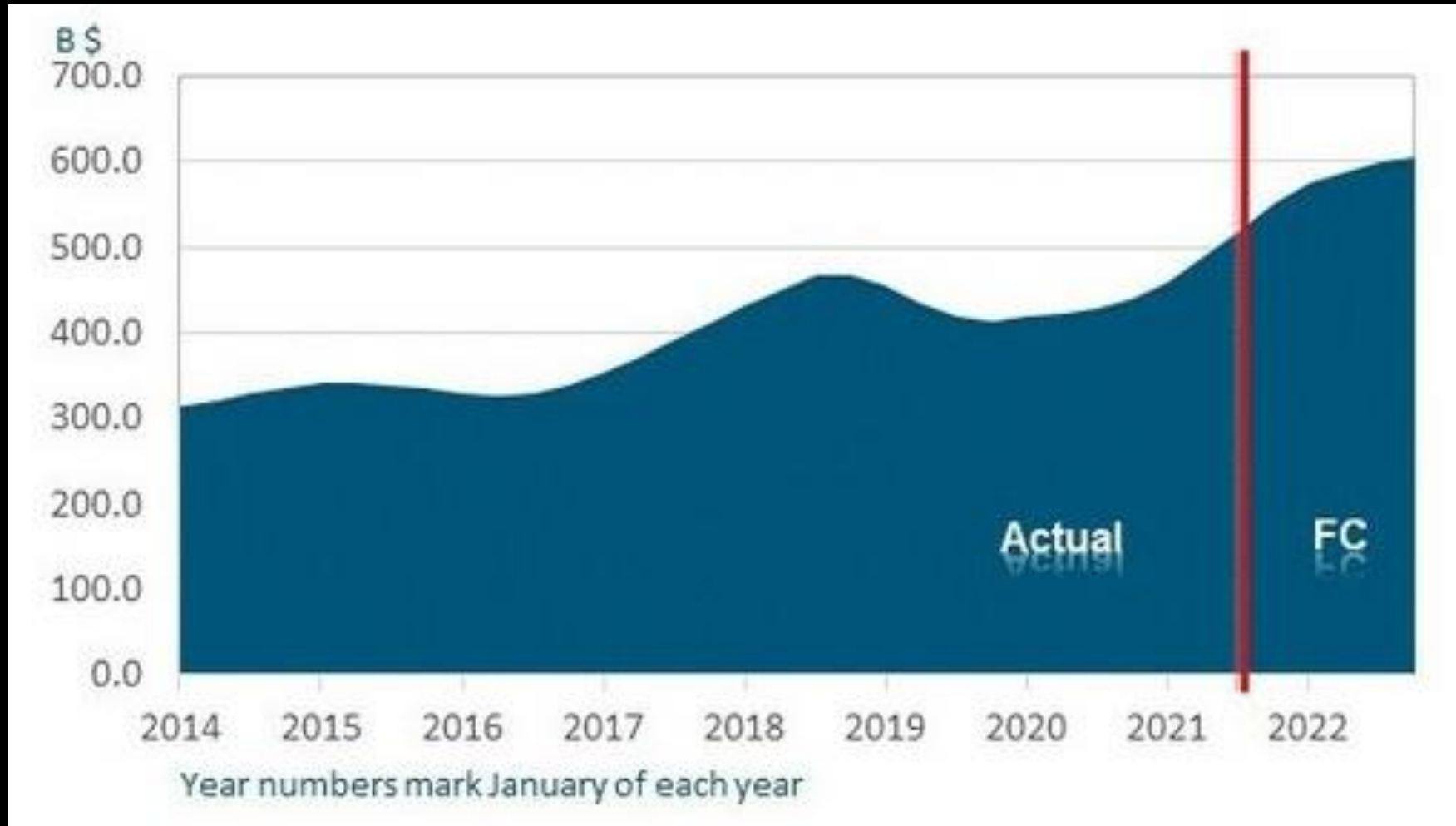




Finding a Small Company in the Semiconductor Equip. Industry

Changing from cyclical to growth?

