

# Micron Technology

September 6, 2025

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# Overview



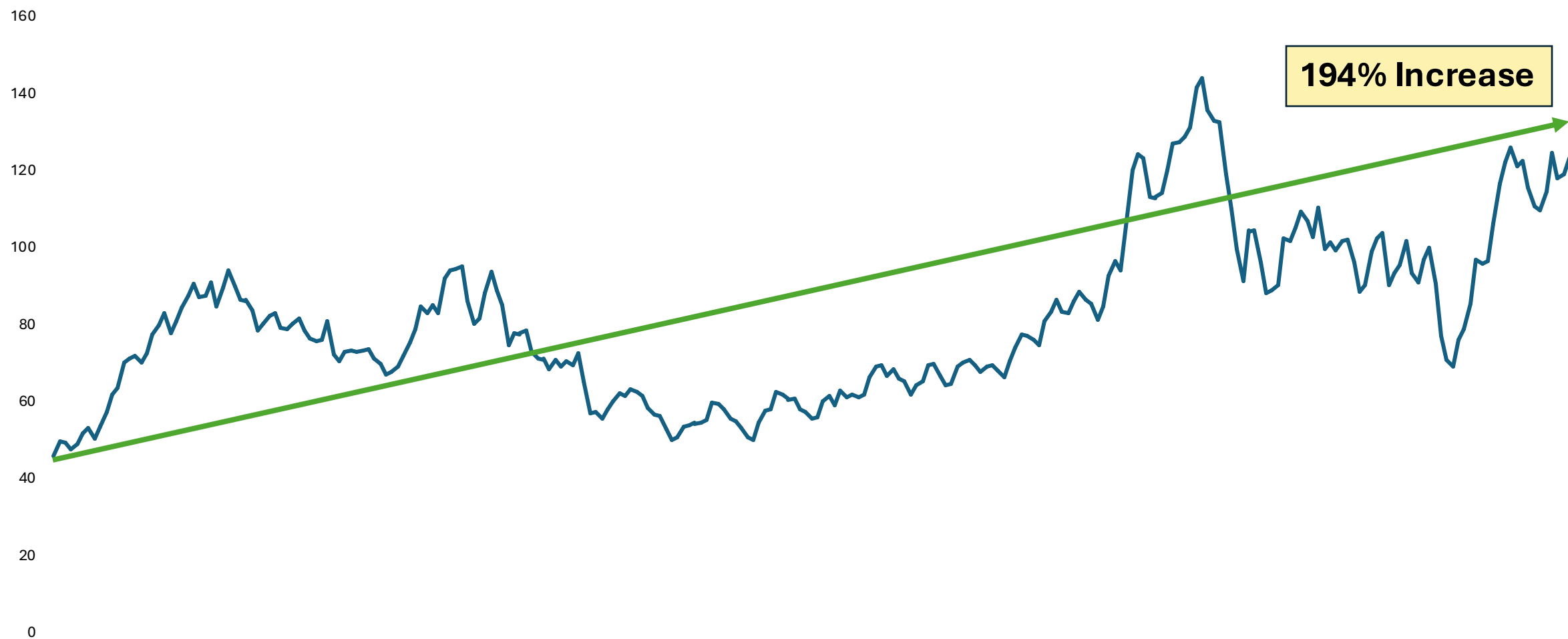
**Ticker: MU**

**Stock Price:**  
**\$131.37**

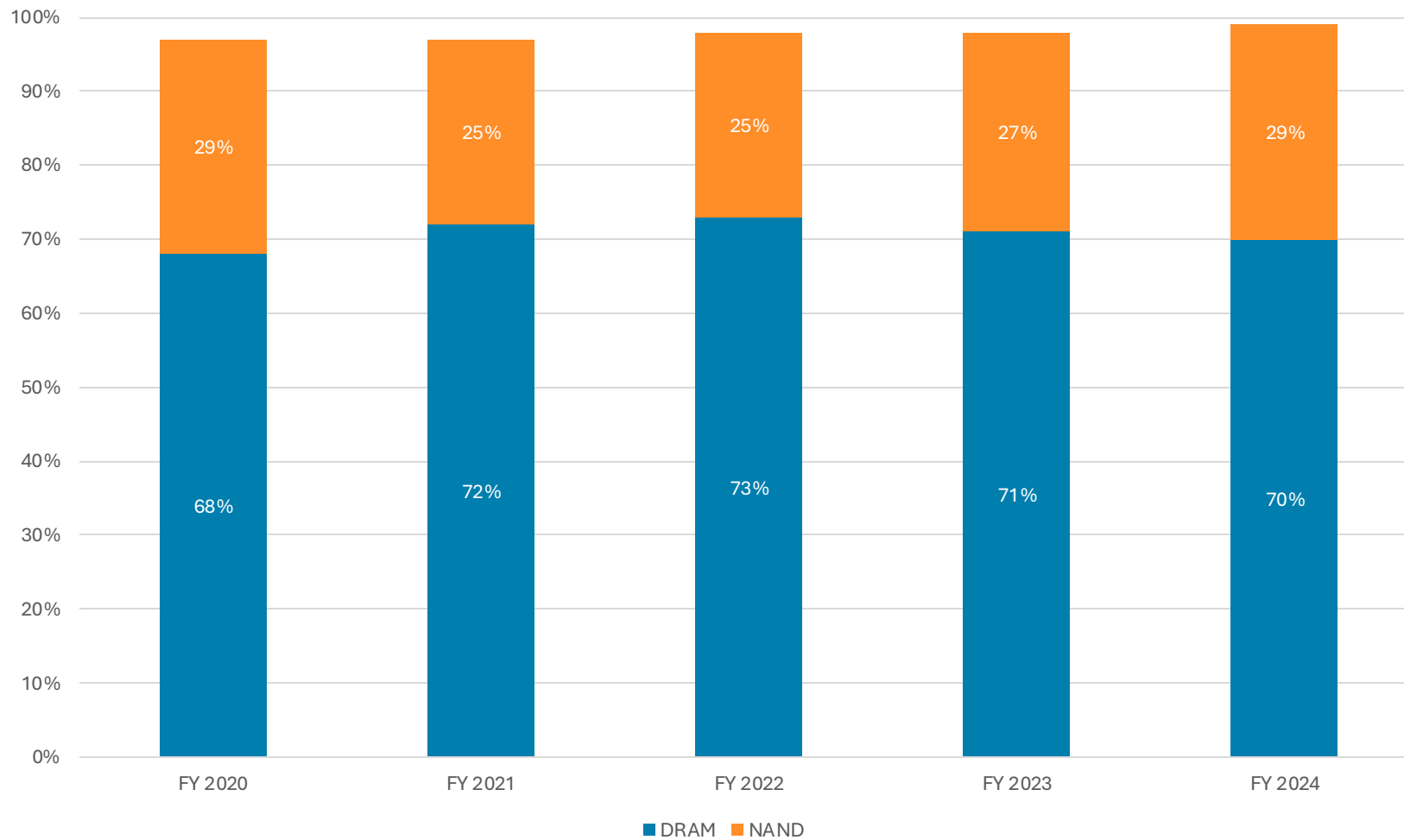
- One of the leading memory chip manufacturers
  - The only one in the United States
- \$25.11 billion in worldwide sales in FY2024
  - 52% US, 48% International (12% China)
- Market capitalization of ~\$148 billion
- CEO Sanjay Mehrotra has led Micron since 2017

