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Semiconductor Industry Stocks 2025

A First Lesson from the Info Tech Sector

Part One: [The Big Picture on the Semiconductor Industry](#)

Part Two: [Top Semiconductor Stocks by Market Capitalization. Broken Up Into Four \(or Five\) Style Classes](#)

Presented by:

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Zacks Chief Equity Strategist and Economist

06/30/2025



This is critical information!!!

1. The Big Picture on the Semiconductor Industry

Semiconductors: Definitions, Advantages, and Dis-Advantages

From Hitachi and Science Facts

Semiconductors : Definitions, Advantages and Dis-Advantages

What are Semiconductors?

Definition 1 A substance that conducts Electricity is called a Conductor, and a substance that does not conduct Electricity is called an Insulator. Semiconductors are substances with properties somewhere between them.

Definition 2 : Chips or Semiconductors refer to small platelets of Semiconductor Materials (such as Silicon) in which circuits are embedded that ultimately end up providing different types of functions for a wide range of Electronic Devices.

Advantages of Semiconductors:

- **Small Size and Lightweight:** Semiconductor devices are significantly smaller and lighter, enabling compact and portable electronic devices.
- **Longer Lifespan:** Semiconductor devices generally have a longer operational lifespan.
- **Low Power Consumption:** They require less power to operate, leading to energy-efficient devices and systems.
- **Cost-Effectiveness:** Semiconductor devices are generally more affordable.
- **Fast Operation:** They can switch on and off very quickly, with no warm-up time required, enabling fast and responsive devices.
- **Shockproof:** Semiconductors are generally more resistant to mechanical shock.
- **Versatility:** Semiconductors can be used in a wide range of applications, from simple diodes to complex Integrated Circuits (ICs).
- **High Resolution:** Semiconductor detectors, like those used in particle physics, offer high resolution for tracking charged particles.

Disadvantages of Semiconductors:

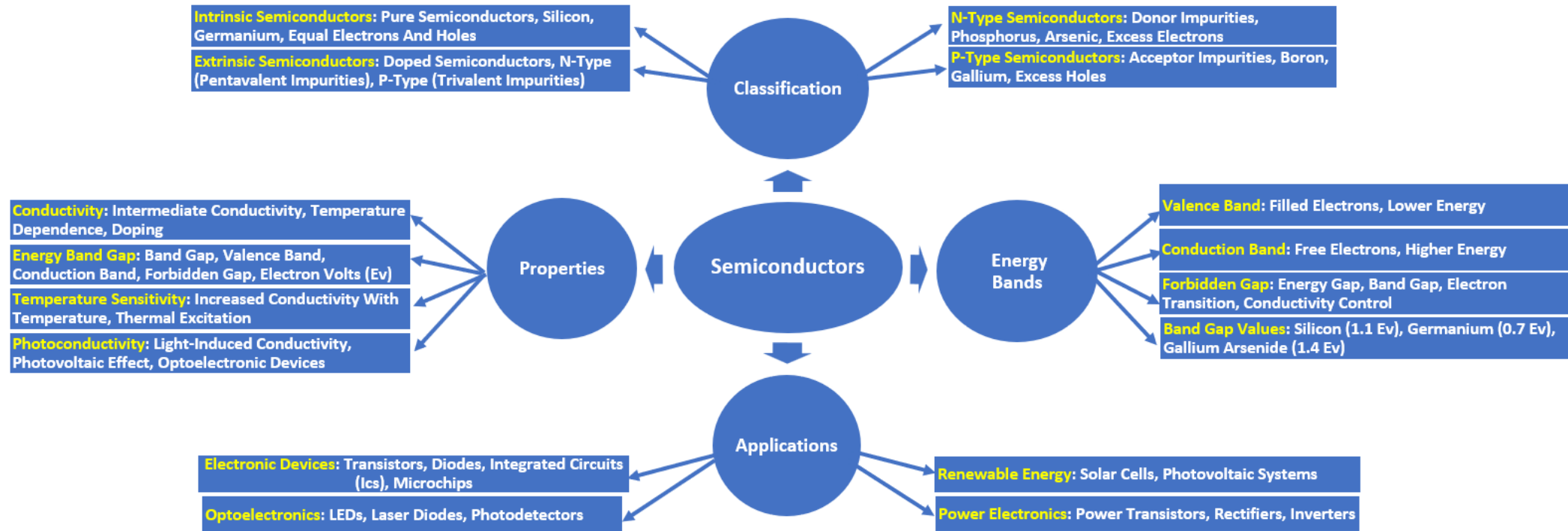
- **Temperature Sensitivity:** Semiconductors are susceptible to performance degradation and damage from temperature fluctuations.
- **Radiation Sensitivity:** They can be affected by radiation exposure, which can alter their properties and lead to failure.
- **Power Handling Limitations:** While generally low power devices, some semiconductor devices cannot handle the same amount of power as vacuum tubes.
- **Miniaturization Limitations:** As devices are miniaturized, leakage currents can become a significant problem, limiting further miniaturization.
- **High Frequency Limitations:** Certain types of semiconductor devices may not perform well at very high frequencies.
- **Cost:** Specialized semiconductor materials or devices can be expensive.
- **Manufacturing Complexity:** Manufacturing semiconductor devices, especially complex integrated circuits, requires sophisticated and expensive facilities.

<https://www.hitachi-hightech.com/global/en/knowledge/semiconductor/room/about/>
<https://www.sciencefacts.net/semiconductor.html>

Four Important Facets to Semiconductors

From Sciencefacts.net: Classification, Energy Bands, Applications, and Properties

Important Facets of Semiconductors : Classification, Energy Bands, Applications and Properties



Source : <https://www.sciencefacts.net/semiconductor.html>

Semiconductor Manufacturing Process, Business Models and Value Chain Analysis in Detail

The Value Chain Analysis of Semiconductors

1. An **Integrated Device Manufacturer (IDM)** in the semiconductor industry is a company that handles all stages of chip production, from design to manufacturing and sales.
2. Unlike **Fabless** companies (which only design chips) or **Foundries** (which only manufacture chips), IDMs control the entire process. A semiconductor **Foundry** is a specialized manufacturing facility that produces **Integrated Circuits (ICs)** designed by other companies.
3. **OSAT**, which stands for **Outsourced Semiconductor Assembly and Test**, refers to companies that specialize in the back-end processes of semiconductor manufacturing.

Semiconductor Manufacturing Process, Business Models and Value Chain Analysis in Detail

Semiconductor Production Process



Business Models according to Specialized Activities



Value Chain Analysis of Semiconductors				
Activity	Description	Key Players	Importance	Challenges
Research and Development (R&D)	Develops New Technologies and improves Existing Processes through Experiments, Simulations, and Analysis.	IBM, Microsoft, NVIDIA, TSMC, Universities, Startups	Enables Innovation In Smaller, Faster, and Energy-Efficient Chips. Vital For Competitiveness.	High Cost, Long Cycles, Requires Industry-Academia Collaboration
Design and Engineering	Creates Chip Architecture Using *EDA Tools and IP Cores. Covers CPUs, Memory, Sensors.	Fabless: NVIDIA, AMD, Qualcomm, Apple, Meta, Alphabet EDA: Cadence, Synopsys, Siemens	Determines Performance/Functionality; Fabless-Foundry Ecosystem.	Complex Design At Advanced Nodes (3nm/5nm), IP Protection, Reliance On EDA Tools
Wafer Fabrication	Produces Wafers via Photolithography, Etching, Doping In Cleanrooms.	*IDMs: Intel, Samsung, TI Foundries: TSMC, GlobalFoundries, Samsung Foundry	Most Capital-Intensive; Critical Step in Chip Production;	High CAPEX, Geopolitical/Geographical Risks, Supply Chain Fragility
Assembly, Testing, and Packaging (ATP)	Cuts, Assembles, Tests, and Packages Chips; includes Advanced Packaging like 3D Stacking, SiP.	Amkor, ASE Group, JCET, TSMC (Advanced Packaging)	Ensures Chip Reliability; Enables Performance Optimization; Less CAPEX than Fabs.	Supply Chain Delays, PFAS Regulations, Need For Advanced Packaging
Distribution and Integration	Ships Chips To *EMS/*OEMs for Integration into End Products like Phones, Cars, Medical Devices.	EMS: Foxconn, Pegatron OEMs: Apple, Tesla Distributors	Connects Chip Manufacturers to Market;	Demand Shocks, Trade Tensions, Logistics Disruptions

*EDA - Electronic Design and Automation, *IDMs : Integrated Device Manufacturers, *EMS - Electronic Manufacturing Services, *OEMs : Original Equipment Manufacturers

Source : <https://quartr.com/insights/company-research/understanding-the-semiconductor-value-chain-key-players-and-dynamics>

