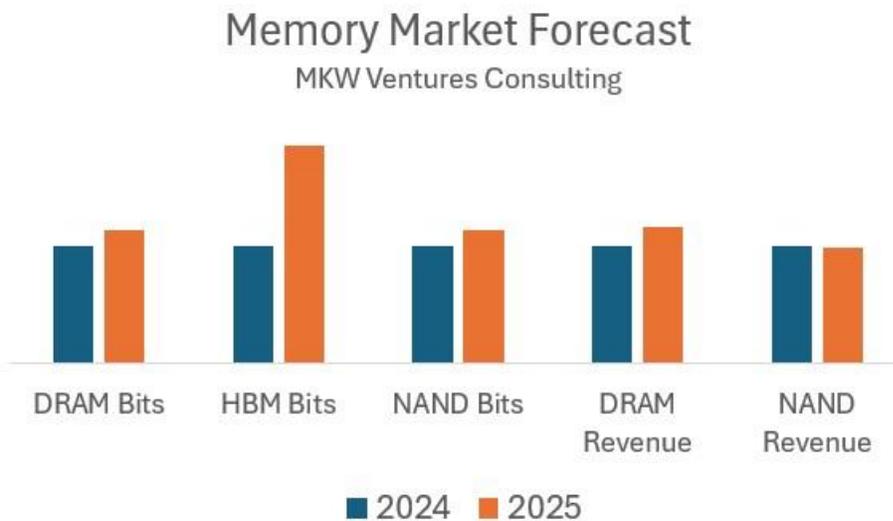


The Memory Market in 2025. A Forecast

We looked at Q4 performance, Q1 guidance and some of the market forces. Plugged them into the memory model and came up with some numbers. There are some big trade offs and as a result, the numbers were surprising. This is for 2025 overall.

Caveat: I do not believe the “macro” normally affects memory market, but if the US continues to implement trade restrictions with China, That could single handed put the entire Semiconductor market into a holding pattern. I am a free trader because free trade ALWAYS helps the market grow.

The Guesstimates:



Numbers are normalized to 2024

- 1) DRAM Bits overall increase High teens percentage
- 2) DDR Pricing decreases mid teens percentage
- 3) HBM Bit Volume increases roughly 90%
- 4) HBM Bit pricing is flat
- 5) DRAM ASP is roughly flat (HBM offsets DDR)
- 6) DRAM Revenue increases mid teens percentage
- 7) DRAM Operating Margin dollars increase mid teens percentage
- 8) NAND Bits increase mid teens percentage
- 9) NAND ASP decreases Mid teens percentage
- 10) NAND Revenue is flat to slightly down

End result: Expect big 3 memory company margins (dollars) to increase Mid teens percentage over the year... growth almost totally dominated by HBM.

The “cycle disrupting” product is HBM. It sucks up capex, sells for 6x bit price of DDR. Costs 3.3x the price of DDR bits. Potentially sucks up excess DRAM capacity. Add lots of margin for ever bit converted from DDR. We expect supply to catch up by the end of 2025 and we will see what happens next in 2026

We have all the gory details in excel spreadsheets to look at the tradeoff and some possible scenarios

Mark Webb

www.mkwventures.com

mark@mkwventures.com

505-681-7614