# 5 Year Stock Performance (since Sep. 2020)

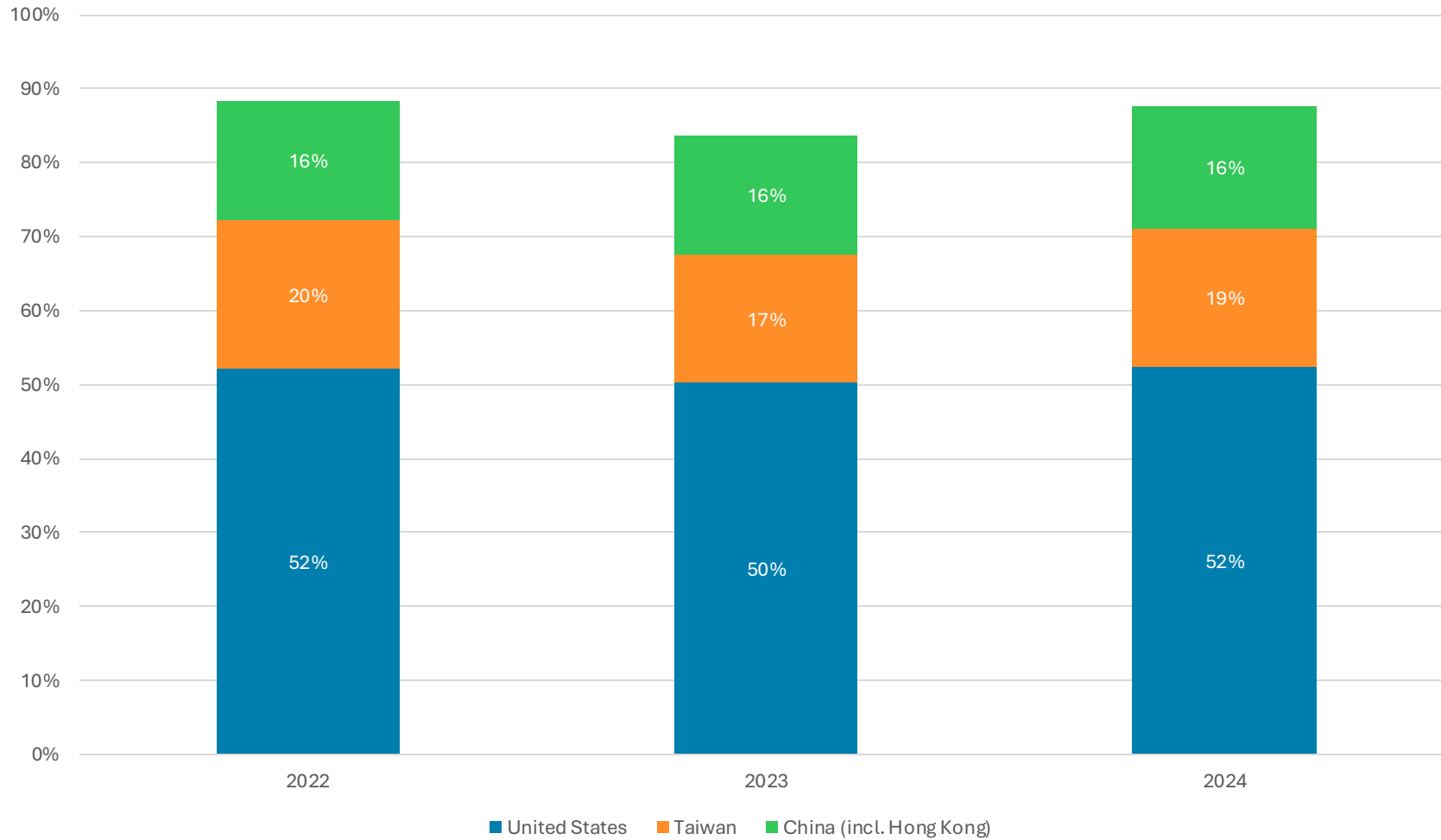
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# Revenue by Technology



# Revenue by Region



# Industry Overview

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- DRAM
  - Only 3 players: Micron, SK Hynix, and Samsung
  - Core to the AI chip revolution
  - High Bandwidth Memory (HBM) is supply constrained; quickly sold out
- NAND
  - Micron, SK Hynix, Samsung, Kioxia + Western Digital (joint venture)
  - Core to servers
- Very cyclical
  - Just coming off one of the worst downturns in over a decade

# DRAM Background

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- DDR invented in the late 1990s
- Industry consolidates after Qimonda bankruptcy (2009) and Micron's acquisition of Elpida (2013)
  - The market becomes a three-player oligopoly
- Sold as standardized “bits”:
  - DDR(PC/Server)
  - LPDDR(Mobile/Edge)
  - GDDR(Graphics)
  - HBM(AI/accelerators).
- HBM3 sold out; HBM4 in production
  - AI is driving demand for HBM



# NAND Background

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- 1987: NAND invented at Toshiba.
- Raw NAND
  - Requires external controller
  - SLC = 1 bit (highest performance)
  - MLC = 2 bits
  - TLC = 3 bits
    - Mainstream data center workhorse
    - AI data centers are almost entirely TLC
  - QLC = 4 bits (cheapest)
- Managed NAND
  - Includes an integrated controller to handle tasks