Source : Semiconductor Value Chain : Structure and Prospects for the New Global Scenario. March 2022

Four Tables for Semi Stocks: Our Market Capitalization Classification

A Very, Very Important List of Semiconductor Stocks: Arranged by Market Capitalization, in Four (Maybe Five) Style Categories

Tables for Market Capitalization Classification (on the Right) and List of Semiconductor Stocks arranged by Market Capitalization into Four categories

Mega & Large Cap.,		Mid Cap.,		Small Cap.,		Micro Cap.,	
Tickers	Mkt, Cap (\$ Mil)	Tickers	Mkt, Cap (\$ Mil)	Tickers	Mkt, Cap (\$ Mil)	Tickers	Mkt, Cap (\$ Mil)
AVGO	1240634.5	DINRF	7686.3	HIMX	1623.2	VLN	248.8
TXN	186972.6	NVMI	7306.5	NVTS	1409.8	NA	232.8
QCOM	170969.6	LSCC	7033.5	AAOI	1293.6	ALMU	221.0
ARM	165679.5	RMBS	6691.8	MXL	1151.0	ATOM	157.8
AMAT	144594.1	ALGM	6020.4	AMSSY	1068.3	SVCO	141.9
LRCX	122322.0	CRUS	5474.6	LASR	889.4	MX	141.0
ADI	116608.4	AMKR	5178.3	AOSL	747.4	IQEPF	139.4
INTC	98363.1	ROHCY	4986.4	INDI	699.2	WOLF	97.7
MRVL	64968.7	SLAB	4823.2	ICHR	652.0	QUIK	93.6
NXPI	55201.9	TSEM	4726.7	CEVA	525.1	AXTI	92.1
IFNNY	54234.9	SMTC	3782.5	SKYT	449.1	CODA	88.0
MCHP	37989.9	THKLY	3472.4	POET	364.6	GCTS	74.6
MPWR	34309.9	POWI	3150.0	LAES	360.7	ASYS	60.5
STM	27098.0	PI	3124.1	NVEC	346.1	SOTK	60.2

Market Capitalization Classification	
Mega Cap.,	Greater than \$200 Billion
Large Cap.,	Between \$10 Billion to \$200 Billion
Mid Cap.,	Between \$2 Billion to \$10 Billion
Small Cap.,	Between \$250 Million to \$2 Billion
Micro Cap.,	Less than \$250 Million

Source : Zacks Investment Research

The Elephant in the Room: Nvidia (NVDA)

This is the mother of all chip stocks, in this era.

52 Wk High-Low **\$156.72 - \$86.62**

20 Day Avg Vol **181,386,496**

Beta **2.12**

Market Cap **3,849.10 B**

Dividend / Div Yld **\$0.04 / 0.03%**

Industry [Semiconductor - Ge..](#)

Industry Rank **192/245 (Bottom 22%)**

Proj. EPS Gr (Q1) **45.59%**

Proj. EPS Gr (F1) **41.81%**

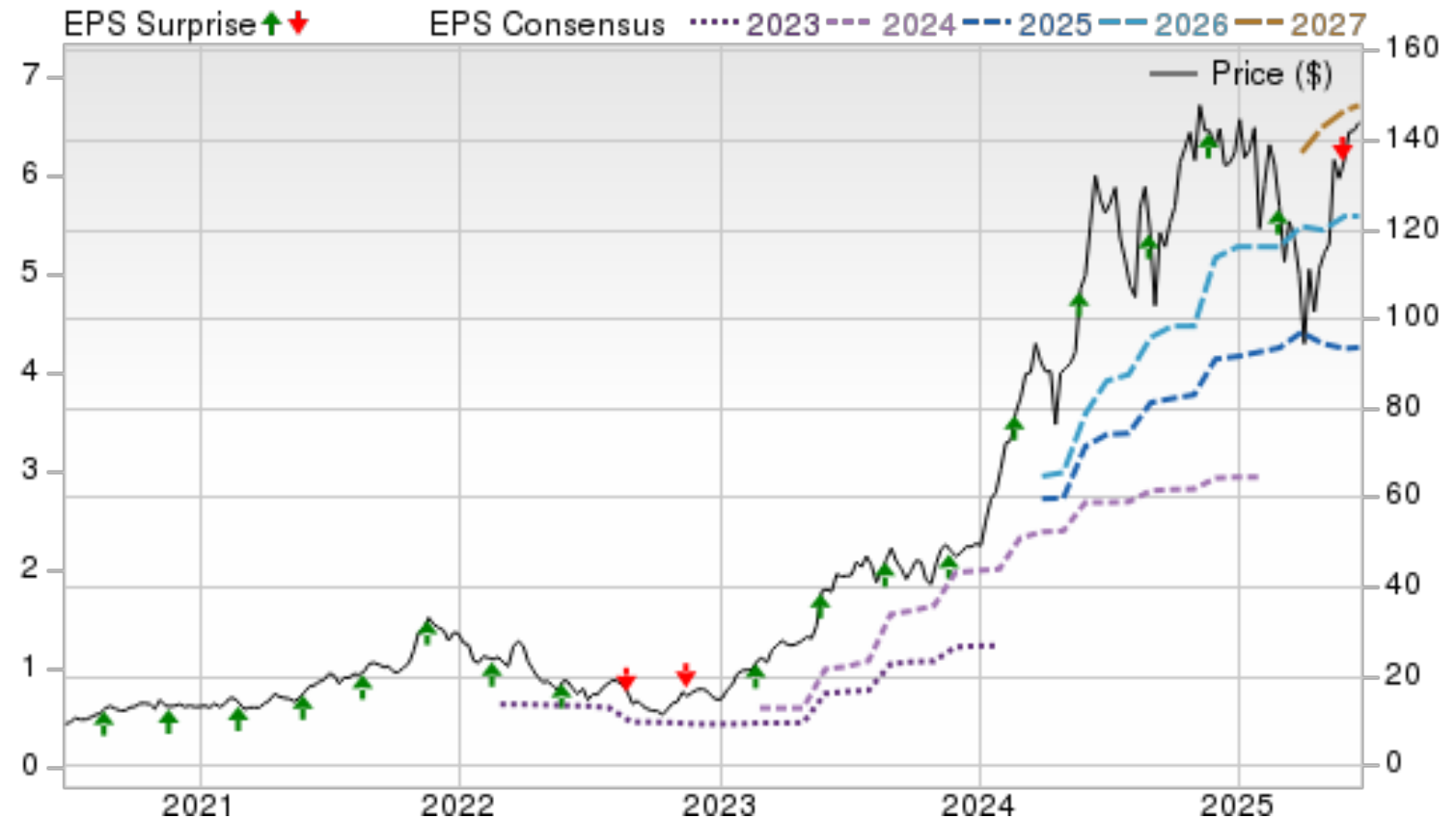
P/E (F1) **37.19**

Last EPS Surp **-4.71%**

Avg Last 4 Surp **3.87%**

Next Report Date **8/27/2025**

Earnings ESP **-0.04%**



What Tickers Look Good?

2. The Top Semiconductor Stocks

By Market Capitalization
Broken into Four Style Classes

Zacks Price, EPS Consensus, and EPS Surprise Charts for Top Semiconductor Stocks

Using Market Capitalization -- Classified into *Large and Mega-cap*, and *Mid Cap* Groups

Price, EPS Consensus and EPS Surprise Charts for Top Semiconductor Stocks by Market Capitalization Classified into Four Groups
Large and Mega Cap., Stocks



