Earnings results Sept 26, 2024

MU: Don't expect the stock to head to its previous high

KC Rajkumar, CFA, PhD
(408) 425-5680
KC@LynxEq.com

MU management crushed lowered expectations for Nov quarter, the stock jumped to our $110 PT sooner than we expected. In a matter of a few weeks, how did management's expectation for the Nov quarter change so dramatically? We think a couple of one-time large DRAM deals from Asia distis may have helped. And for the distis to get interested, we think Samsung, one of the 'circuit breakers' we mentioned in our preview, kicked in sooner than we expected and helped put a floor under falling spot price.

However much the memory vendors would like to position themselves as predictable secular growth companies, the business continues to be cyclical and volatile. Even with Fy25 expectations netting out unchanged to where it was three months ago, we do not expect the stock to return to its previous high.

--xx--

Management does a 'bit dance': MU management crushed lowered investor expectations for Nov quarter by doing a 180deg turn on dram bit outlook it had provided just a month ago. Nov quarter bit demand outlook went from 'strengthen modestly' at the earnings call in late June to flat growth at investor conferences in Aug. At the earnings call yesterday, management did another 180deg turn and returned DRAM bits to modest growth. The shifts in guidance naturally caused a meaningful perturbation to revenue estimates. Overall revenue for Nov quarter was guided at the earnings call yesterday to up 12% q/q, crushing buyside estimates in the mid-single digit range set in August, but inline with consensus expectation right after the earnings call in June.

What accounts for the head-spinning changes in management's expectations? Management seemed reluctant to address the pivots. No mention of it in the monologue and unclear response to analyst queries. Management limited itself to the explanation – 'we see stronger data center demand'.

But how did stronger data center demand manifest itself? Management did not indicate whether there was a month-to-month fluctuation in demand from either the traditional server end market or from AI servers. Was there a sudden improvement in HBM yield? Management gave no cause to believe so.

Circuit breaker: In the absence of a credible explanation from management we will resort to the 'circuit breaker' argument we had proposed in our preview (link). We think **Samsung** has helped stabilize falling spot DRAM price by **curtailing its DRAM output**. We think excess wafers goes into its die bank.

Large DRAM contracts to the rescue: The abrupt changes in MU management's bit growth expectations resulting in overall revenue swinging to the order of half a billion dollars over a few weeks could not have happened via organic changes in end market demand. Rather, we see the hand of large distributors taking contract positions. **Our checks** into the Asia supply chain show that in recent weeks, a couple of large **Taiwan distributors** may have stepped in with large contracts to exploit fallen prices and with the knowledge that Samsung had a floor under DRAM price.

PCs are sexy again? We believe **Taiwan distis** may have soaked up MU inventory of the order of several hundred million dollars. While MU management spoke of stronger data center demand, we believe these large disti deals are related to commodity PC memory. While there is little growth in PC units, ASPs are likely to remain elevated, thereby giving PC vendors leeway to stuff higher DRAM $content per unit. As MU management said on the call, the lowest memory configuration is going to be 16GB. The days of 8GB PCs are over. Our point is that despite dormant PC unit growth, we expect decent growth in PC DRAM bits over the next 12 months. While AI/HBM may get all the headlines, from a bit growth perspective, PCs and smartphones still form the base of the DRAM pyramid.

Why did MU management wobble in August? Was it due to an accelerated slowdown in consumer demand? Or were there cancellations of large contracts? Our hypothesis is this – coming out of Computex in June we believe **Intel** may have locked up a large contract for lpDDR5 from MU for its low-power consuming AI PCs, worth several hundred million dollars. Due to well-known problems with cash flow, we think Intel turned around and canceled the contract, thereby abruptly cutting into MU's bit outlook for November.

The message is this: However much the memory vendors would like to position themselves as predictable secular growth companies, the business continues to be **cyclical and volatile**. And with repeated changes to out-quarter guidance, management did not help its credibility with investors. Without the help from the large disti deals, would MU have been able to crush Nov guidance? Just as good a question is whether MU would have depressed investor expectations a month earlier had it not lost a large contract or two? Samsung's action may have inadvertently helped MU grab large DRAM contracts this time around. By the same token, Samsung could oversupply the HBM market in the HBM3e and HBM4 cycles. And just as importantly, the torrid demand from AI data centers could mature and settle into a regular pace.

The outlook for Fy25 remains largely unchanged from three months ago. Management implied a **$40bn revenue** bogey by setting capex for the fiscal year in the mid-30s percent of annual revenue. With Q1 capex guided to $3.5bn, the math is obvious. A 40% gross margin and opex growing mid-teens land Fy25 in the $9 ballpark.

Are there upside risks?

Not from HBM capacity addition: In our estimate ~50% of the WFE in Fy25 is likely to the allocated to HBM capacity expansion. But we expect tool delivery to start only in Cy25, which means incremental HBM capacity comes online no earlier than at the end of FY25.

HBM yield could be close to maturity: The company has made steady progress in improving HBM yield. We think HBM yield is already close to mature yield. Whereas six month ago the yield of 8-high stack, in our estimate was ~30%, we believe the yield has more than doubled. If so, there is not much headroom for further improvement. Higher yield gives credence to management's expectation of HBM margin improvement. But this dynamic may have largely played itself out.

Traditional non-AI end markets? With the US Fed and China's PBoC starting on an easing cycle, we could see a concerted effort by the two largest central banks to stimulate their domestic economies. Whether this effort meaningfully increases end demand remains to be seen. We think upside risk to MU fundamentals from current expectations is more likely to come from the traditional non-AI end markets.

Net/Net: The stock jumped to our new $110 PT sooner than we expected. Where does the stock go from here? Is there upside to the $40bn revenue bogey? We do not think so. We made the 'peak earnings' call back in July when we lowered our PT from $150 to $120 (link). With Samsung's entry into the HBMe3 arena imminent and with Hynix just having announced production shipment of fully qualified 12-high HBM3e stacks (vs. MU still in qualification), the competitive dynamics prevents a return to the AI premium from 3 months ago seem.

With Fy25 eps estimate in the $9 ballpark, and with peak earnings expectation implying low double-digit eps multiple, we think the stock likely settles down in the **$110 to $120 range**. With limited upside to HBM expectations thru 2025 and with the traditional non-AI end markets (PC, smartphone, CPU servers) growing no more than low single digit, we think there is **limited upside to the stock**. We will revisit our thesis when NVDA's Blackwell starts shipping in volume.

Disclosures and Disclaimers