

Micron Technology F3Q Mixmaster
Operating and Market Strengths Offset By Mix Issues, Reiterate Buy

Diluted Shares(mil) :	813.3	<u>Closing Price 6/25/09</u>	<u>fye August</u>	<u>FY08 act</u>	<u>FY09</u>	<u>FY10</u>
Market Cap(\$mil) :	\$4,310	\$5.30	Revenue(\$mil)	\$5,841	\$4,741	\$7,033
Avg Volume(,000) :	23,943		EPS	(\$1.25)	(\$2.35)	\$0.51
Net Cash/Share:	(\$2.24)	<u>Recommendation/Target</u>	Price/Sales	0.7	0.9	0.6
Tangible Book/Share	\$5.31	Buy, \$10.	Price/EPS	NM	NM	10.4

Micron Technology is a leading supplier of DRAM and NAND memory products, as well as CMOS image sensors. It has recently partnered with Nanya in Taiwan to manufacture DRAMs and announced a 65% divestiture of Aptina, its CMOS image sensor business.

Summary: Micron’s F3Q09 was a mix-master of offsetting strengths and disappointments as impressive operating gains were neutralized by product and customer mix issues. Micron is returning to its roots as a DRAM manufacturer as it divests its CMOS image sensors and partner Intel tempers much of the leverage in its NAND business. I am lowering my revenue estimates, but raising my earnings estimates and retaining my 12-month target price of \$10. I reiterate my Buy recommendation for investors with very high tolerance for risk, and continue to believe MU is well positioned to benefit from increasing DRAM market prices, cost reductions and production expansion associated with technology migrations and significant future capacity enhancements.

Operating Strength: Operationally, MU knocked the cover off the ball last quarter as it accelerated both process technology migration and restructuring activities: DRAM cost per bit declined by -11%, a couple hundred basis points better than guidance in the high-single digits; NAND cost per bit declined by an amazing -35% compared to guidance in the mid- to high-teens percentage; DRAM bit shipments grew by 18% compared to high-single-digit percentage guidance; NAND bit shipments at 21% edged-out the high-end or guidance in high-teens; CMOS image sensor revenue grew by 53% sequentially as part of pronounced seasonal rebound; and operating expenses of \$242M were \$18M below the low-end of R&D and SG&A expectations.

Offsetting ASP Weakness??: The problem was that all this good news was offset by ASP weakness—despite spot and contract price strength for both DRAM and NAND throughout the period. How could this be (I asked myself as I struggled to reconcile and update my financial model into the wee hours of the morning)? The answer was mix.

Specialty DRAM Snap: Micron’s DRAM business accounted for 50% of total revenue and has two pieces: commodity PC DRAM at 30% (up from 26%), and specialty DRAM that includes low-power offerings for cell phones and high-performance offerings for networking and communications applications at 20%. Publicized DRAM market prices only apply to the relatively homogenous commodity PC segment, and MU enjoyed market share gains amid market price gains on the order of 30% in this space due to 50nm technology migration and a jump on next-generation DDR-3 interface offerings. Unfortunately, all these price gains were almost exactly offset by weakness in its specialty DRAM offerings that command (meaningfully) higher ASPs. This is the second quarter in a row that we have seen this weakness, although management claims that smart phone and enterprise networking market gains are forthcoming. Overall DRAM ASPs were flat on the quarter, hurting both revenue and profitability compared to expectations that folks like me who track market pricing were watching.

NAND Partner Gets Paid: Micron’s NAND business consists of a joint-venture with partner Intel that takes half of total production volume at a price intended to approximate cost. So even though 21% more NAND bits were manufactured, half of all this increase was shipped to Intel. Even worse, the shipments to Intel were transferred at cost—which decreased by the aforementioned -35%! Therefore, the 15% or so market price increase in NAND netted out to a DECLINE of -17% after accommodating Intel. Whoops. Again, revenue and profits got slammed.

Other Gotcha’s: Operational strength and offsetting mix issues slamming ASPs were the big story last quarter, although there were a few lesser issues of note, including: a \$28M foreign exchange loss; a \$53M loss associated with the forthcoming divestiture of image sensors; a \$30M charge in COGS for idle capacity at new DRAM manufacturing partner Inotera (part of Nanya in Taiwan); persistent gross margin weakness in image sensors at 2%; share count gains from a sale of 69.7M shares of stock at \$4.15 for \$287M and a \$230M, 4.25% convert with a ‘Capped Call’ last quarter; and—most significantly—a \$242M benefit in COGS from the sale of previously written-off inventory. This last issue allowed the company to report a surprisingly good aggregate gross margin of 9.7%.

However, adjusting for this benefit and the \$30M idle capacity charge renders gross margin of -9.5%—which was disappointingly close to my published estimate of -10.8% going into this announcement.

The mix-master financial and operating parameters for the quarter are summarized in the table below. Adjusting for one-time charges and the sale of previously written off inventory, the quarter was very close to my expectations. Unfortunately, I have to count this as a disappointment given the noticeably higher consensus expectation. On the other hand, most normal people's eyes would have glazed over long before digesting any of the aforementioned detail and simply given the company credit for bettering loss expectations despite the revenue shortfall. Maybe I just need to lighten up. . .