Mid Cap., Stocks



Nova Ltd (NVMI): Israeli

Lattice (LSICC): 1983 Oregon

Rambus (RMBS): San Jose

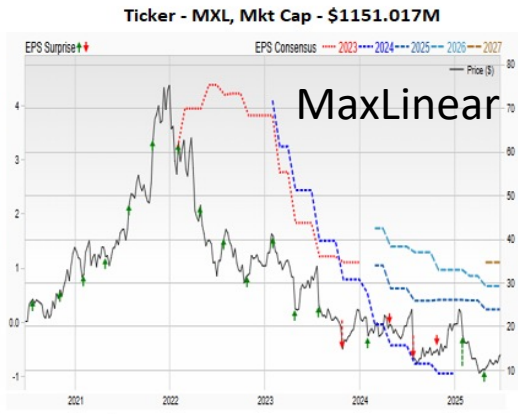
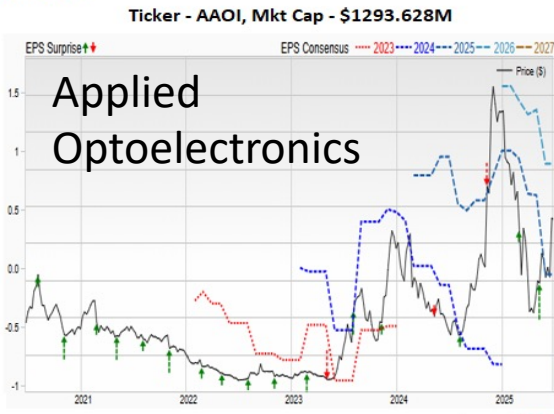
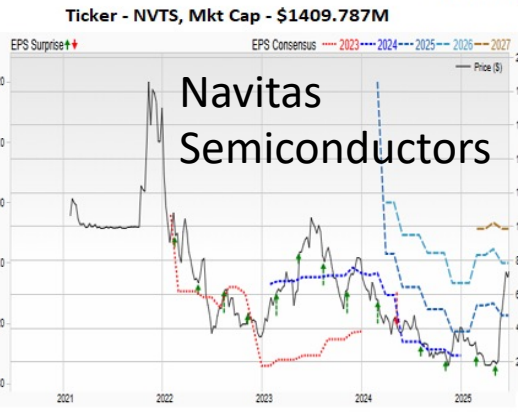
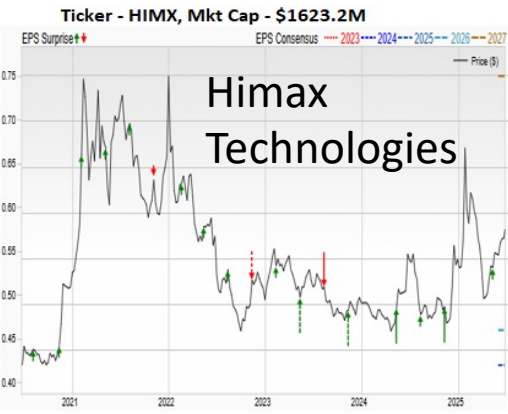
Allegro Microsystems (ALGM):
New Hampshire, USA

Zacks Price, EPS Consensus, and EPS Surprise Charts for Top Semiconductor Stocks

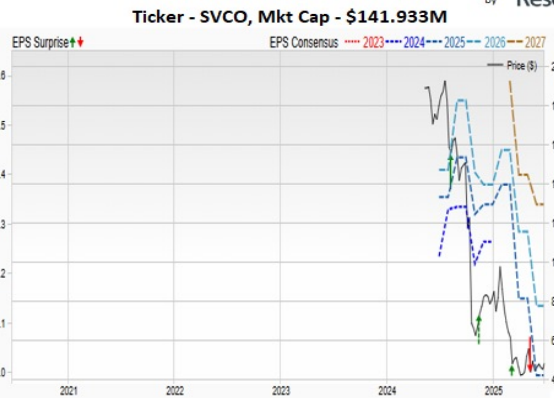
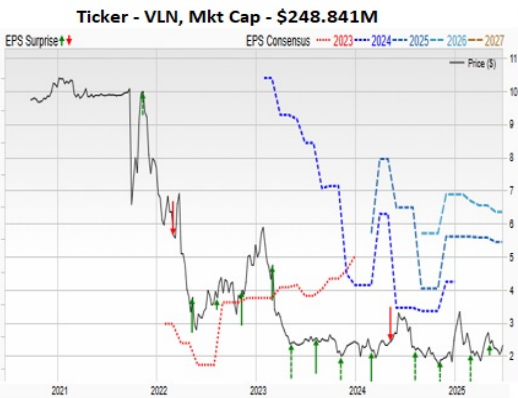
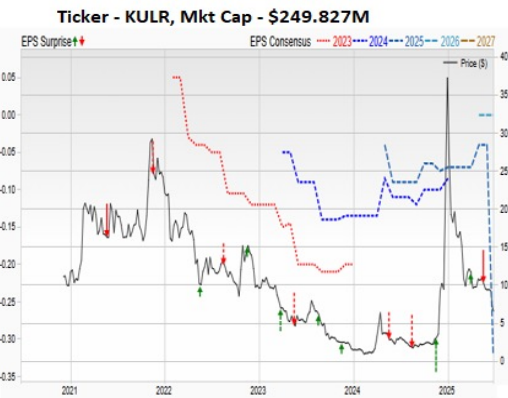
Using Market Capitalization -- Classified into *Small Cap* and *Micro Cap* Groups

Price, EPS Consensus and EPS Surprise Charts for Top Semiconductor Stocks by Market Capitalization Classified into Four Groups

Small Cap., Stocks



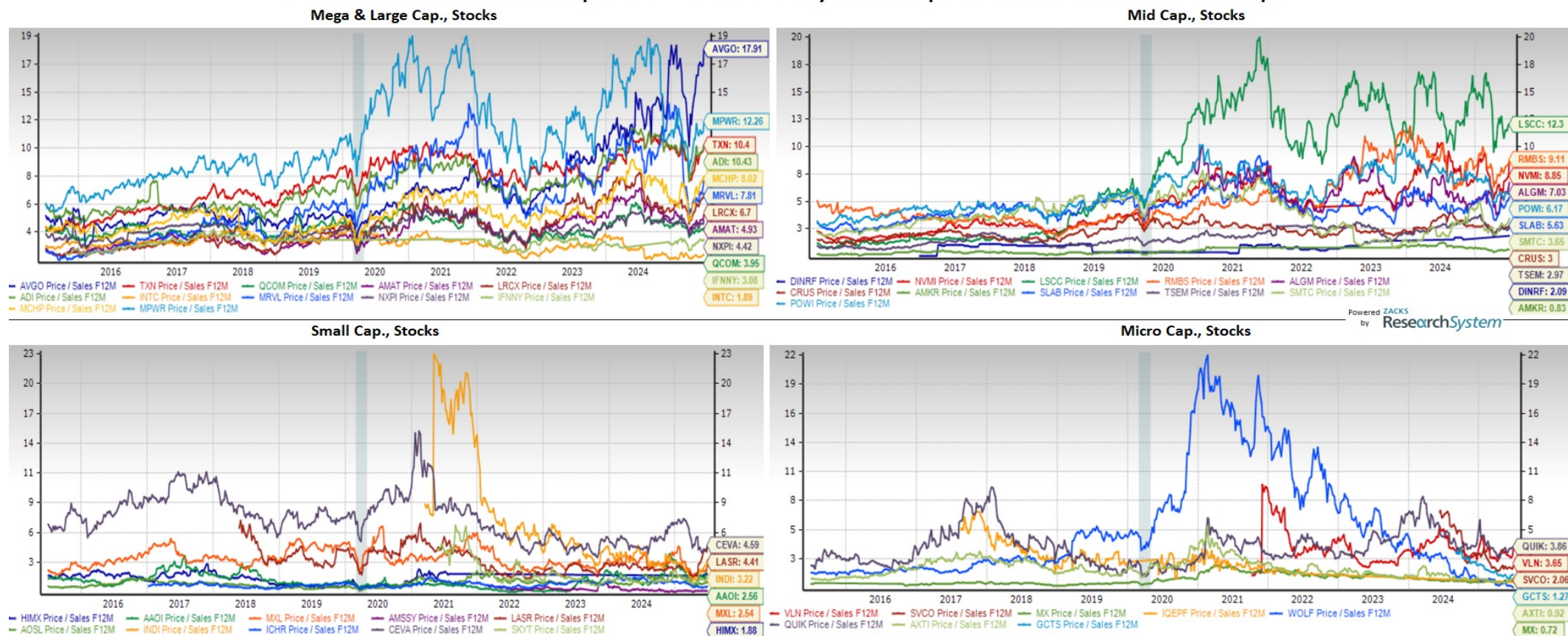
Macro Cap., Stocks



Valuations: Price to Sales F12M Charts for Top Semiconductor Stocks

Using Market Capitalization, Classified into these Four Groups

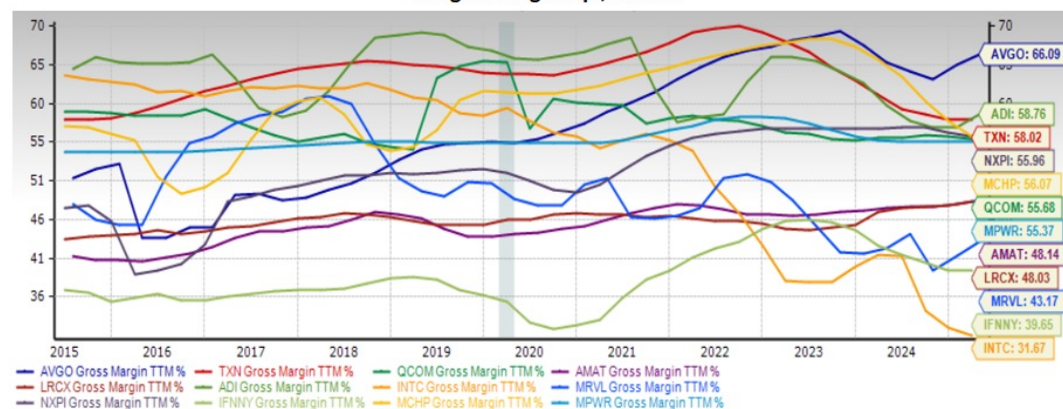
Price to Sales F12M Charts for Top Semiconductor Stocks by Market Capitalization Classified into Four Groups