# Competitive Standing

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- The only advanced memory manufacturer in the United States
- Existing Chinese restrictions avoids trade risk
  - Chinese government blocked use of Micron chips in critical infrastructure in 2023
  - Less likely to face any more investigations, export controls, etc.
  - Optionality to be unbanned - although this is a low probability
- Minimal exposure to China
  - Revenue exposure from China (~10-13%) vs SK Hynix (>20%)
  - Fewer manufacturing operations in China vs SK and Samsung
- Companies cannot risk single supplier = buy from all three makers

# Competitive Advantage

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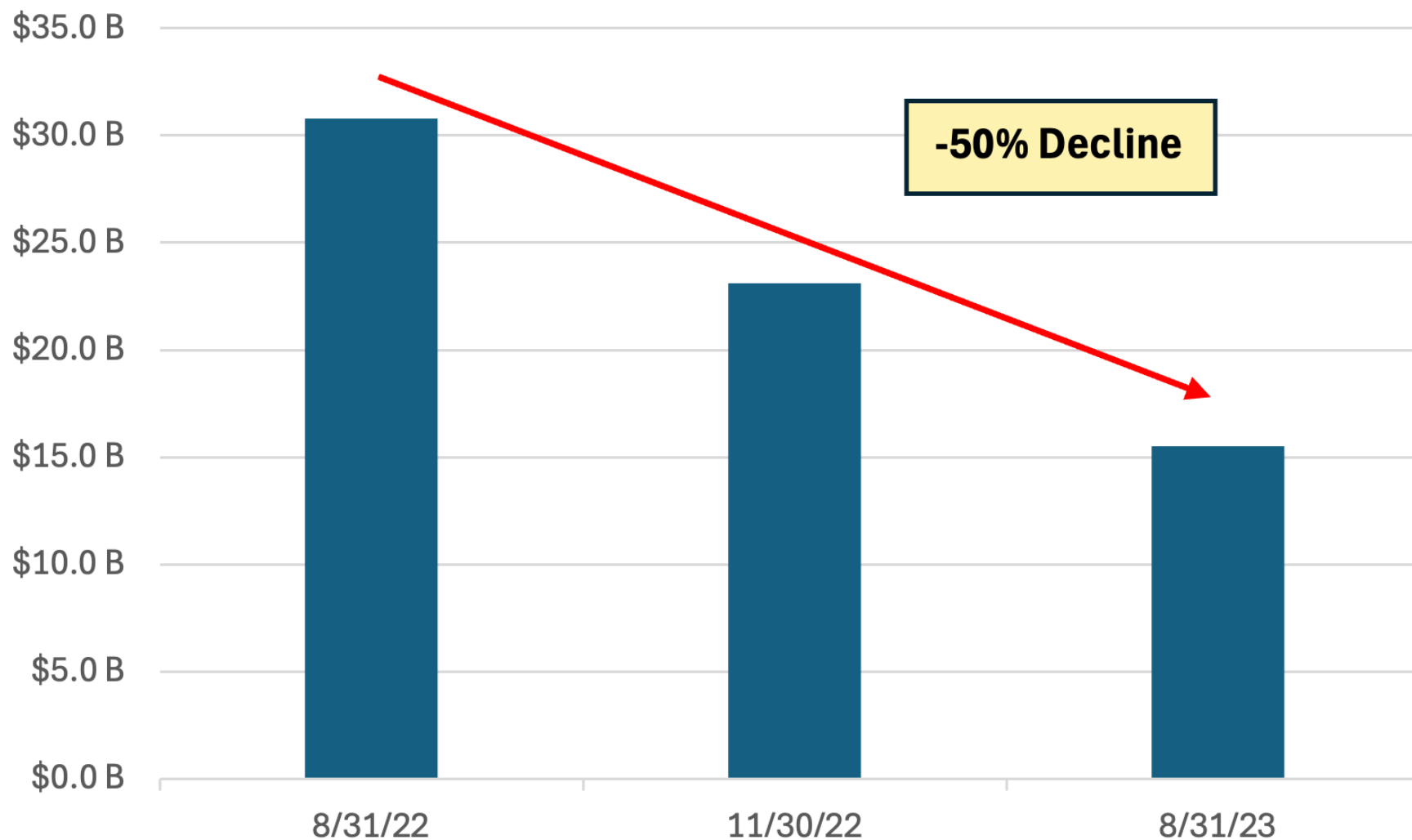
- Extremely capital-intensive business
  - Fabs cost billions to build, maintain, and upgrade
  - R&D requires billions
- Expertise is built over decades
- China has the money but is subject to export controls
- No way to enter the high-end DRAM or NAND market anymore
- No new competitors can come in and customers have to buy from at least two (usually all three) of the manufacturers b/c of short supply + single source risk
- Micron's G9 NAND offers the best performance, SK's 321 NAND offers superior efficiency