Metric	Estimate	Actual	FY3Q09		
			Guidance	Consensus	Range
DRAM Bits Shipped	8.0%	18.0%	Hi 1-digit%		
NAND Bits Shipped	18.0%	21.0%	Hi Teens%		
DRAM ASP change	15.0%	0.0%			
NAND ASP change	10.0%	-17.0%			
DRAM Cost/bit change *	-7.0%	-11.0%	Mid/Hi 1-dig		
NAND Cost/bit change *	-17.0%	-35.0%	Mid/Hi teens		
Revenue (\$ mil)	1,264	1,106		1,180	1,070-1,260
Revenue Growth	27.3%	11.4%		18.8%	+8%+27%
Gross Margin *	-10.8%	-9.5%			
Opn Expenses (\$ mil)*	265	242	260-270		
Taxes (\$ mil)	10	(2)			
Diluted Shares (mil)	773.9	813.3			
EPS reported		(\$0.36)			
EPS (excl. charges)	(\$0.54)	(\$0.50)		(\$0.43)	(\$0.64-\$0.25)

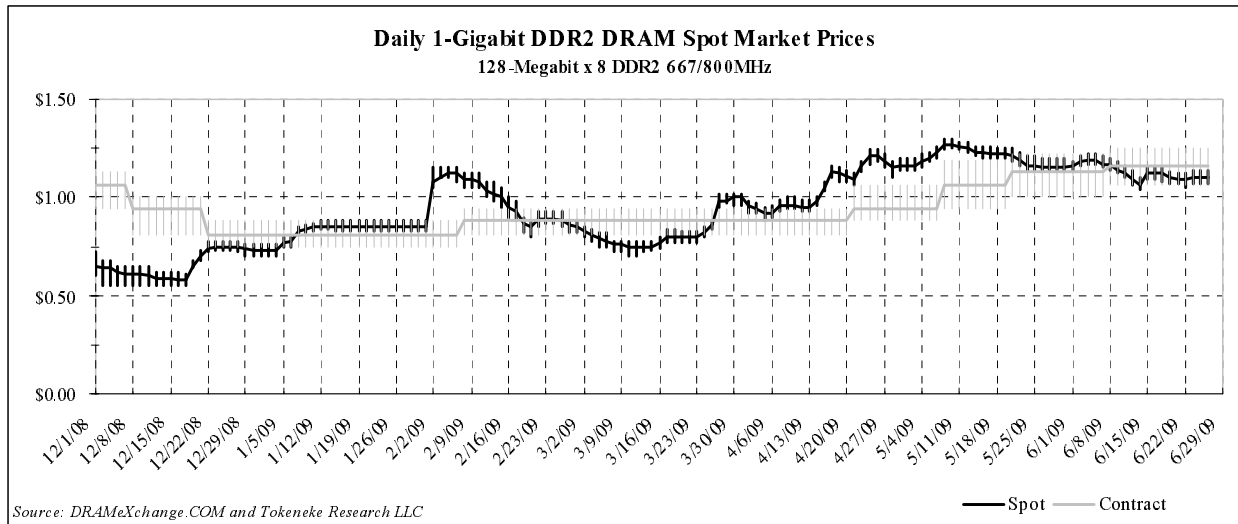
*adjusted for inventory revaluation and charges

Cash flow from operations was positive at \$151M and cash grew by \$374M to \$1.3B after the convert and share offerings. Cap ex totaled \$93M, receivables grew by \$96M to \$750M, inventory expanded by \$140M to \$999 (no write-offs last quarter), and debt grew by the \$230M convert to just over \$3.1B. Wafer output rebounded by a couple percent, as expected.

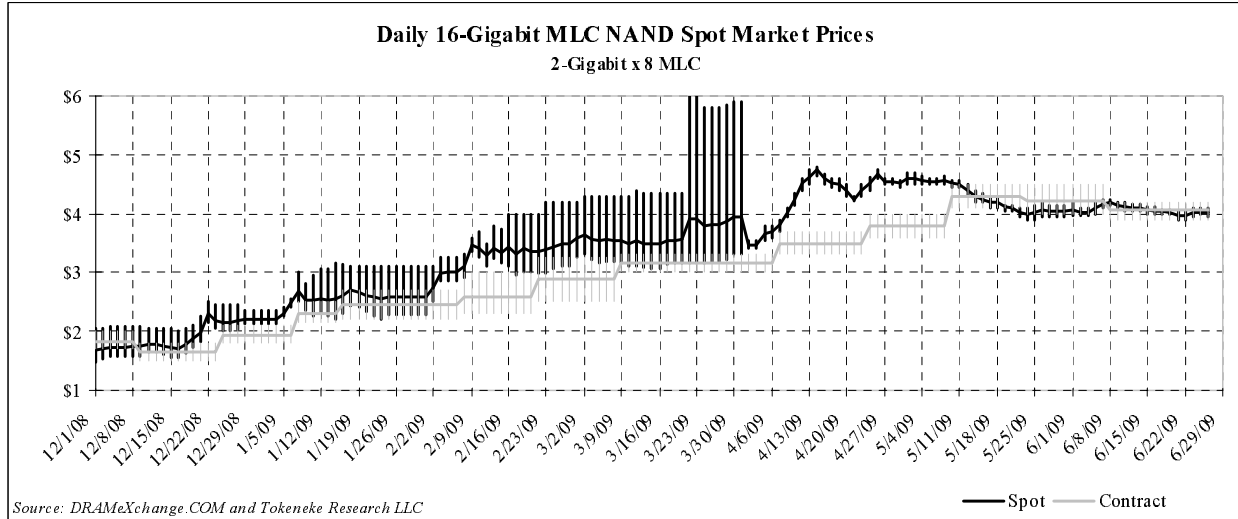
DRAM in the Drivers Seat: Micron is back to being a DRAM company after its sells its image sensors in a couple of weeks and NAND business leverage is tempered by partner Intel. DRAM revenue grew by 14% and accounted for 50% of total sales. Bit sales grew by 18%, ASPs were flat, and cost per bit declined by -11% as DRAMs continued to migrate to 50nm technology from 78 and 68nm. Flat ASPs resulted from increasing commodity PC prices (amid market price improvements and MU leading the conversion to higher priced DDR3 devices) being offset by specialty DRAM sales weakness. Commodity PC sales accounted for 30% of total sales, up from 26%.

