

Inside Micron: major goals, and last quarter's progress.

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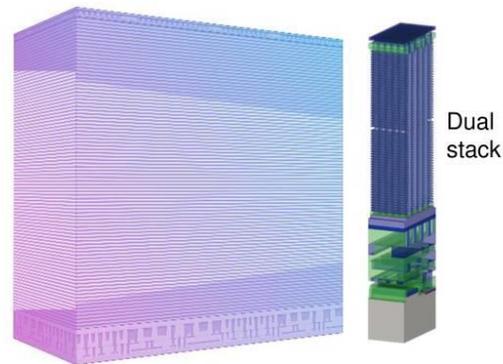
“For the first time in history, Micron has technology leadership in both DRAM and NAND”. Sanjay Mehrotra’s statement on last quarter’s earnings call is welcome news to investors. Micron has always maintained a leadership position in DRAM memory chips, which make up 70% of its revenues, but has historically lagged competitors in its NAND memory technology by a generation or two (so, 6-12 months). It has spent the last 4 years catching up on both the technology side and the cost side for both DRAM and NAND, and finally seems to have hit its goal. It introduced the industry’s first 176-layer NAND product, which has double the power efficiency and performance as the previous generation (see slide below for more details). On the DRAM side, it introduced its “1-alpha” generation product, which has 40% more storage space than prior models.

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- ✓ >2x better write times†
- ✓ 33% higher data transfer rate†



*Cash cost per Gb vs. 64L/96L transition
†versus Micron’s high volume, floating-gate 96-Layer 3D NAND

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Continuing improvement in business conditions for most of Micron’s customers led to a 12% revenue increase from a year ago. Demand for DRAM products was especially strong: mobile, PC, and cloud market demand grew, and the auto market roared back to life from its March through May death walk, hitting record revenue for the company. What is most impressive about the revenue growth in DRAM was that it happened despite pricing for the products decreasing from a quarter ago. This past quarter most likely represents the bottom for DRAM pricing for this cycle. Pricing has already started increasing and is expected to increase more throughout 2021. The three players in the DRAM market are Micron, SK Hynix, and Samsung. SK Hynix and Samsung both recently announced no increases in DRAM spending during 2021 (that news accounted for one of the many nice days Micron’s stock had in December).

With supply constrained by the 3 major producers, demand set to increase further as the economy keeps recovering, and pricing to increase, 2021 is shaping up to be a very good year for Micron. As Micron begins its march towards the next cyclical high it is very clearly a much better company: financially, operationally,

and technologically. Despite the long wait, at Outlook we've never doubted the eventual outcome for our Micron position. As the chart below shows, Micron has already gone beyond its last cyclical high, and we're fairly certain it still has a long run ahead.

Micron: 10 Years of Cycles



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