# Why now?

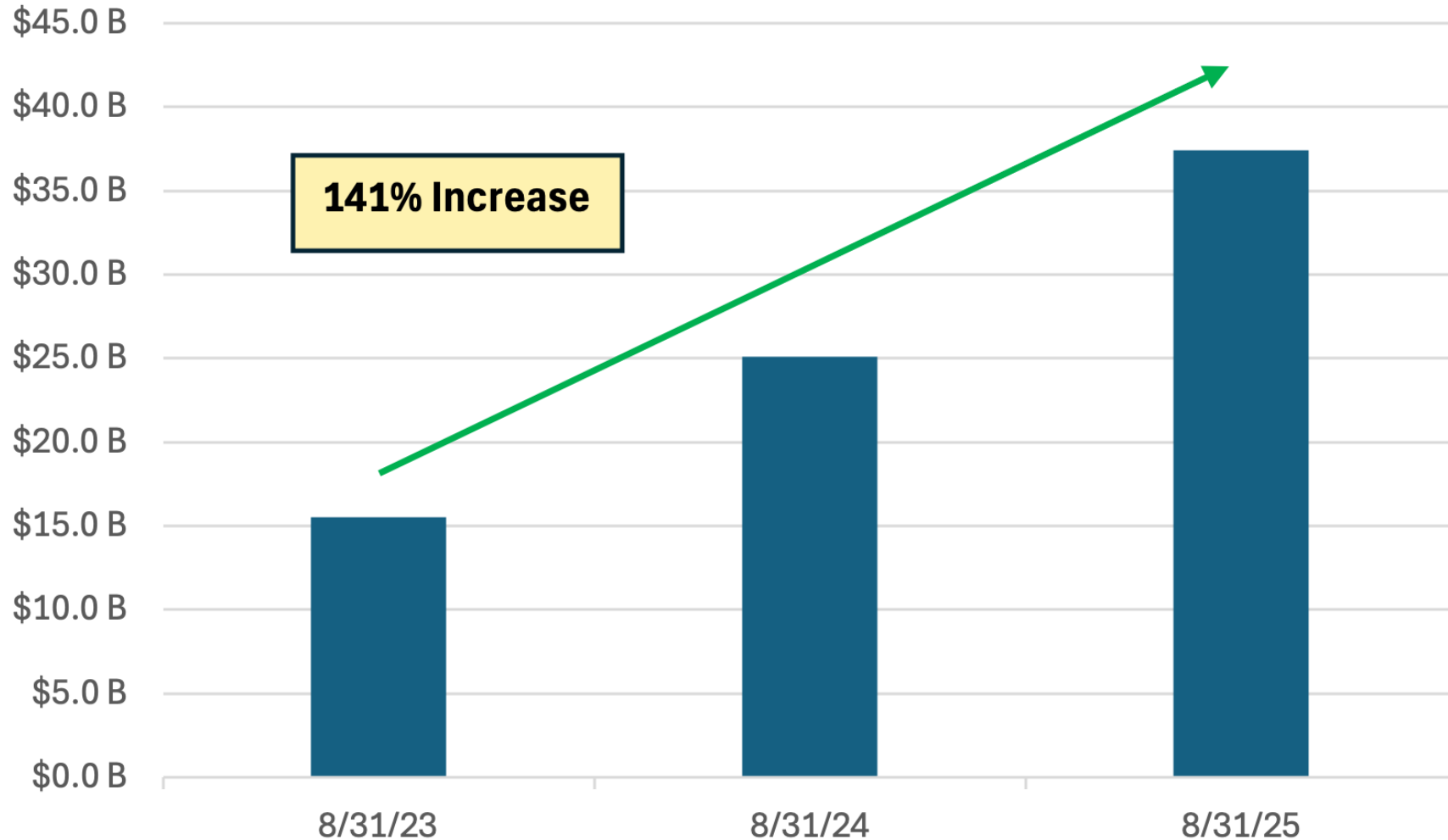
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- Continued high demand; supply
- Data center buildout requires DRAM and NAND
- Demand far exceeds supply
  - HBM supply will still fall short for next two years
  - “Micron’s bit supply growth in fiscal 2024 remains below our demand growth for both DRAM and NAND, and we expect to decrease our days of inventory in FY24.” – Micron, FQ2’24
  - “We expect Micron’s supply growth in calendar 2025 to be lower than industry demand growth for both DRAM and NAND.” – Micron, FQ2’25
- Micron has ~22% market share vs SK Hynix (~39%) and Samsung (~33%)
  - Low market share of a large and growing market gives it high growth potential