Specialty DRAMs are higher-performance devices that face less competition and greater profitability in smaller end-market opportunities used in networks, servers, consumer electronics, communication equipment and certain computer peripherals. Low-power devices go in to portable handheld markets that include smartphones, PDAs, GPSs, and digital cameras. Some of these parts are legacy in generation and most are smaller-density than the mainstream, PC-based DRAMs. Specialty DRAMs used to account for half of all DRAM sales, but this has fallen to under 40%. My earnings model consolidates both PC-based and specialty DRAMs into a single revenue and gross margin profile, mostly due to the difficulty in obtaining pricing and competitive information from the many market niches served by numerous different DRAM device configurations covered under the specialty DRAM umbrella. Unfortunately, this lack of transparency has been an issue for each of the last two quarters.

Inotera Interest: Taiwanese joint-venture fab Inotera (with partners Nanya/Formosa) is still manufacturing former partner Qimonda's trench technology DRAMs, but has established a pilot line running Micron's stack technology. Qimonda's bankruptcy and failure to continue to accept deliveries lead to idle capacity at Inotera and the \$30M COGS charge at MU last quarter. Management expects publicly-traded Inotera to finance its own conversion to Micron's stack technology, and the timeframe when it could begin to receive manufacturing output from Inotera depends on Inotera's financing, technology conversion and production ramp. Eventually, Micron should enjoy a meaningful boost to DRAM output. Separately, potential participation in the Taiwanese Government's recently formed Taiwan Memory Corp. appears increasingly unlikely.



Neutered NAND: NAND sales were flat sequentially and accounted for 38.5% of total revenue. Bit sales growth of 21% was offset by an ASP decline of -17% as costs crashed by an impressive -35% and MU shared this savings with partner Intel on half the output. The ASP on sales to customers other than Intel increased significantly. All NAND wafer starts now occur in 34nm process technology, and this migration from 50nm is driving cost reductions and bit growth. Micron's NAND business is a joint-venture with Intel called IM Flash where both companies share development costs and manufacturing output—which Intel takes at cost. NAND flash is used in USB, flash-drives, solid-state drives, and various memory card configurations for use in PCs, digital cameras, MP3 and MP4 players, and cell phone handsets. Market prices have improved considerably since the end of last year.



CMOS Sensor Divestiture: CMOS image sensors seasonally rebounded nicely: revenue grew by 53% sequentially to 11.5% of total sales from 8%, but gross margin fell to 2.0% from 2.8%. On June 1 management announced the sale of 65% of this business (called Aptina) to private equity firms Riverwood Capital and TPG Capital. Micron will retain 35% ownership and continue to provide certain manufacturing and services, and the deal is expected to close in early-July. A loss of \$53M associated with the sale was posted last quarter and only one-month of operating costs and sales are expected to be reported this quarter. I expect whatever residual financial considerations after this quarter to be reflected on the minority interest line of the income statement.

Management Guidance: For F4Q, DRAM bit production is expected to grow in the mid- to high-teens percentage range; DRAM cost reductions are expected in the low-teens percent; and ASPs for commodity-oriented PC DRAMs have been flat so far this quarter. NAND bit production is expected to grow in the mid-teens percent; NAND cost reductions are expected in the high single-digit percent; and ASPs would be flat to slightly up if current market prices were to hold for the next two months. SG&A is expected at \$75-80M, R&D at \$140-150M (both down on the Aptina divestiture), and capital expenditures around \$100M for a FY09 total of \$650-700M split 65:35 DRAM:NAND and continuing flat for FY10.

Lowering Revenue, Raising Earnings: My earnings model incorporates management guidance for operating costs, and then breaks down revenue and COGS by DRAM, NAND and image sensors. My assumptions include some catching-up of market price increases and a recovery of specialty DRAMs over the next couple of quarters, the phase-out of image sensors in early-July, and half of NAND cost reductions hitting ASPs to accommodate Intel. For DRAM and NAND I make assumptions for bit growth (or manufacturing output), ASP changes (average selling prices), and manufacturing cost per bit changes. For image sensors I make assumptions for revenue growth and gross margin for each quarter. My assumptions by quarter are spelled out in the financial model on page 7, and the table below summarizes the changes in my updated model.

FYE August \$ in millions	FY4Q09		FY09		FY10		FY11
	Previous	Update	Previous	Update	Previous	Update	New
Total Revenue	1,496	1,240	5,156	4,741	7,384	7,033	8,065
Revenue Growth	18.3%	12.1%	-11.7%	-18.8%	43.2%	48.3%	14.7%
Gross Margin	2.8%	0.8%	-15.7%	-12.6%	16.7%	24.7%	28.5%
Operating Expenses	256	223	1,225	1,003	1,104	883	983
Taxes	10	10	37	25	40	40	40
Diluted Shares (mil)	773.9	843.0	773.8	800.9	773.9	1,008.0	1,063.0
Diluted EPS	(\$0.30)	(\$0.34)	(\$2.72)	(\$2.54)	\$0.19	\$0.51	\$0.92

Still Attractive: I am maintaining my Buy recommendation and 12-month target price of \$10 based on a slightly less than historical average, two-times price-sales ratio based on expected revenue this year, divided by 1B shares which includes the anti-dilutive potential common shares that totaled 219.1M a couple of quarters ago.

MU shares continue to trade at record or near-record low valuation levels based on historical trailing price-sales and price-book ratios, as well as lower than average price-sales ratios relative to two separate peer groups identified on page 8. The shares continue to be very attractive from a fundamental valuation perspective.

