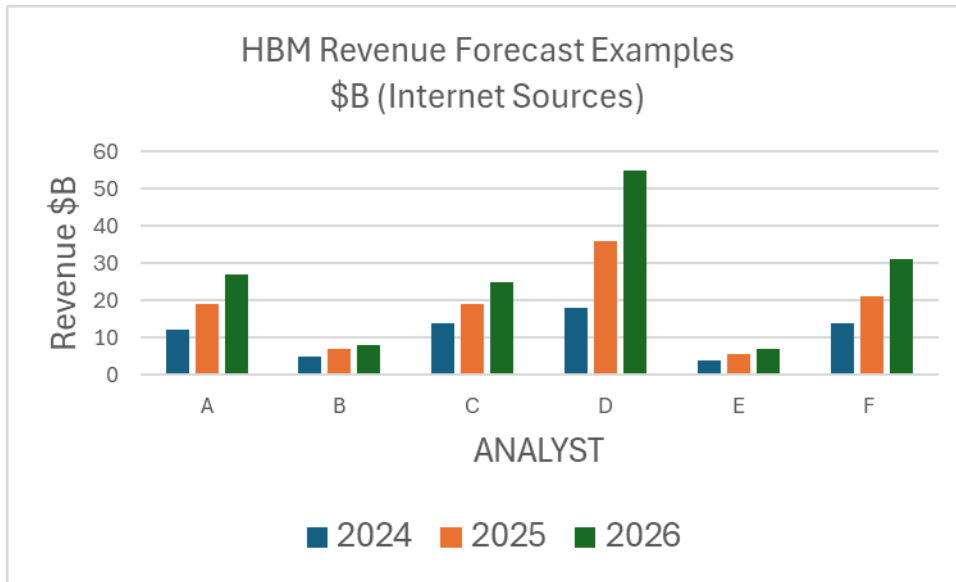
Some Recent Data:

- HBM current market revenue estimates are 3B-20B+ per year (see graph)
- HBM revenue growth is forecast at 25% CAGR to 150%+ CAGR
- NVIDIA revenue is growing at astounding rates. But other companies not so much
- Hyperscalers are spending TONS of money on AI servers AND still buying more traditional servers than last 2023
- HBM bit price is ~6x DDR memory. Bit cost is ~3x DDR Memory.
 - Interesting Update 7/25. Hynix stated that if DDR prices increase more, then DDR might have higher margin than HBM. Perhaps HBM Bit Cost is much higher than we modeled.

Some Forecast Challenges:

- HBM is now competitive. Solutions from Micron and Samsung joined Hynix dominance. Hynix recent report shows they still are the largest supplier by far.
- Competitive memory leads to cyclical shifts. This is due to lead times, factory builds, and inventory and price adjustments
- During hypergrowth, everyone over orders to cover possible growth. Cutting CAGR by half (not even flat) will lead to Inventory going from 4 weeks to 20+ weeks. Then, most orders stop and the price drops. The larger the forecast growth, the larger the problem

Update on Forecasts:



We definitely underestimated HBM sales in 2023 and 2024. We increased the forecast based on Q2 results. The forecasts show growth from everyone.

Regardless of growth of 50% or 150%, we would expect some correction sometime. Datacenter digestion, overproduction, pricing causing demand destruction, Price war among producers. We will discuss when, how much, and who might win the battle long term

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