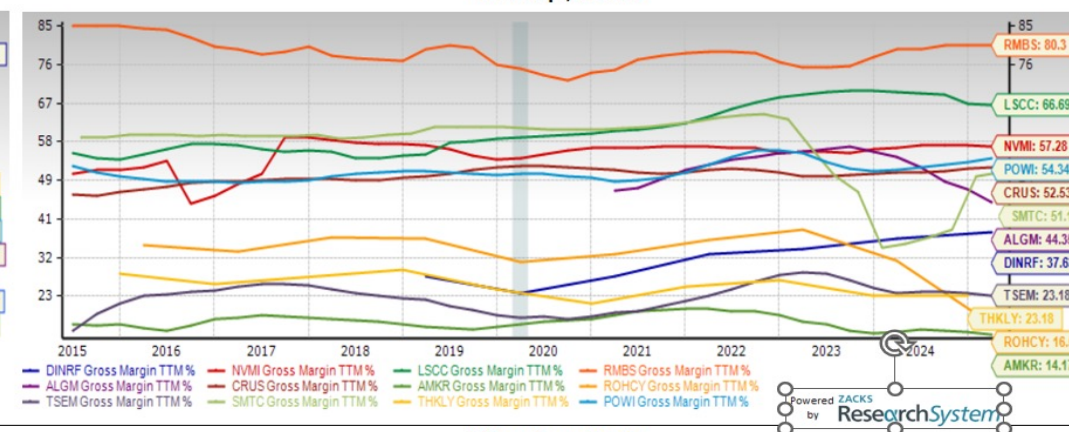
Gross Profit Margin TTM % Charts for Top Semiconductor Stocks

By Market Capitalization -- Classified into Four Groups

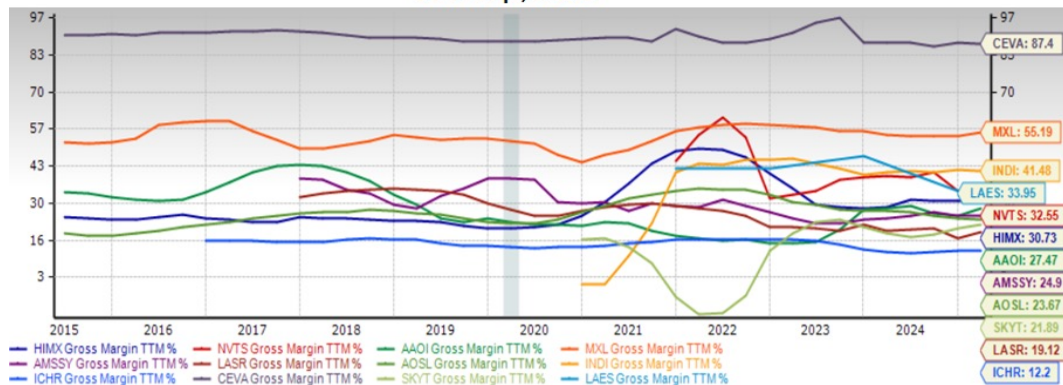
Gross Margin TTM % Charts for Top Semiconductor Stocks by Market Capitalization Classified into Four Groups
Mega & Large Cap., Stocks



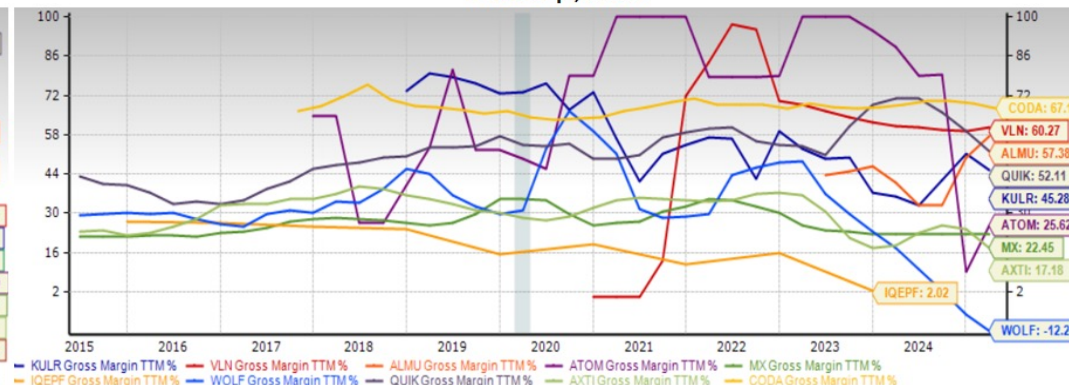
Mid Cap., Stocks



Small Cap., Stocks



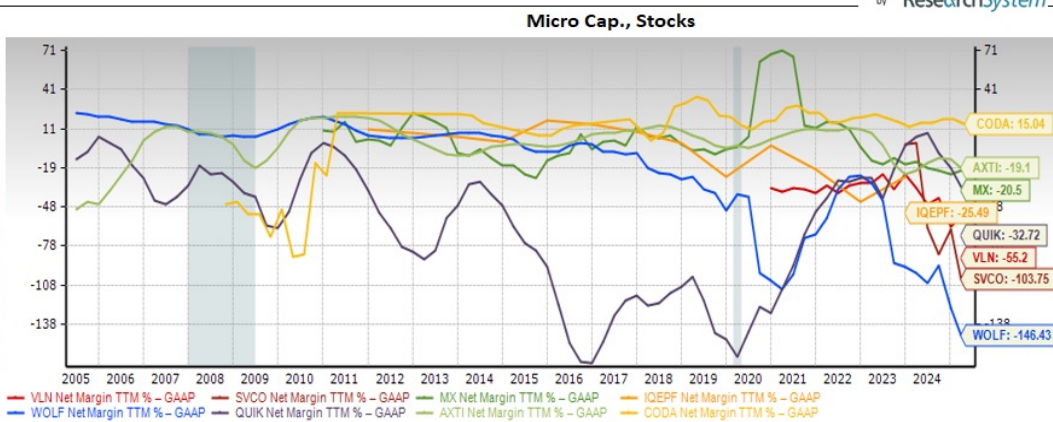
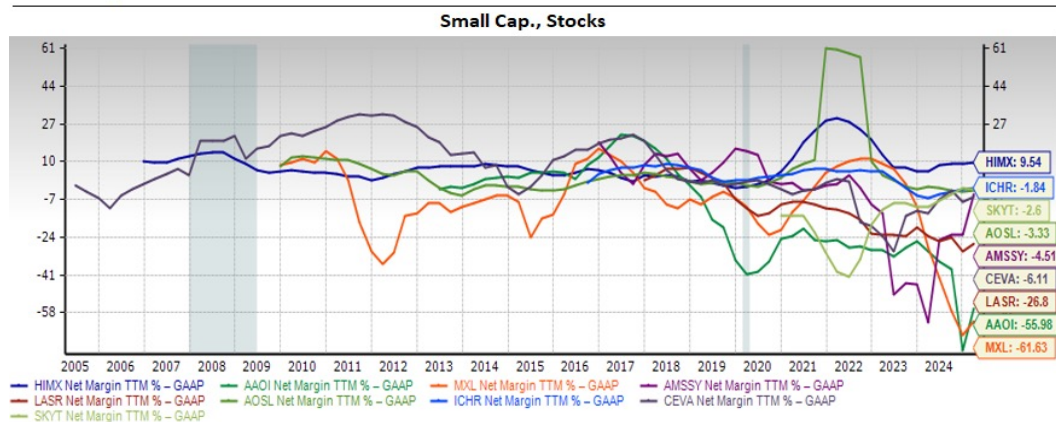
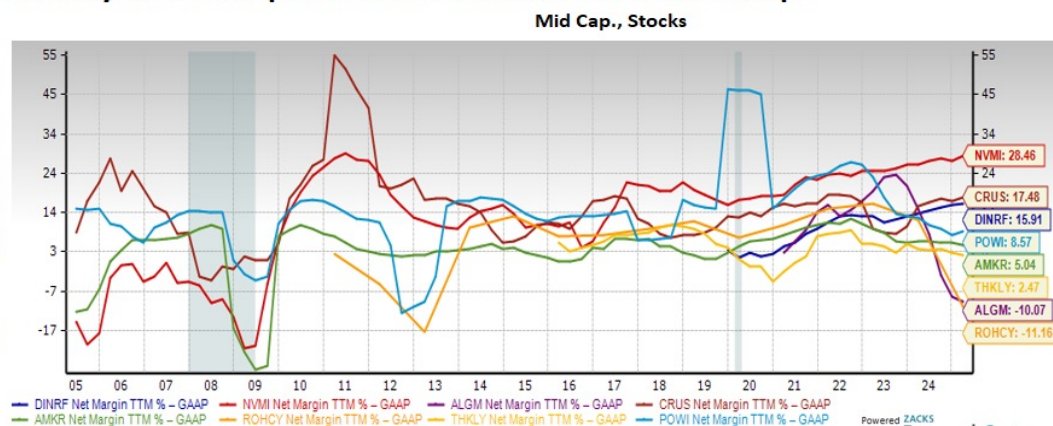
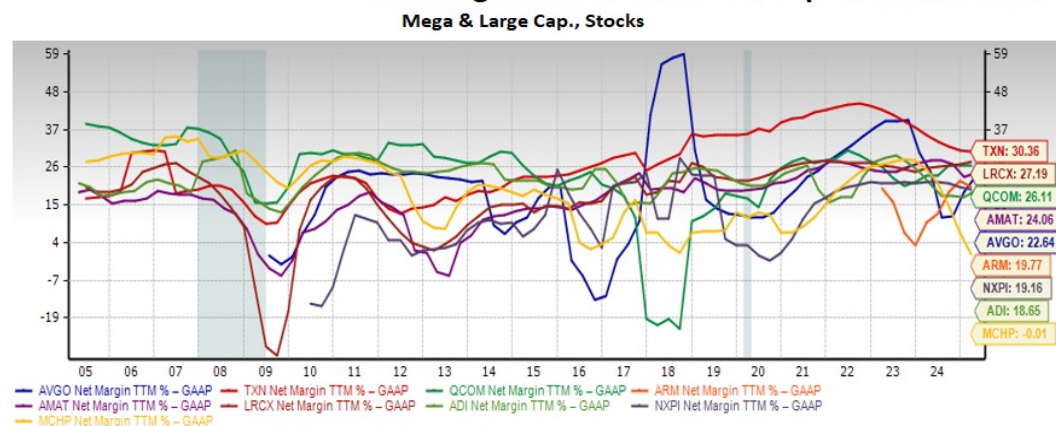
Micro Cap., Stocks