However, this attraction comes with ample risk worth repeating: significant expected financial losses over the next couple quarters; over \$3.1B in debt against \$1.3B in cash; a dominant and financially robust competitor in Samsung; and participation in two of the most volatile and competitive product markets in the semiconductor industry—NAND and DRAM.

Mitigating factors include: demonstrated and expected positive operating cash flow; multiple joint-venture partner capital expenditure and development subsidies; deep-pocketed partners in Intel and Formosa Plastics; significantly more financially strained competitors across most of the rest of the field in both NAND and DRAM; and significantly improving spot market prices in both of these product areas over the last few months.

I continue to believe there is a significantly favorable risk-reward opportunity in MU shares at current price levels, but it is certainly NOT for the faint of heart.

—Dan K. Scovel
Semiconductor Analyst

Micron Technology

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Income Statement

www.micron.com

dollars in millions, except per share data
fiscal year ends August

	FY07	FY2008				FY08	FY2009 est				FY09	FY2010				FY10	FY2011				FY11
		Q1	Q2	Q3	Q4		Q1A	Q2A	Q3A	Q4		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4	
Total Revenue	5,688	1,535	1,359	1,498	1,449	5,841	1,402	993	1,106	1,240	4,741	1,453	1,721	1,894	1,965	7,033	2,064	1,933	1,998	2,069	8,065
COGS	4,610	1,530	1,402	1,450	1,514	5,896	1,851	1,260	999	1,231	5,341	1,262	1,280	1,358	1,397	5,297	1,439	1,373	1,449	1,505	5,766
Gross Profit	1,078	5	(43)	48	(65)	(55)	(449)	(267)	107	9	(600)	191	441	536	568	1,736	625	560	550	564	2,299
SG&A	610	112	120	116	107	455	102	90	80	78	350	75	75	77	80	307	82	84	87	90	343
R&D	805	163	180	170	167	680	178	168	162	145	653	140	140	144	149	573	153	158	162	167	640
Restructuring	19	13	471	8	4	496	(66)	163	19	-	116	-	-	-	-	-	-	-	-	-	-
Other	(76)	(23)	(42)	(21)	(5)	(91)	9	20	92	20	141	20	20	20	20	80	20	20	20	20	80
Operating Expenses	1,358	265	729	273	273	1,540	223	441	353	243	1,260	235	235	241	248	960	255	262	269	277	1,063
Operating Income	(280)	(260)	(772)	(225)	(338)	(1,595)	(672)	(708)	(246)	(234)	(1,860)	(44)	206	294	320	776	370	298	280	288	1,236
Interest Income	103	9	3	(6)	(9)	(3)	(20)	(31)	(31)	(31)	(113)	(35)	(35)	(35)	(35)	(140)	(35)	(35)	(35)	(35)	(140)
Other Non-Opn Inc.	9	(1)	(6)	-	(6)	(13)	(14)	(3)	(3)	-	(20)	-	-	-	-	-	-	-	-	-	-
Tax Expense	30	7	(4)	13	2	18	13	4	(2)	10	25	10	10	10	10	40	10	10	10	10	40
Minority Interest	(122)	(3)	(6)	8	11	10	13	(5)	(12)	(15)	(19)	(20)	(20)	(20)	(20)	(80)	(20)	(20)	(20)	(20)	(80)
Net Income	(320)	(262)	(777)	(236)	(344)	(1,619)	(706)	(751)	(290)	(290)	(2,037)	(109)	141	229	255	516	305	233	215	223	976
EPS-basic	(\$0.42)	(\$0.34)	(\$1.01)	(\$0.31)	(\$0.45)	(\$2.10)	(\$0.91)	(\$0.97)	(\$0.36)	(\$0.34)	(\$2.54)	(\$0.13)	\$0.17	\$0.27	\$0.30	\$0.61	\$0.36	\$0.28	\$0.26	\$0.26	\$1.16
