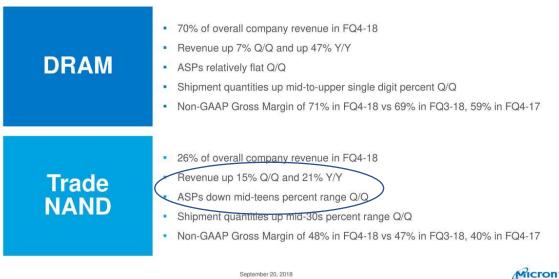
## Inside Micron: major goals, and last quarter's progress.

In the past 3 months, Micron's price has dropped 24% due to a few negative news items and a history of Micron speculators ready to sell on every negative piece of news, regardless of its actual meaning. The biggest and most important negative item has been a forecasted decline in DRAM and NAND prices, with speculators always ready to believe this marks the beginning of the next sharp downcycle in the historically cyclical memory industry. With this background, Micron announced its 4<sup>th</sup> fiscal quarter results last week, exceeding expectations with record revenue and earnings per share. Revenue increased 38% and EPS increased 75% from last year. Despite these exceptional results, the market's crowd focused on Micron's outlook for the near future, in light of the memory pricing declines in the headlines.

Let's take a look at Micron's top 3 priorities, and how it performed this quarter.

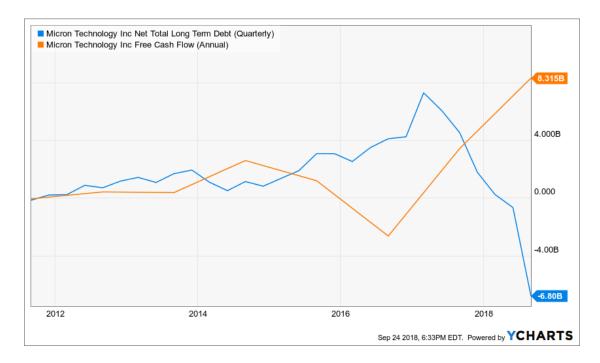
1. Cut production costs, in order to thrive in (rather than simply survive) future pricing downturns: Micron's success at cost reduction techniques over the past couple of years continues to show itself in higher gross margins for both DRAM (to 71%) and NAND (to 48%). Its NAND cost of production is now the lowest in the entire industry. In addition to lowering production costs, Micron is transitioning into increasing its mix of high-value products that will help protect revenues in the future.

## Performance by Product Line



The combination of low-cost production and a higher-value mix of products are already helping Micron perform well in pricing downcycles, as highlighted by the circled portion in the graphic above. NAND ASP (average selling price) declined this quarter, but revenue still grew—which would have been considered impossible in Micron's past. As Outlook has noted before, memory technology is becoming more complicated and more expensive to make, so it is even harder to oversupply the market. Micron's team doesn't think the global memory price cycle has gone away—but it is less worried about the price cycle than ever before.

2. <u>Increasing financial strength:</u> the stronger Micron's balance sheet is before an industry downturn, the better the outcome will be. At the beginning of last cycle's downturn, Micron had a net debt position (more debt than cash.) It ended this quarter with a record net <u>cash</u> position of \$2.8 billion. *In 2018 alone, it has more than halved its debt and almost tripled its free cash flow.* 



Micron also announced that it has started its long-awaited share buyback program and will spend at least \$1.5 billion in the next 3 months on share buybacks, equating to roughly 3% of the company. In future quarters, it plans on spending 50% of free cash flow to repurchase shares. Micron has an exceptionally strong balance sheet and an exceptionally low stock valuation, making it a perfect time to start this program.

3. Improving technology: As mentioned above, Micron has been increasing its product mix to include more high-value solutions, selling products that include both DRAM and NAND, for example. This quarter, Micron introduced a new DRAM/NAND mixed memory product, used in cell phones, that ramped up that sector's revenue faster than any other NAND product Micron has ever released. In 2017, 40% of Micron's NAND revenue came from high-value products. In 2018, that revenue has already increased to 60%, with the goal of hitting 80% by 2021. Because of these actions, even as NAND pricing has decreased this quarter, Micron's revenue still increased.

A large portion of Micron's capital spending for the next fiscal year will be spent on creating more clean room space in its factories, to especially focus on next generation DRAM and NAND as well as these higher-value mix products to be used in the demanding automotive and mobile industries.

In addition to excellent earnings and very high long-term expectations for the memory market, Micron also announced several headwinds which lowered its earnings expectations for the next quarter. These

are: a higher tax rate; a 0.5% to 1.0% hit to profit margins from the Chinese tariff actions; and a temporary slowdown in global personal computer sales, due to a shortage of central processors, which naturally means a slowdown in memory sales into that product line. Mr. Mehrotra went out of his way to predict that all these "headwinds" would be brief, and have no meaningful effect on Micron's longer-term performance. The market, of course, expressed the opposite opinion, pushing the stock down once again. The market never looks past headwinds, temporary or not.

Overall, it was another excellent quarter for Micron, whose results showed that it is doing exactly what it has planned to do: make more sophisticated memory products at lower and lower production costs. Like Micron, Outlook is convinced that global long-term demand for those memory products will be exceptionally strong for many years—regardless of temporary slowdowns. Micron has dramatically improved its business operations in time to catch this long-term wave of demand. We're happy to keep riding this rollercoaster.

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