Net Profit Margin TTM % Chart for Top Semiconductor Stocks

By Market Capitalization Classified into Four Groups

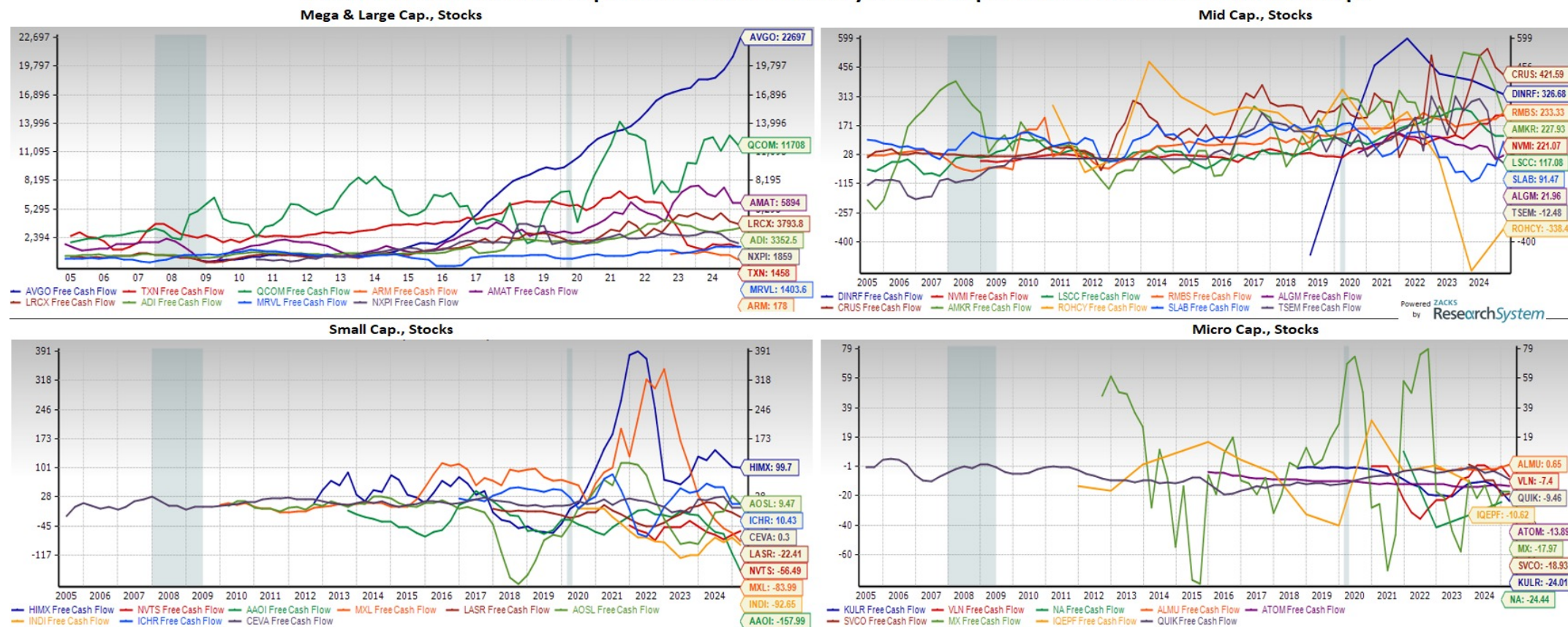
Net Margin TTM % Charts for Top Semiconductor Stocks by Market Capitalization Classified into Four Groups