Shares-basic	769.1	771.9	772.4	772.8	772.9	772.5	773.3	773.9	813.3	843.0	800.9	843.0	843.0	843.0	843.0	843.0	843.0	843.0	843.0	843.0	843.0
EPS-diluted	(\$0.42)	(\$0.34)	(\$1.01)	(\$0.31)	(\$0.45)	(\$2.10)	(\$0.91)	(\$0.97)	(\$0.36)	(\$0.34)	(\$2.54)	(\$0.13)	\$0.13	\$0.22	\$0.24	\$0.51	\$0.29	\$0.22	\$0.20	\$0.21	\$0.92
Shares-diluted	769.1	771.9	772.4	772.8	772.9	772.5	773.3	773.9	813.3	843.0	800.9	843.0	1,063.0	1,063.0	1,063.0	1,008.0	1,063.0	1,063.0	1,063.0	1,063.0	1,063.0
EPS-pro forma	(\$0.39)	(\$0.26)	(\$0.41)	(\$0.31)	(\$0.28)	(\$1.25)	(\$0.72)	(\$0.82)	(\$0.50)	(\$0.50)	(\$2.35)										
Margin Analysis																					
Gross Margin	19.0%	0.3%	-3.2%	3.2%	-4.5%	-0.9%	-32.0%	-26.9%	9.7%	0.8%	-12.6%	13.1%	25.6%	28.3%	28.9%	24.7%	30.3%	29.0%	27.5%	27.3%	28.5%
SG&A	10.7%	7.3%	8.8%	7.7%	7.4%	7.8%	7.3%	9.1%	7.2%	6.3%	7.4%	5.2%	4.4%	4.1%	4.0%	4.4%	4.0%	4.4%	4.4%	4.3%	4.3%
R&D	14.2%	10.6%	13.2%	11.3%	11.5%	11.6%	12.7%	16.9%	14.6%	11.7%	13.8%	9.6%	8.1%	7.6%	7.6%	8.1%	7.4%	8.2%	8.1%	8.1%	7.9%
Operating Expense	23.9%	17.3%	53.6%	18.2%	18.8%	26.4%	15.9%	44.4%	31.9%	19.6%	26.6%	16.2%	13.7%	12.7%	12.6%	13.6%	12.4%	13.6%	13.5%	13.4%	13.2%
Operating Income	-4.9%	-16.9%	-56.8%	-15.0%	-23.3%	-27.3%	-47.9%	-71.3%	-22.2%	-18.8%	-39.2%	-3.0%	12.0%	15.5%	16.3%	11.0%	17.9%	15.4%	14.0%	13.9%	15.3%
Interest/Other Income	2.0%	0.5%	-0.2%	-0.4%	-1.0%	-0.3%	-2.4%	-3.4%	-3.1%	-2.5%	-2.8%	-2.4%	-2.0%	-1.8%	-1.8%	-2.0%	-1.7%	-1.8%	-1.8%	-1.7%	-1.7%
Tax Rate	-17.9%	-2.8%	0.5%	-5.6%	-0.6%	-1.1%	-1.8%	-0.5%	0.7%	-3.8%	-1.3%	-12.7%	5.9%	3.9%	3.5%	6.3%	3.0%	3.8%	4.1%	4.0%	3.7%
Net Income	-5.6%	-17.1%	-57.2%	-15.8%	-23.7%	-27.7%	-50.4%	-75.6%	-26.2%	-23.4%	-43.0%	-7.5%	8.2%	12.1%	13.0%	7.3%	14.8%	12.1%	10.8%	10.8%	12.1%
Qtr-to-Qtr Growth																					
Revenue		6.8%	-11.5%	10.2%	-3.3%		-3.2%	-29.2%	11.4%	12.1%		17.2%	18.4%	10.1%	3.8%		5.0%	-6.3%	3.4%	3.5%	
Operating Expenses		-20.7%	175.1%	-62.6%	0.0%		-18.3%	97.8%	-20.0%	-31.2%		-3.3%	0.0%	2.7%	2.8%		2.8%	2.8%	2.8%	2.8%	
Operating Income		61.5%	197%	-70.9%	50.2%		98.8%	5.4%	-65.3%	-5.0%		-81%	-568.8%	43%	9%		16%	-19.4%	-6%	3%	
Net Income		65.8%	197%	-69.6%	45.8%		105.2%	6.4%	-61.4%	-0.1%		-62%	-229.3%	63%	11%		20%	-23.5%	-8%	3%	
EPS		65.6%	196%	-69.6%	45.7%		105.1%	6.3%	-63.3%	-3.6%		-62%	-202.5%	63%	11%		20%	-23.5%	-8%	3%	
Year-to-Year Growth																					
Revenue	7.9%	0.3%	-4.8%	15.8%	0.8%	2.7%	-8.7%	-26.9%	-26.2%	-14.4%	-18.8%	4%	73%	71.2%	58.5%	48.3%	42%	12%	5.5%	5.3%	14.7%
Operating Expenses	59.8%	-20.2%	86.4%	-9.3%	-18.3%	13.4%	-15.8%	-39.5%	29.3%	-11.0%	-18.2%	5.4%	-46.7%	-31.6%	2.1%	-23.8%	8.5%	11.5%	11.5%	11.5%	10.8%
Operating Income	-180%	-336%	2171%	15.4%	110%	470%	158%	-8.3%	9.3%	-30.9%	16.6%	-93.5%	-129.1%	-220%	-236.9%	-142%	-942.2%	44.8%	-5%	-10.0%	59%
Net Income	-178%	-328%	1394%	4.9%	118%	406%	169%	-3.3%	22.9%	-15.8%	25.8%	-84.6%	-118.8%	-179%	-188.0%	-125%	-379.9%	65.5%	-6%	-12.6%	89%
EPS	-174%	-330%	1387%	4.5%	117%	404%	169.0%	-3.5%	16.8%	-22.8%	21.3%	-85.8%	-113.7%	-161%	-169.8%	-120%	-321.9%	65.5%	-6%	-12.6%	79%

