

Equity Research

Robert J. Sullivan IV

Micron Technology



Recommendation

BUY

Ticker Symbol (NYSE)

MU

Price (1/15/2018)

\$42.81

Style Large Cap Growth

Sector Technology - Semiconductors

Industry Memory Chips

Beta 1.74

EPS & Revenue Forecasts

FY Ended	Sep 2015	Sep 2016	Aug 2017	(3 yr annlzd) Growth	2018-E
Revenue (M)	\$ 16,192	\$ 12,399	\$ 20,322	7.9%	\$ 21,921
EBITDA (M)	\$ 5,651	\$ 3,214	\$ 9,845	20.3%	\$ 11,846
EPS (Basic)	\$ 2.71	\$ (0.27)	\$ 4.67	19.9%	\$ 5.60

Key Statistics

52-wk. Price Range (Low - High) **\$21.49 : \$49.89**

Average Daily Volume **40.89 M**

Shares Outstanding **1.09 B**

Market Value (\$U.S.) **\$46.62 B**

Total Debt/Equity **57%**

Cash per share (\$U.S.) **\$ 4.69**

Book Value per share **\$ 17.10**

Dividend and Yield - -

Valuation Summary

	Last	High	5-Year Low	Avg.	Rel. to Industry
P/E (TTM)	9.2x	17.3x	6.7x	11.1x	40.2x
P/Book	2.5x	3.7x	2.9x	3.0x	11.4x
P/Sales	2.3x	4.7x	2.2x	3.1x	5.0x
EV/EBITDA	5.9x	26.4x	18.2x	16.8x	16.8x

Growth Summary

	YoY	2015	2016	2017	Average
Sales (growth)	-1.0%	-23.4%	63.9%	13.2%	
EBITDA (margin)	34.9%	25.9%	48.4%	36.4%	
Net Income (margin)	17.9%	-2.2%	25.0%	13.6%	
EPS basic (growth)	-5.0%	-	+	19.0%	
Dividends per Share (growth)	-	-	-	-	

Profitability Ratios

	2017	High	5-Year Low	Average	Industry Average
Return on Assets (%)	11.9%	11.9%	0.6%	8.2%	9.7%
Return of Equity (%)	31.4%	33.2%	-2.1%	22.6%	22.0%
Return on Invested Capital (%)	14.0%	14.0%	0.7%	9.7%	12.0%
Gross Margin	42.0%	42.0%	20.2%	32.9%	52.8%
EBITDA Margin	48.4%	48.4%	24.8%	37.2%	39.3%
NI Margin	25.0%	25.0%	-2.2%	17.5%	32.8%

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Company Profile

Micron Technology, Inc., is an industry leader in innovative memory and storage solutions. Global brands include – Micron®, Crucial®, and Ballistix®.

Microns portfolio of high-performance memory and storage technologies, includes; DRAM, NAND, NOR Flash, 3d XPoint™

Memory and storage solutions enable disruptive trends, including;

Artificial Intelligence, Machine Learning, Autonomous Vehicles

Key Market Segments Include; Cloud, Data Center, Networking, Mobile

Micron manufactures their products worldwide, through wholly-owned and joint venture facilities.

Inotera (now known as MTTW) was wholly acquired on December 6, 2016.

Inotera manufactures DRAM products in their 300mm wafer fabrication facility located at Taoyuan City, Taiwan.

Operations

	Net Sales 2017	YoY G%	Op. Income 2017	YoY G%	Geographic Region	Sales 2017	YoY G%
CNBU	\$ 8,624	90%	\$ 3,755	+	China	\$ 10,388	96%
SBU	\$ 4,514	38%	\$ 552	+	USA	\$ 2,763	44%
MBU	\$ 4,424	72%	\$ 927	856%	Taiwan	\$ 2,544	67%
EBU	\$ 2,695	39%	\$ 975	106%	Asia Pacific	\$ 1,808	12%
All Other	\$ 65	-35%	\$ 23	-18%	Europe	\$ 1,360	45%
Consolidated	\$ 20,322	64%	\$ 6,232	1285%	Japan	\$ 1,025	23%

Four Business Units, which are reportable segments:

Compute and Networking Business Unit (CNBU)

Includes memory products sold into compute, networking, graphics, and cloud server markets.

Storage Business Unit (SBU)

Includes memory and storage products sold into enterprise, client, cloud, and removable storage markets.

SBU also Includes products sold to Intel through our IMFT joint venture*.

Mobile Business Unit (MBU)

Includes memory products sold into smartphone, tablet, and other mobile-device markets.

Embedded Business Unit (EBU)

Includes memory products sold into automotive, industrial, connected home, & consumer electronics markets.

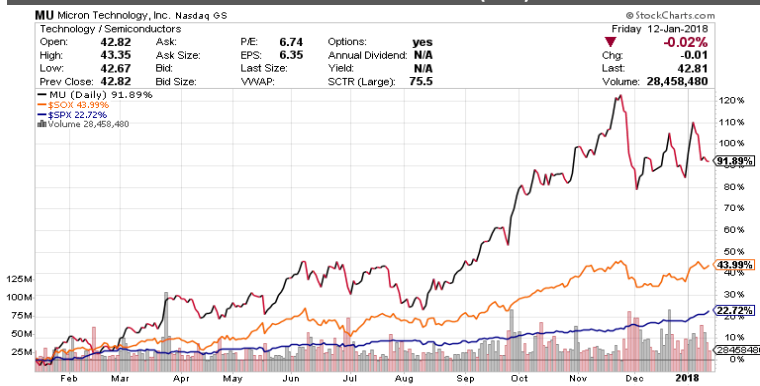
Bull Case

- Rapid Growth
- Well Positioned to capitalize on rapidly increasing demands for memory and storage technologies.
- Synergistic vertical-integration with the 2016 acquisition of Inotera.
- Strengthening financial position. In FY 2017, retired \$1.5B of high-yield debt.
- Attractive Valuation

Bear Case

- Intense Competition; lowers margins, requires constant innovation.
- Highly Cyclical Industry.
- Recently parted ways with Intel, will discontinue joint development venture, IMFT. This could increase future R&D expense.

One-Year Price Performance vs. S&P 500 vs. (SOX) Semiconductor Index



Liquidity Ratios

	2017	High	5-Year Low	Average	Industry Average
Current Ratio	2.33x	2.33x	1.96x	2.20x	2.50x
Quick Ratio	1.71x	1.71x	1.30x	1.54x	1.50x
Total Debt/Equity	57%	77%	56%	58%	16%
Total Liab/Total Assets	45%	53%	45%	46%	26%
Avg Cash Conv. Cycle (days)	97.8	121.4	83.7	97.7	91.2