Free Cash Flow Chart for Top Semiconductor Stocks

By Market Capitalization Classified into Four Groups

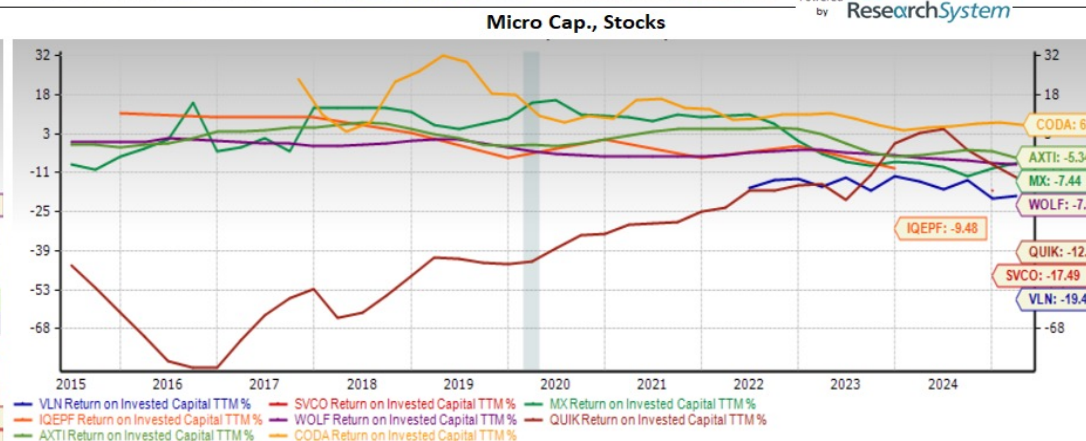
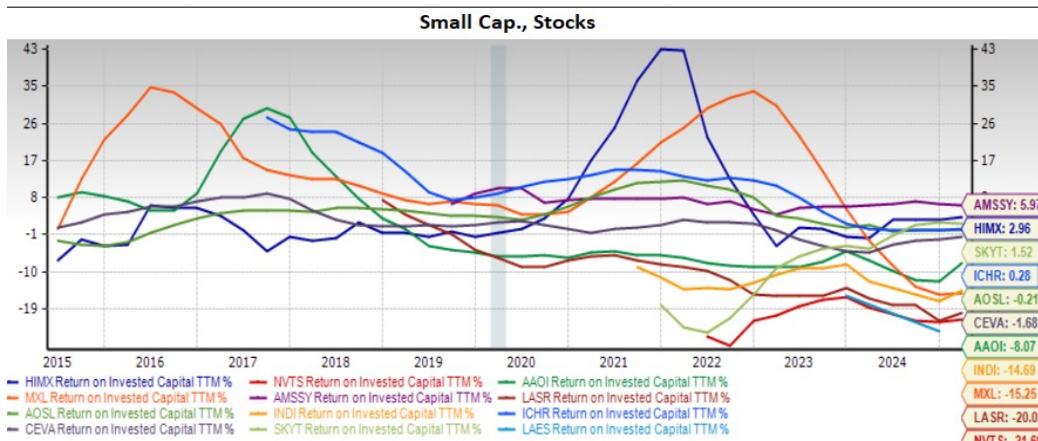
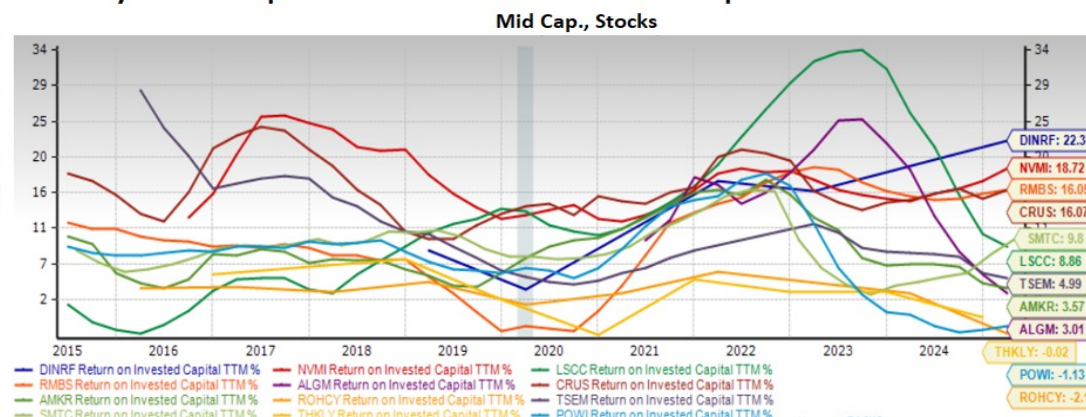
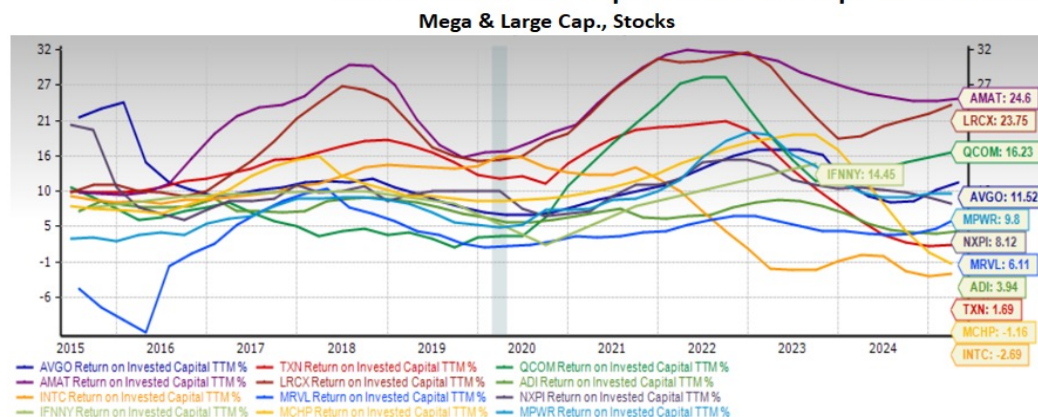
Free Cash Flow Charts for Top Semiconductor Stocks by Market Capitalization Classified into Four Groups



Return on Invested Capital Charts for Top Semiconductor Stocks

By Market Capitalization Classified into Four Groups

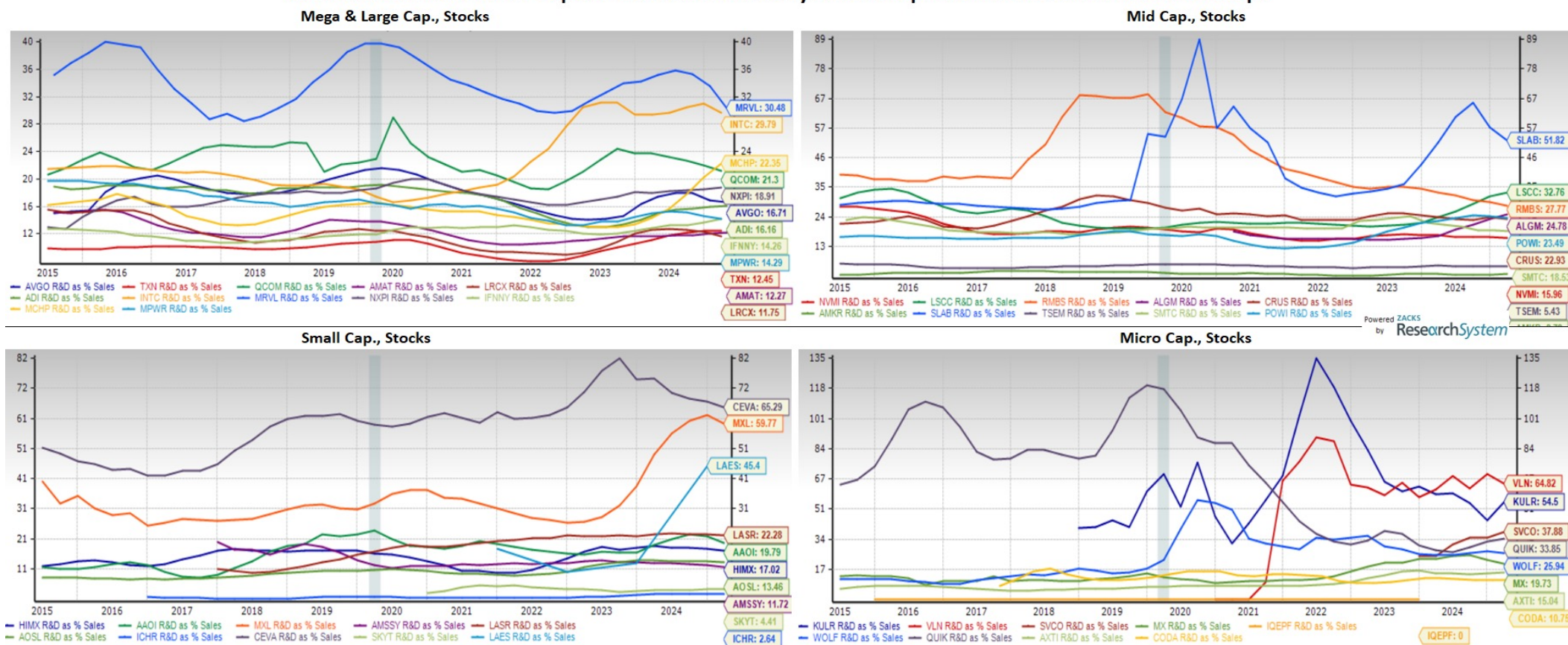
Return on Invested Capital Charts for Top Semiconductor Stocks by Market Capitalization Classified into Four Groups



R&D as % Sales Charts for Top Semiconductor Stocks

By Market Capitalization Classified into Four Groups

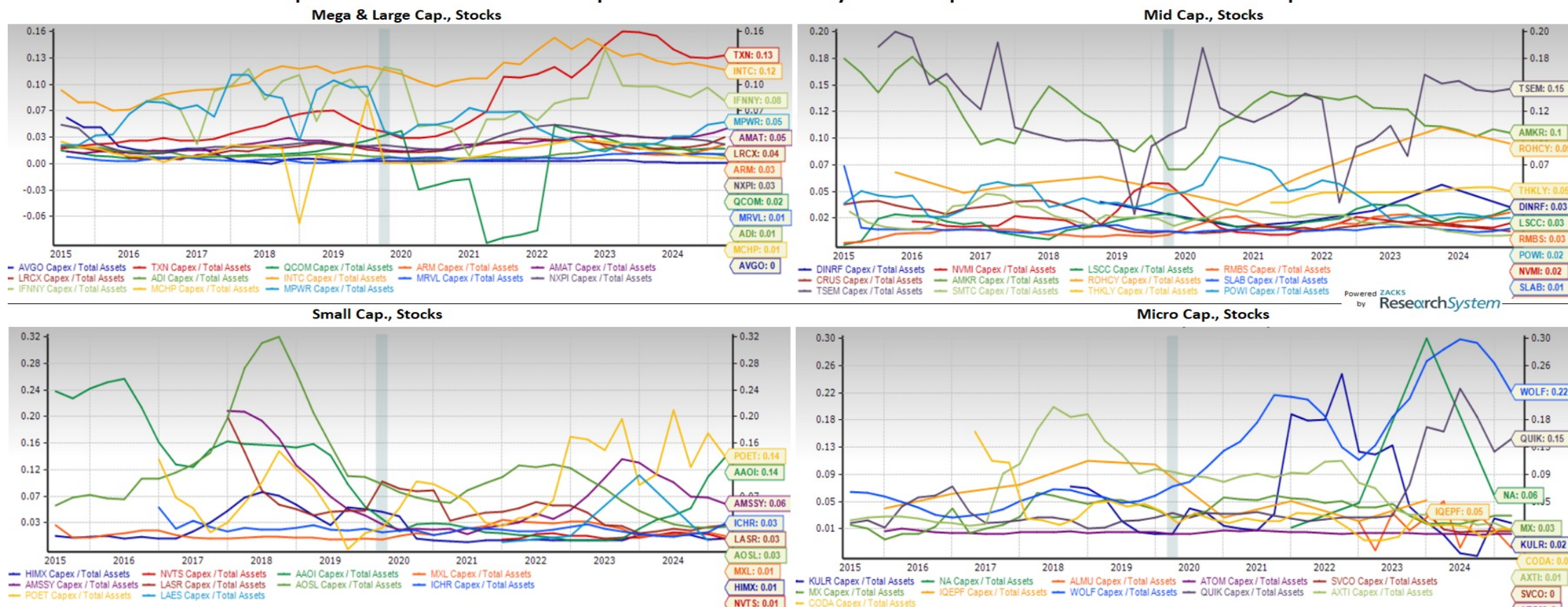
R & D as % Sales Charts for Top Semiconductor Stocks by Market Capitalization Classified into Four Groups



