

MU F1Q Manufacturing and Pricing Strength

MU	Micron Technology		
Qtr: F1Q	Grade: B	Growth(qtr-qtr)	
Rev: 3,970	Rev: +	Rev: +23.4%	
GM: 26%	EPS: ++	Fcst: +10+18%	
EPS: \$0.32	Fcst: +++	Div:	

Micron Technology (MU, \$20.58 -0.07), rated Buy/UpSide Incremental in my latest Chip Investment Ideas

F1Q Earnings: MU reported November-ended F1Q17 results late yesterday above expectations. Revenue strength was due to production growth, while gross margin improved by seven points due to manufacturing cost reductions and DRAM market price strength. The acquisition of its Inotera Taiwanese joint venture in early-December will positively impact gross margin and is worth 2-cents of accretive EPS (already in guidance) this quarter.

DRAM revenue was 61% of sales at 28% gross margin after sales bit growth of 18%, an average selling price increase of +5%, and a manufacturing cost per bit reduction of -5%. 20nm product bit production ramped to cross-over last quarter, and next-gen 1X is expected 2HFY17. Mobile grew to 30% of DRAM sales, PCs in the mid-20% range, servers in the high-teens percentage, and specialty (networking, graphics, auto, other) in the mid-20% range. 2017 industry bit growth is estimated at +15+20%, while longer term it is expected to range from +20+25%.

Trade/merchant non-volatile memory revenue was 32% of sales at 23% gross margin after sales bit growth of 26%, no change to average selling price, and a manufacturing cost per bit reduction of -8%. 3D NAND bit cross-over was achieved last quarter as Gen-1 ramped and production began of Gen-2 product. Consumer (memory cards, USB) was 40% of trade NVM sales; mobile (eMCPs) was in the low-20% range; SSDs in the mid-teens percentage; and Automotive/industrial/embedded approximated 20%. 2017 industry bit growth is estimated to be in the high-30 to low-40% range, while longer term it is expected to range from +40+45%. The balance of total revenue was NAND product to partner Intel at sales approximating cost, per their agreement.

Compute and Networking Business Unit (CNBU) was 37% of total sales, growing by +18% with non-GAAP operating profit of 13.9% vs 0.8% the prior quarter. Strong 20nm product shipments to cloud, graphics GPUs and game console applications. **Mobile (MBU)** was 26% sales, up by +54% with non-GAAP operating profit of 8.6% vs (5.2%). Chinese customer qualifications, LPDRAM and mobile NAND drove growth, while 20nm technology product improved profitability. **Embedded (EBU)** was 15% sales, up by +13% with non-GAAP op profit of 30.8% vs 27.5%. Seasonal strength from home automation and cameras, as well as continued strength from automotive. **Storage (SBU)** was 22% sales, up by +13% with non-GAAP operating profit of (5.2%) vs (7.5%) for NAND and SSDs. The company is in full production of 3D NAND TLC for client and cloud drives.

Micron's financial model is highly leveraged to DRAM market prices which have been improving and are likely to remain favorable for the foreseeable future due to supplier consolidation and market fragmentation. The shares currently trade around 1.5x expected sales and 15x expected earnings, both of which will likely go up and drive down those valuations after this announcement. I think the shares should be worth \$35-40 over the next year or so, although historically they struggle after \$30. Nevertheless, business conditions are healthy and I think upside potential exceeds downside risk at current price levels. I remain positive on the shares.

—Dan K. Scovel
Semiconductor Analyst

Tokeneke Research LLC
Rowayton, CT 06853
dscovel@tokenekeresearch.com
www.tokenekeresearch.com
203-554-4621

LEGEND		Grade	
+++	exceeded the high-end of the range	A	all +++
++	above consensus, within the high-end of the range	B	all +
+	slightly above consensus	C	all o/+
o	met consensus	D	mixed -/o/+
-	slightly below consensus	E	all o/-
--	missed consensus, within the low-end of the range	F	all -
---	missed the low-end of the range		

Copyright © 2016 Tokeneke Research LLC. All rights reserved. This report is for information purposes only and does not constitute a solicitation or an offer to buy or sell any security or to participate in any investment or trading strategy. Opinions expressed in this report reflect the judgment of Tokeneke Research LLC on the topics addressed as of the date of the report, and are subject to change without notice. Tokeneke Research LLC makes every effort to use reliable and comprehensive information but makes no representation that the information in this report is accurate or complete, nor does it undertake to update or revise this report at any time or for any reason. This report contains forward-looking statements that involve risks and uncertainties, both known and unknown, as well as assumptions that, if they do not fully materialize or prove incorrect, could cause actual results to differ materially from those expressed or implied by such forward-looking statements. Actual results and trends may differ materially from historical results or those projected in any such forward-looking statements depending on a variety of factors. This report does not provide individually tailored investment advice and has been prepared without regard to the specific individual financial situation, objectives and needs of those who receive it. Securities discussed in this report may not be suitable for the reader. Tokeneke Research LLC and/or Dan Scovel may have a long or short position in the securities of a company or companies mentioned in this report and, at any time, may change that position. Tokeneke Research LLC accepts no liability whatsoever for any loss or damage of any kind arising out of the use of any part, or all, of this report. All company and product names mentioned in this report may be trademarks or registered trademarks of their respective holders and are used for identification purposes only. Reproduction or distribution of this report, even for internal distribution, is strictly prohibited unless specifically authorized by Tokeneke Research LLC.