# TTM Revenue During Memory Downturn



# TTM Revenue During Recovery/Expansion



# Excellent Debt Management

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- Limited debt especially for a capital-intensive business
  - $\text{Net Debt} / \text{EBIT} = 0.62$
  - $\text{Debt} / \text{Tangible Equity} = 0.32$
- Micron's debt is heavily weighted toward longer maturities which is important for businesses in cyclical industries
  - Avoid refinance cost spikes if they mature during a trough
  - Can bridge through low utilization without forced deleveraging

# Management

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- Managed the demand downturn well
  - Slowed capital expenditures in 2021
  - First memory maker to slash output
  - Reduced executive compensation
    - 20% for the CEO, 15% for EVPs, 10% for SVPs, and 20% for board of directors
- Transparent about challenges
  - Upfront about EUV DRAM delays
- Handled margin compression in 2024 by continuing price discipline
- Management is clearly focused on high return initiatives
  - Ceased development of 3D XPoint, announced sale of the Lehi fab in March 2021 and closed the deal the same year



# Management

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- Stays on the forefront of innovation
  - First to begin volume production and shipment of 1-alpha DRAM
  - First to reach 176-layer (2020) and 232-layer (2022)
- Continuously delivering record revenues

Management has shown that they operate as owners and understand what drives business value.

# Earnings Growth

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- Micron raised revenue and margin guidance by 4.7% on August 11

	Old	New
Revenue	\$10.7 ± \$0.3 billion	\$11.2 ± \$0.1 billion
Margins	42.0% ± 1.0%	42.0% ± 1.0%
non-GAAP EPS	\$2.50 ± \$0.15	\$2.85 ± \$0.07

- Management is probably guiding conservatively with a “beat and raise” approach
  - Next earnings call: September 23, 2025
- Strong revenue growth should continue
- Likely bit growth CAGR in high-teens
  - Possible bull case is low 20s over the next few years

# Valuation

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- Margin expansion and continued AI demand should produce a significant premium to historical through-cycle earnings (\$10-12)
- Micron's excellent management should allow Micron to maximize this generational opportunity in AI resulting in a premium multiple (23-25x)
- Favorable economic backdrop
  - Federal Reserve is cutting interest rates
  - Full expensing (immediate 100% tax deduction of capex) benefits capital-intensive businesses like Micron
- Target range between \$230 and \$300

# What Makes This Non-Consensus?

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The view that Micron stock will go up is a consensus view.

What is non-consensus:

- 1) The magnitude by which it will go up (75-130% in the next year)
- 2) The decision to concentrate and have it as just one of <8 stocks in a portfolio

It's not about whether you're right or wrong. It's about how much you make when you're right and how much you lose when you're wrong.

# Risks

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- Trade war intensifies and focuses on memory chips / Micron
  - Unlikely given that Micron is already restricted and has far less exposure to China than peers
- Pullback in AI spending
  - Unlikely given that companies view AI spending as a requirement to survive
- Poor execution leading to fewer orders
  - Improbable given management's excellent historical performance
- NAND demand slows resulting in lower revenue
- Economic downturns
- Approximately half the revenue comes from 10 customers

# Micron: Summary Investment Thesis

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- ✓ Strong brand in the secularly growing and attractive memory industry
- ✓ Reputation for cutting-edge innovation
- ✓ Few competitors in a market that is not “winner take all”
- ✓ Excellent management that operates as owners
- ✓ AI presents a generational opportunity and Micron is well positioned to capitalize
- ✓ Favorable backdrop with lower interest rates and tax regime
- ✓ Has fallen off its all time high but is fast approaching

Micron is a good business, in a good industry, with good management, at a good price.