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6/26/09

Micron Technology

Financial Summary

dollars in millions

Fiscal year ends August

	FY2007	FY2008	F3Q08	F4Q08	F1Q09	F2Q09	F3Q09
Assets							
Cash and equivalents	2,616	1,362	1,584	1,362	1,028	932	1,306
Net accounts receivable	<u>994</u>	<u>1,032</u>	<u>995</u>	<u>1,032</u>	<u>1,031</u>	<u>654</u>	<u>750</u>
Quick Assets	3,610	2,394	2,579	2,394	2,059	1,586	2,056
Inventory	1,532	1,291	1,453	1,291	883	859	999
Other	<u>92</u>	<u>94</u>	<u>97</u>	<u>94</u>	<u>95</u>	<u>78</u>	<u>73</u>
Current Assets	5,234	3,779	4,129	3,779	3,037	2,523	3,128
Property, plant and eqt net	8,279	8,811	8,721	8,811	8,460	7,910	7,536
Goodwill and intangibles	916	364	433	364	354	382	382
Long-term equities	0	84	0	84	432	371	
Other	<u>389</u>	<u>392</u>	<u>333</u>	<u>392</u>	<u>393</u>	<u>340</u>	<u>618</u>
Total Assets	14,818	13,430	13,616	13,430	12,676	11,526	11,664
Liabilities and Shareholders Equity							
Current portion l-t debt	423	275	262	275	343	353	372
Accounts payable	1,385	1,111	1,374	1,111	943	950	1,037
Deferred Income	84	114	80	114	192	195	
Other	<u>134</u>	<u>98</u>	<u>68</u>	<u>98</u>	<u>157</u>	<u>139</u>	<u>416</u>
Current Liabilities	2,026	1,598	1,784	1,598	1,635	1,637	1,825
Long-term debt	1,987	2,451	2,159	2,451	2,523	2,542	2,752
Other	<u>446</u>	<u>338</u>	<u>354</u>	<u>338</u>	<u>332</u>	<u>261</u>	<u>260</u>
Total Liabilities	4,459	4,387	4,297	4,387	4,490	4,440	4,837
Minority interest	2,607	2,865	2,811	2,865	2,702	2,344	2,130
Common stock	6,595	6,642	6,634	6,642	6,650	6,662	
Retained earnings	1,164	(456)	(112)	(456)	(1,162)	(1,913)	
Other	<u>(7)</u>	<u>(8)</u>	<u>(14)</u>	<u>(8)</u>	<u>(4)</u>	<u>(7)</u>	
Total Shareholders Equity	7,752	6,178	6,508	6,178	5,484	4,742	4,697
Total Liabilities and Equity	14,818	13,430	13,616	13,430	12,676	11,526	11,664
Sales and Income							
Revenue	5,688	5,841	1,498	1,449	1,402	993	1,106
COGS	4,610	5,896	1,450	1,514	1,851	1,260	999
Net income	(320)	(1,619)	(236)	(344)	(706)	(751)	(290)
Other							
Capital Expenditures	4,090	2,916	577	759	334	139	93
Depreciation and Amortization	1,718	2,060	513	532	594	540	514
Shares (weighted average diluted)	769	773	772.8	772.9	773.3	773.9	813.3
Employees (units)		23,509		23,509	21,888	20,794	
Cash Flow from Operations	937	1,018	217	243	359	339	151
Ratios							
Liquidity							
Quick Ratio	1.78	1.50	1.45	1.50	1.26	0.97	1.13
Current Ratio	2.58	2.36	2.31	2.36	1.86	1.54	1.71
Leverage							
Debt Ratio	0.30	0.33	0.32	0.33	0.35	0.39	0.41
Long-term Debt/Capital	0.16	0.21	0.18	0.21	0.23	0.24	0.26
Asset Management							
Fixed Asset Turnover	1.4	0.7	0.69	0.66	0.65	0.49	0.57
Total Asset Turnover	0.8	0.4	0.88	0.43	0.43	0.33	0.38
Receivables DSO	63	64	60	64	66	59	61
Inventory Days	120	79	90	77	43	61	90
Inventory Turnover	6.0	4.2	3.99	4.41	6.81	5.79	4.30
Annual Revenue/Employee					0.247	0.186	0.213
Profitability							
Gross Margin	19.0%	-0.9%	3.2%	-4.5%	-32.0%	-26.9%	9.7%
Net Margin	-5.6%	-27.7%	-15.8%	-23.7%	-50.4%	-75.6%	-26.2%
Return on Assets	-4.3%	-11.5%	-13.9%	-10.2%	-21.6%	-24.8%	-10.0%
Return on Equity	-8.3%	-23.2%	-29.0%	-21.7%	-48.4%	-58.8%	-24.6%
Per Share Data							
Book Value/Share	\$10.08	\$8.00	\$8.42	\$7.99	\$7.09	\$6.13	\$5.78
Tangible Book Value/Share	\$8.89	\$7.53	\$7.86	\$7.52	\$6.63	\$5.63	\$5.31
Cash/Share (gross)	\$3.40	\$1.76	\$2.05	\$1.76	\$1.33	\$1.20	\$1.61
Cash/Share (net)	\$0.27	(\$1.77)	(\$1.08)	(\$1.76)	(\$2.38)	(\$2.54)	(\$2.24)
Earnings/Share	(\$0.42)	(\$2.10)	(\$0.31)	(\$0.45)	(\$0.91)	(\$0.97)	(\$0.36)