Capex to Total Assets Charts for Top Semiconductor Stocks

By Market Capitalization Classified into Four Groups

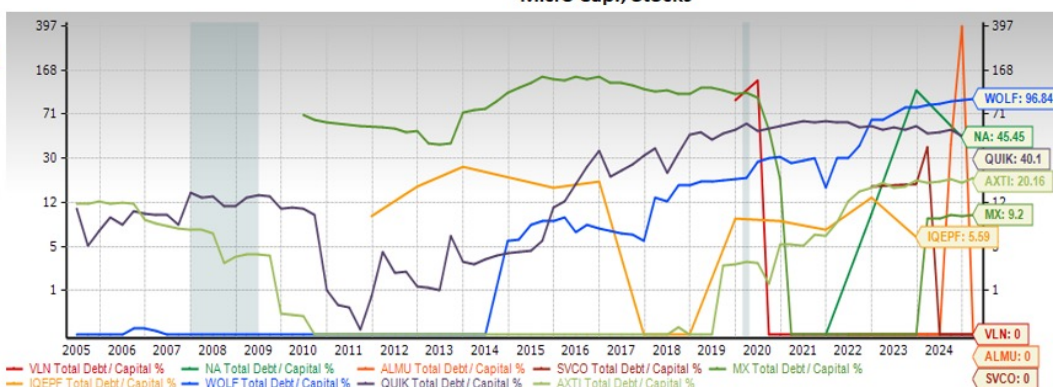
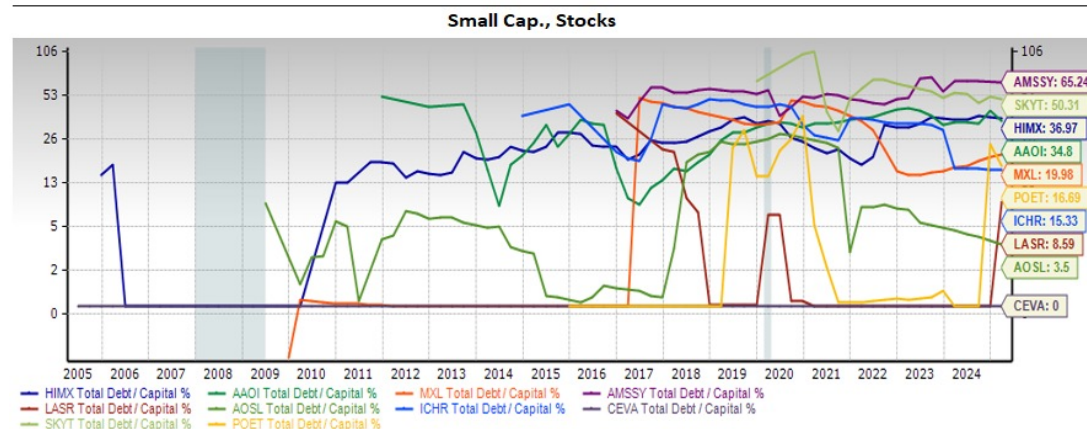
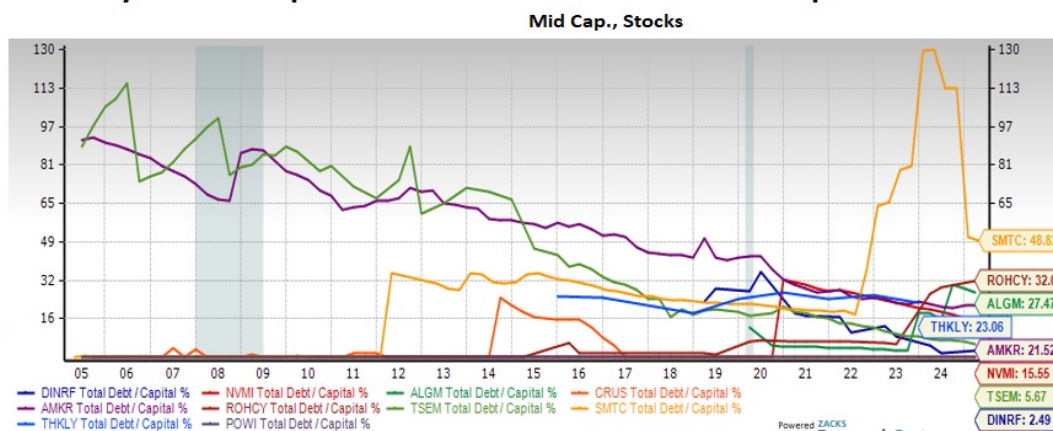
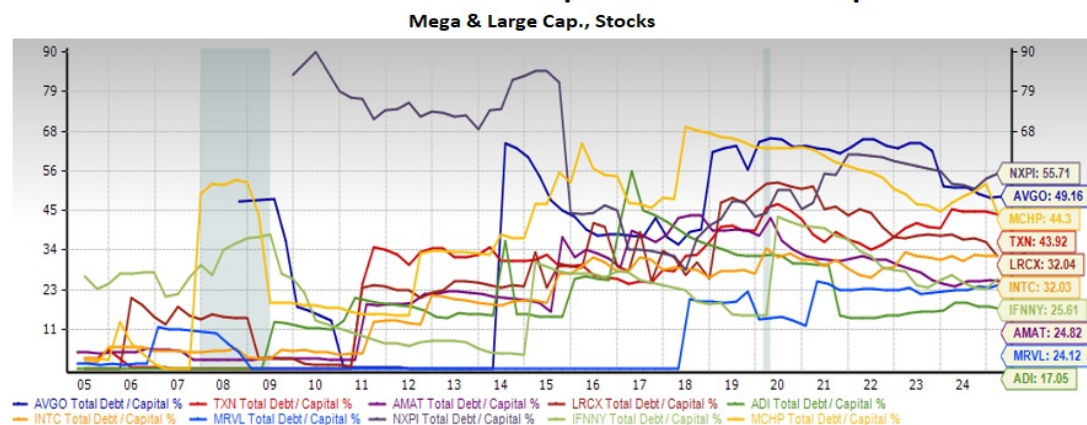
Capex to Total Assets Charts for Top Semiconductor Stocks by Market Capitalization Classified into Four Groups



