Company update Aug 06, 2024

NVDA: The SMCI call today takes on extraordinary importance

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Extraordinary interest in the SMCI earnings call today is to be expected for its read-through into NVDA and for nervous markets to get a sense of the overall state of AI investments. At the previous earnings call, SMCI management had called out 'strong growth' in September (q1) and December quarters and into Fy25. This expectation was based on the ramp of NVDA's new products. How would SMCI modulate its Fy25 outlook in light of recent reports of product delays?

We think SMCI could soften its outlook, not just to account for Blackwell delays, but also in our view, slower ramp of H200 shipments. We suspect demand for the H100 too is weakening, at least on a second derivative basis. Semis are in the throes of extreme market volatility. On a fundamental basis though, we expect the SMCI call to be incrementally negative for NVDA.

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H200: It is not just Blackwell, we think the H200 ramp too is not going well, and for similar reasons as Blackwell. We believe ODMs shipped minimal volumes of H200 servers due to lack of supply of the silicon vs. expectation set by NVDA that the product should start shipment in their July quarter. In a note yesterday we said that H200 wafers may have been **paused at TSM**, along with Blackwell wafers (link). We suspect H200 supply may not improve into the December quarter as well.

H100: We suspect the supply of H100 silicon may have begun to **outstrip demand**. Three months ago, we proposed H100 shortages had eased significantly based on declining rental/API pricing (link). With lead times for H100 now down to a few weeks, we think H100 shortages are now largely over. Anecdotally, we hear some tactical owners of H100 are looking to offload their excess H100 capacity into the secondary market.

What did MSFT really mean? MSFT appeared to imply on its earnings call that AI capacity shortage was partially responsible for Azure growth coming in at the low end of guidance range. As MSFT raised its quarterly capex from $14bn in the March quarter to an impressive $19bn in the June quarter, investors seem convinced that MSFT was demonstrating urgency in AI server purchases. If so, such an urgency should translate into accelerated shipments at SMCI.

Our take is that the shortfall in Azure growth rate in the June quarter had more to do with the lower-than-expected growth in Europe as related to non-AI Azure services. We note that non-AI growth contribution to Azure decelerated to 21pp in the June quarter vs. 24pp in March. Despite the supposed shortage of AI capacity, the AI contribution to Azure growth accelerated from 7pp in the March quarter to 8pp in June.

Our view is that the Azure shortfall during the quarter could not have been due to AI capacity shortage, as MSFT would have been fully aware of the available AI capacity on hand while setting June quarter growth targets.

We believe MSFT faces AI capacity shortage over the medium and longer term due to paucity of data center **shell space**. The bulk of the capex outlay in the June quarter is headed to greenfield shell construction and leasing. We think a **fixed** portion of capex goes to data center shell construction. A **flexible** portion of the surge is allocated to server purchase, the actual purchase commitment depends on demand signal at the time of purchase.

For the next generation NVDA server families, H200 and beyond, liquid cooling is not optional. (We note that liquid-cooling is optional for H100 servers.) Liquid-cooled data centers shells require significant capex commitments. Going by public reports, over the course of the June quarter, MSFT's commitment to new data centers adds up close to **~$17+bn**. The $19bn reported at the earnings call should not have come as a surprise.

Our key point is that the AI capacity constraint MSFT mentioned on their call is primarily due to lack of shell capacity and not due to lack of supply of AI servers. As and when liquid-cooled shell space becomes available, and with the availability of higher throughput H200/Blackwell servers, MSFT guided to expectation of acceleration of AI growth in 2FH (March/June quarters).

Until then, it looks like MSFT is reconciled to a slower pace of Azure growth, in the 28%-29% range, slower than that reported in recent quarters. In its 1FH, we think it is possible that MSFT slows down the intake of H100, preferring instead to populate liquid-cooled shell space with higher throughput H200/Blackwell servers as and when they become available later in MSFT's 2FH.

Net/Net: The bottleneck is the availability of data center shell space, especially liquid-cooled shell space. And into limited, expensive shell space, hyperscale CSPs would rather install higher throughput H200/Blackwell servers.

As such, even in the face of AI capacity shortages CSPs are likely to push back on taking in H100 servers. We wonder whether the supply chain is headed to a situation of **excess supply** of H100.

Into such as setup, if NVDA's next generation higher throughput products are delayed, that could **upset the applecart** and force hyperscale CSPs to consider alternatives, or slowdown their ramp of AI services.

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