Micron Technology

Financial Model

dollars in millions
fiscal year ends August

	FY2008 act				FY2009 est				FY2010				FY2011			
	1Q	2Q	3Q	4Q	1QA	2QA	3QA	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
DRAM																
Bits Sold	25.0%	0.0%	10.0%	-5.0%	35.0%	0.0%	14.5%	17.0%	15.0%	30.0%	15.0%	10.0%	10.0%	10.0%	10.0%	10.0%
ASP change	-20.0%	-15.0%	-5.0%	0.0%	-34.0%	-30.0%	0.0%	10.0%	10.0%	10.0%	-5.0%	-7.0%	-7.5%	-7.5%	-7.5%	-7.5%
Revenue	859.5	748.4	802.7	763.9	689.2	483.0	553.0	711.8	900.4	1,287.6	1,406.7	1,439.0	1,464.2	1,489.8	1,515.9	1,542.4
Royalties (included)	5.0	-	-	38.0	36.0	33.0	32.0									
Revenue growth		-12.9%	7.3%	-4.8%	-9.8%	-29.9%	14.5%									
Revenue % (incl roy)	56.0%	55.1%	53.6%	52.7%	49.2%	48.6%	50.0%									
Production Bits		0.0%	15.0%	15.0%	23.0%	-8.0%	15.0%									
DDR2/3 Revenue	491.2	407.7	449.4	405.7	350.5	258.2	331.9									
DDR2/3 Revenue %	32.0%	30.0%	30.0%	28.0%	25.0%	26.0%	30.0%									
Cost/bit change	-10.0%	-15.0%	-15.0%	-5.0%	-12.0%	-5.0%	-11.0%	-13.0%	-9.0%	-9.0%	-8.0%	-8.0%	-8.0%	-8.0%	-8.0%	-8.0%
Gross Margin	5.0%	2.6%	12.1%	17.7%	-13.0%	-36.0%	-29.0%	-11.7%	5.8%	26.9%	30.2%	30.8%	30.6%	30.5%	30.4%	30.2%
Gross Profit	43.0	19.7	97.4	135.5	(89.4)	(174.0)	(160.4)									
COGS	816.5	728.6	705.3	628.4	778.6	657.0	713.4	795.3	848.0	941.4	982.1	996.5	1,015.8	1,035.5	1,055.6	1,076.1
NAND																
Bits Sold	60.0%	30.0%	40.0%	10.0%	40.0%	-8.0%	20.3%	15.0%	20.0%	-10.0%	25.0%	20.0%	20.0%	-15.0%	25.0%	20.0%
ASP change	-30.0%	-30.0%	-20.0%	-20.0%	-24.0%	-13.0%	-17.0%	0.0%	-6.0%	-13.0%	-10.0%	-10.0%	-5.0%	-13.0%	-13.0%	-9.0%
Revenue	506.6	475.7	524.3	507.2	532.8	427.0	426.3	490.3	553.1	433.0	487.2	526.1	599.8	443.6	482.4	526.7
Revenue growth		-6.1%	10.2%	-3.3%	5.0%	-19.9%	-0.2%									
Revenue %	33.0%	35.0%	35.0%	35.0%	38.0%	43.0%	38.5%									
Production Bits		30.0%	55.0%	12.0%	17.0%	-5.0%	30.0%									
Cost/bit change	-15.0%	-25.0%	-25.0%	-15.0%	-14.0%	-25.0%	-35.0%	-8.0%	-12.0%	-12.0%	-12.0%	-12.0%	-10.0%	-10.0%	-10.0%	-10.0%
Gross Margin	-6.7%	-18.4%	-18.4%	-24.9%	-34.9%	-29.2%	-20.7%	18.8%	25.1%	21.9%	22.8%	23.8%	29.4%	23.8%	18.5%	18.6%
gm est	-6.7%	-17.0%	-20.7%	-25.3%	-37.7%	-32.3%	13.2%									
Gross Profit	(34.0)	(80.7)	(108.4)	(128.5)	(200.6)	(138.0)	56.1									
COGS	540.5	556.4	632.7	635.6	733.4	565.0	370.3	398.1	414.4	338.3	375.9	400.8	423.5	337.8	393.1	428.6
Memory Revenue																
Revenue	1,366.0	1,224.0	1,327.0	1,271.0	1,222.0	910.0	979.4									
Revenue Growth		-10.4%	8.4%	-4.2%	-3.9%	-25.5%	7.6%									
Revenue %	89.0%	90.1%	88.6%	87.7%	87.2%	91.6%	88.5%									
Gross Profit	(39.0)	(76.0)	(11.0)	(115.0)	(502.0)	(269.0)	107.73									
Gross Margin	-2.9%	-6.2%	-0.8%	-9.0%	-41.1%	-29.6%	11.0%									
Adjusted Gross Profit	9.0	(61.0)	(11.0)	77.0	(290.0)	(312.00)	(104.27)									
Adjusted Gross Margin	0.7%	-5.0%	-0.8%	6.1%	-23.7%	-34.3%	-10.6%									
COGS	1,357.0	1,285.0	1,338.0	1,194.0	1,512.0	1,222.0	1,083.7									
Image Sensors																
Revenue	169.0	135.0	171.0	178.0	180.0	83.0	127.0	38.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Revenue growth		-20.1%	26.7%	4.1%	1.1%	-53.9%	53.0%	-70.0%	-100.0%							
Revenue %	11.0%	9.9%	11.4%	12.3%	12.8%	8.4%	11.5%									
Gross Profit	44.0	33.0	59.0	50.0	53.0	2.0										
Gross Margin	26.0%	24.4%	34.5%	28.1%	29.4%	2.4%	2.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
COGS	125.0	102.0	112.0	128.0	127.0	81.0	124.5	37.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL																
Revenue	1,535.0	1,359.0	1,498.0	1,449.0	1,402.0	993.0	1,106.4	1,240.2	1,453.4	1,720.6	1,893.8	1,965.2	2,064.0	1,933.4	1,998.3	2,069.2
Royalty	5.0				38.0	33.0	32.0									
Revenue growth		-11.5%	10.2%	-3.3%	-3.2%	-29.2%	11.4%	12.1%	17.2%	18.4%	10.1%	3.8%	5.0%	-6.3%	3.4%	3.5%
COGS	1,482.0	1,387.0	1,450.0	1,392.0	1,639.0	1,303.0	1,208.1	1,230.8	1,262.4	1,279.8	1,358.0	1,397.2	1,439.3	1,373.4	1,448.7	1,504.7
Gross Profit	53.0	(28.0)	48.0	57.0	(237.0)	(310.0)	(101.7)	9.4	191.1	440.8	535.8	567.9	624.7	560.0	549.5	564.4
Gross Margin	3.5%	-2.1%	3.2%	3.9%	-16.9%	-31.2%	-9.2%	0.8%	13.1%	25.6%	28.3%	28.9%	30.3%	29.0%	27.5%	27.3%
Reported																
Revenue	1,535.0	1,359.0	1,498.0	1,449.0	1,402.0	993.0	1,106.0									
COGS	1,530.0	1,402.0	1,450.0	1,514.0	1,851.0	1,260.0	999.0									
Gross Margin	0.3%	-3.2%	3.2%	-4.5%	-32.0%	-26.9%	9.7%									
Adjusted COGS	1,482.0	1,387.0	1,450.0	1,392.0	1,639.0	1,303.0	1,211.0									
Adjusted Gross Margin	3.5%	-2.1%	3.2%	3.9%	-16.9%	-31.2%	-9.5%									