Total Debt to Capital % Charts for Top Semiconductor Stocks

By Market Capitalization Classified into Four Groups

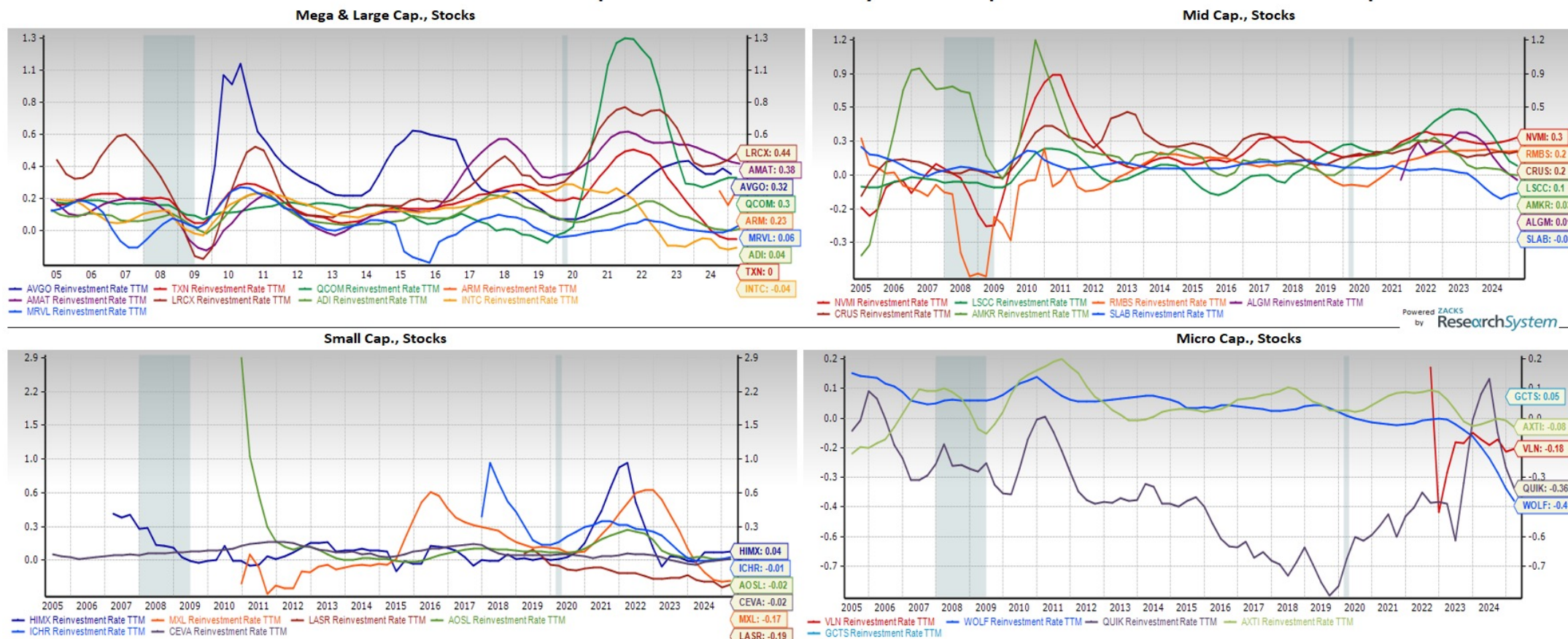
Total Debt to Capital % Charts for Top Semiconductor Stocks by Market Capitalization Classified into Four Groups



Reinvestment Rate Charts for Top Semiconductor Stocks

By Market Capitalization Classified into Four Groups

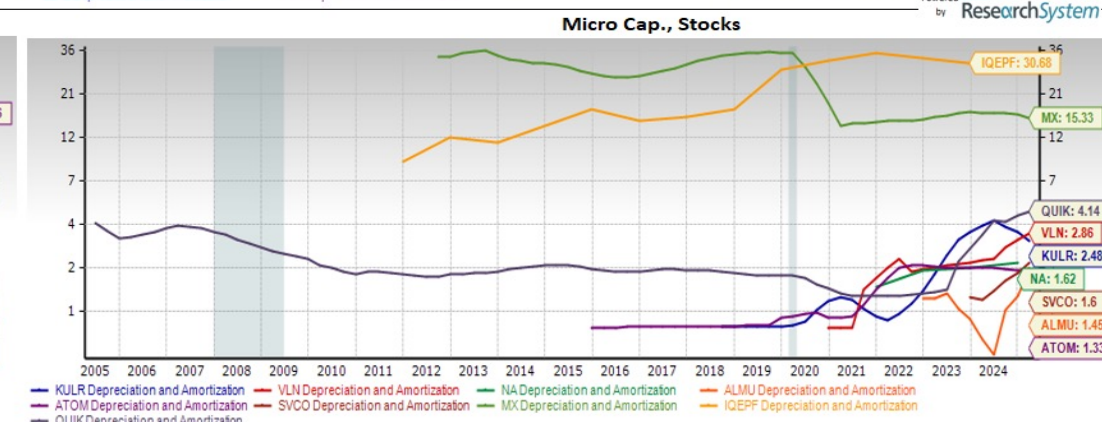
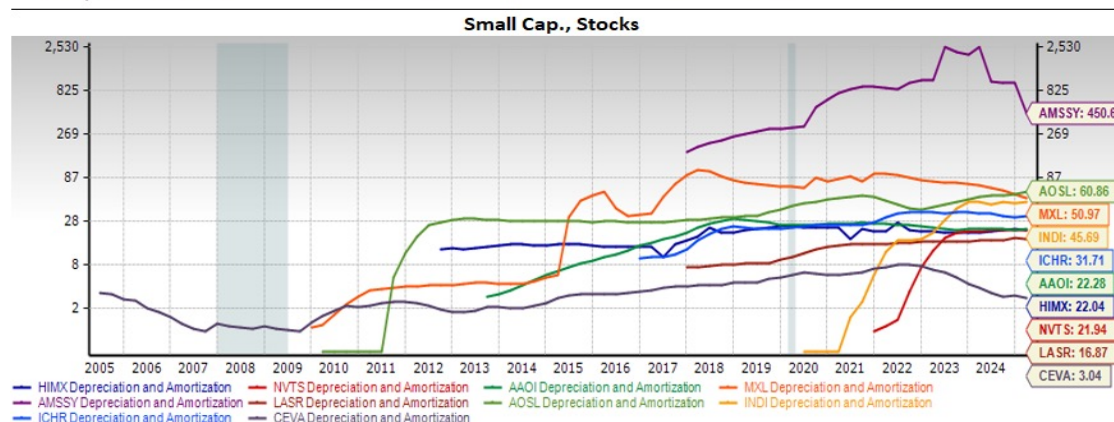
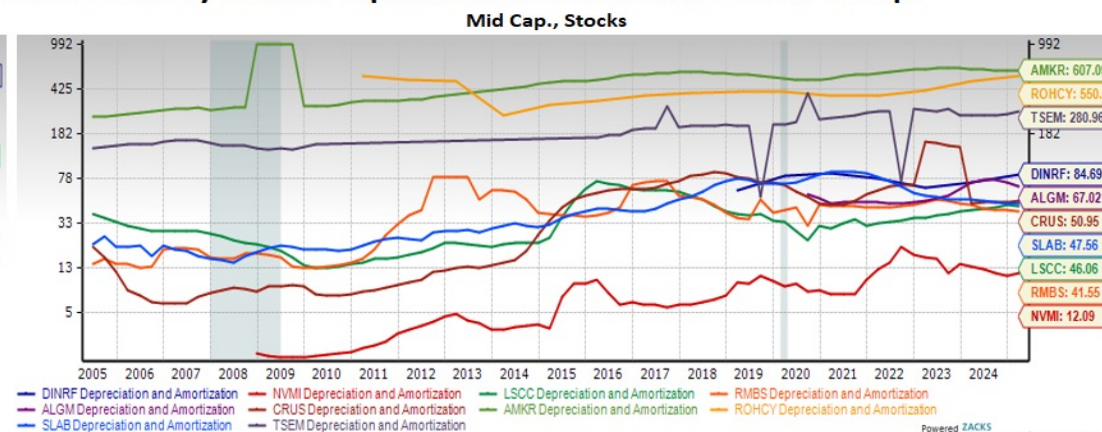
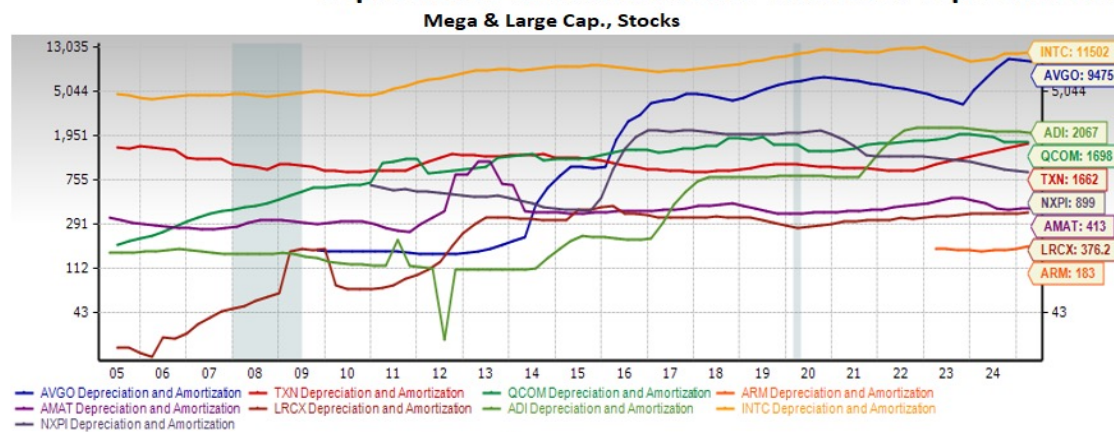
Reinvestment Rate Charts for Top Semiconductor Stocks by Market Capitalization Classified into Four Groups



Depreciation and Amortization Charts for Top Semiconductor Stocks

By Market Capitalization Classified into Four Groups

Depreciation and Amortization Charts for Top Semiconductor Stocks by Market Capitalization Classified into Four Groups



Thank You for Attending!

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