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6/26/09

Micron Technology

Valuation

Relative Valuation

Company	Ticker	Price 6/25/09	52-Week		CY EPS				CY P/E				Diluted Shares(mil)	CAP (\$ mil)	Price-Sales			FY Ends	
			Low	High	2007	2008	2009	2010	2007	2008	2009	2010			TTM	Cur FY	Nxt FY		
Micron Technology *	MU	5.30	1.59 - 7.47		-0.80	-1.72	-1.79	0.88	NM	NM	NM	6.0	813	4,310	0.9	0.9	0.6	Aug	
Advanced Micro Devices	AMD	3.64	1.62 - 6.47		-2.59	-1.96	-1.96	-1.09	NM	NM	NM	NM	626	2,279	0.4	0.5	0.5	Dec	
Atmel	ATML	3.62	2.50 - 4.69		0.16	0.17	-0.07	0.12	22.6	21.3	NM	30.2	467	1,691	1.2	1.4	1.2	Dec	
Intel *	INTC	16.31	12.05 - 24.75		1.16	0.92	0.57	0.73	14.1	17.7	28.6	22.3	5,634	91,891	2.6	3.1	2.8	Dec	
STMicroelectronics	STM	7.48	3.73 - 13.74		0.44	0.44	-0.89	0.05	17.0	17.0	NM	NM	874	6,540	0.7	0.9	0.8	Dec-ADR	
Texas Instruments *	TXN	21.35	13.38 - 29.30		1.80	1.51	0.85	1.24	11.9	14.1	25.1	17.2	1,277	27,264	2.4	2.9	2.8	Dec	
Average									16.4	17.5	26.9	23.2				1.5	1.8	1.6	
Company	Ticker	Price 6/25/09	52-Week		CY EPS				CY P/E				Diluted Shares(mil)	CAP (\$ mil)	Price-Sales			FY Ends	
			Low	High	2007	2008	2009	2010	2007	2008	2009	2010			TTM	Cur FY	Nxt FY		
Micron Technology *	MU	5.30	1.59 - 7.47		-0.8	-1.72	-1.79	0.88	NM	NM	NM	6.0	813	4,310	0.9	0.9	0.6	Aug	
Integrated Silicon Solutions	ISSI	2.81	1.31 - 5.85		0.49	0	-0.41	-0.14	5.7	NM	NM	NM	26	72	0.4	0.5	0.5	Sep	
OmniVision	OVTI	11.10	4.12 - 13.23		1.47	0.47	-0.53	0.14	7.6	23.6	NM	79.3	50	555	1.1	1.3	1.1	Apr	
SanDisk	SNDK	14.46	5.07 - 23.50		1.72	-2.13	-0.83	0.05	8.4	NM	NM	NM	227	3,275	1.0	1.3	1.2	Dec	
SMART Modular	SMOD	2.58	0.76 - 4.25		0.86	0.39	0.09	0.24	3.0	6.6	28.7	10.8	64	164	0.3	0.4	0.3	Aug	
STEC	STEC	23.50	3.42 - 24.62		0.23	0.31	1.19	1.63	NM	75.8	19.7	14.4	49	1,154	4.8	4.8	4.0	Dec	
Average									6.2	35.3	24.2	34.8				1.5	1.7	1.4	

* Tokeneke estimate
Source: consensus as of 6/23/09

Historical Valuation

Company	Ticker	Price 6/25/09	Trailing 12-month								
			Price/Earnings		Price/Sales		Price/Book				
			Current	Historical*	Current	Historical*	Current	Historical*			
Micron Technology	MU	\$5.30	NM		0.8		0.9				
			Average	50.6	Average	2.7	Average	2.5			
			High	568.0	High	9.0	High	9.8			
			Low	4.6	Low	0.8	Low	0.6			

* weekly since 1990

The Company

Tokeneke Research is an independent research firm specializing in semiconductor industry business issues, providing fundamental research focused on US equities across all market capitalizations within the sector to investors. The company was founded in 2005 and is based in Connecticut.

The Offering

- *Monthly Newsletter:* A summarized review of noteworthy industry business developments, sales statistics, and sector equity market performance, as well as a near-term and annual outlook for sector business fundamentals and share prices. This report typically includes two pages of text and a handful of recurring charts and tables. It is intended for relatively broad-based distribution.
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My Background

I have an electrical engineering background, nearly 12 years of semiconductor industry experience, and was on Wall Street for nearly eight years where I was selected as the Best On The Street semiconductor analyst for 2002 by The Wall Street Journal, and third-rated Best of the Best across all sectors.

I obtained my undergraduate BS degree in electrical engineering from the University of Washington, and my MBA from Santa Clara University. My industry experience consists of nearly 12 years in various technical sales and marketing roles at four different semiconductor firms located in Silicon Valley beginning with Advanced Micro Devices in 1984, followed by two small start-up companies, and ending at Cirrus Logic where I supported the firm's Japanese market development. I joined Fahnestock & Co. as a senior semiconductor analyst in 1996 and was recruited by Needham & Co. in April 2000.

My formal coverage list as a sell-side analyst included the following equities: AMD, ALSC, ALTR, ARTI, ATML, CUBE, CY, ESST, GNSS, INTC, ISSI, LSI, MOSY, MU, OIIM, OVTI, RMTR, SIII, SMSC, STEC, SVTG, TDFX, TSRA, TXN, and ZRAN.

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