Cyclical But Growing

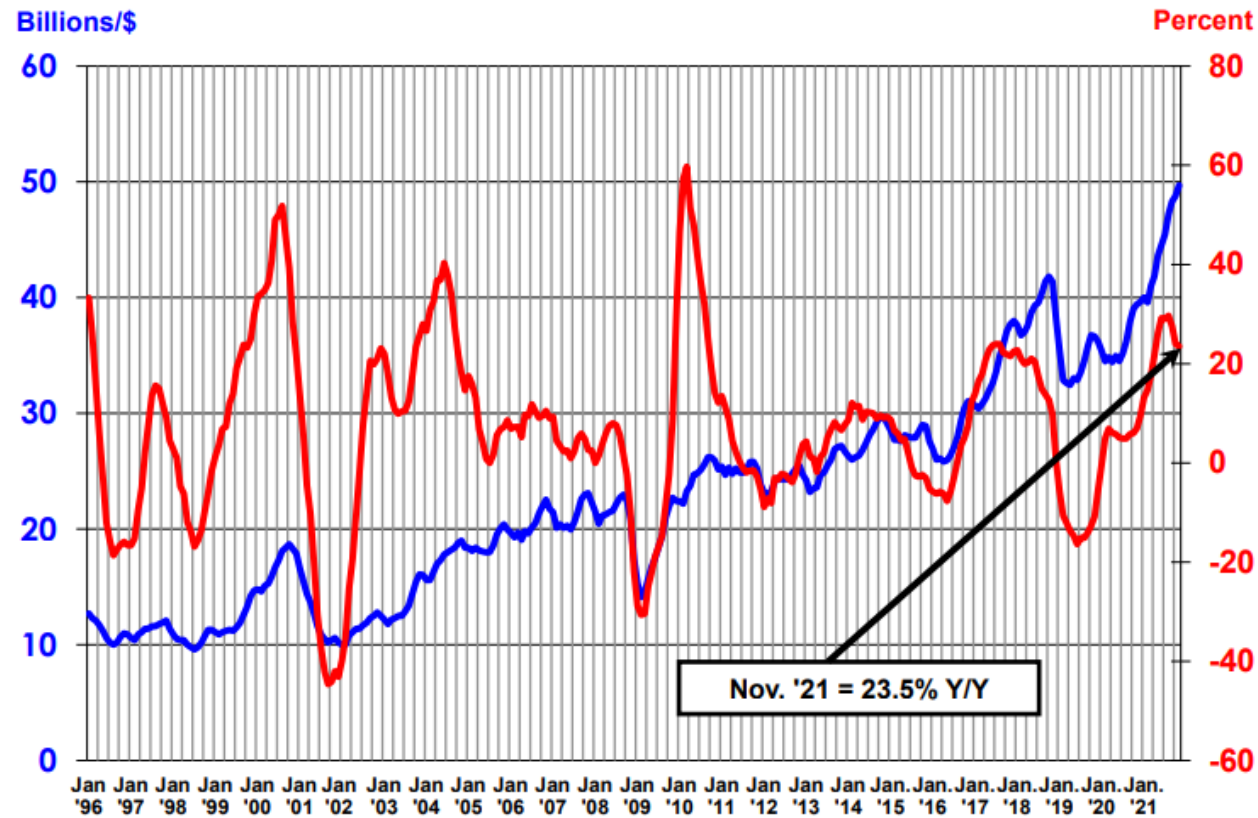


From World Semiconductor Trade Statistics

Monthly Semiconductor Revenues and Y/Y % Change

Worldwide Semiconductor Revenues

Year-to-Year Percent Change

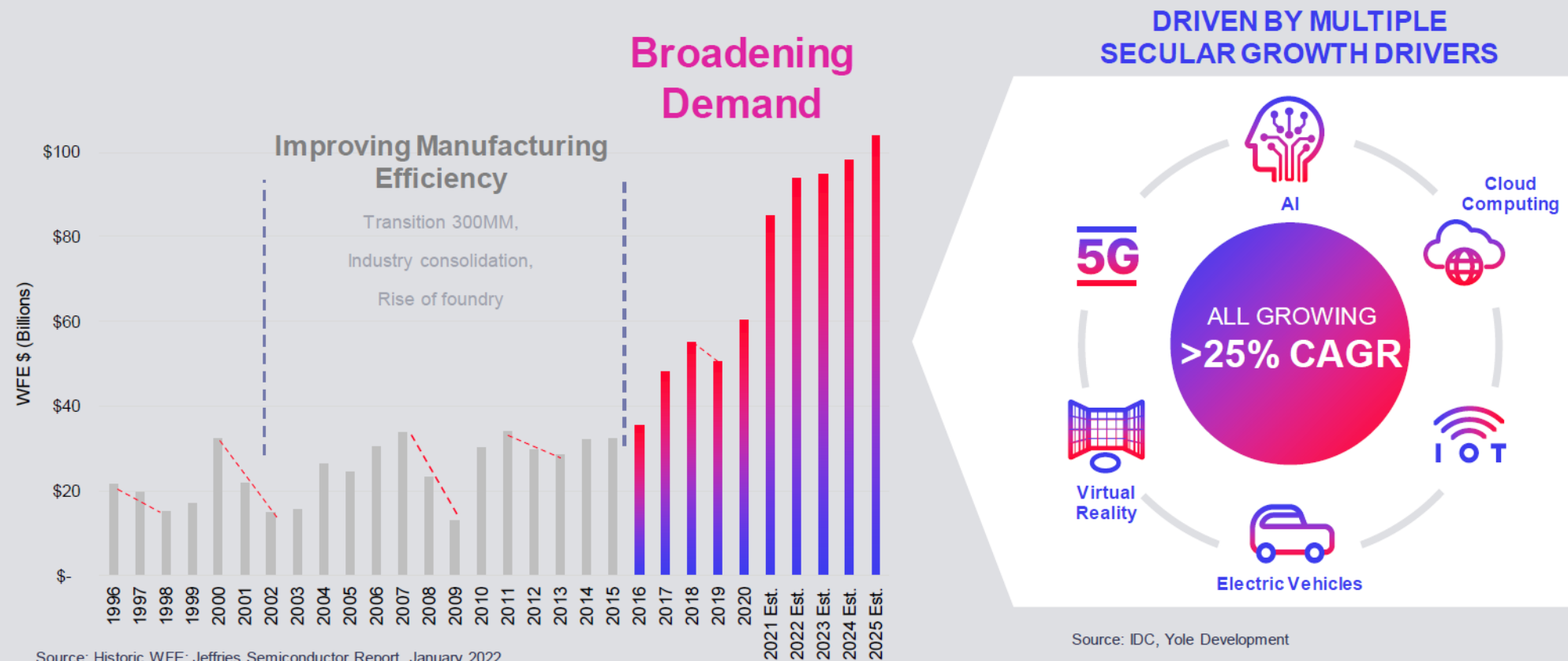


Source: WSTS

Revenue Y/Y % Change

What Companies Say

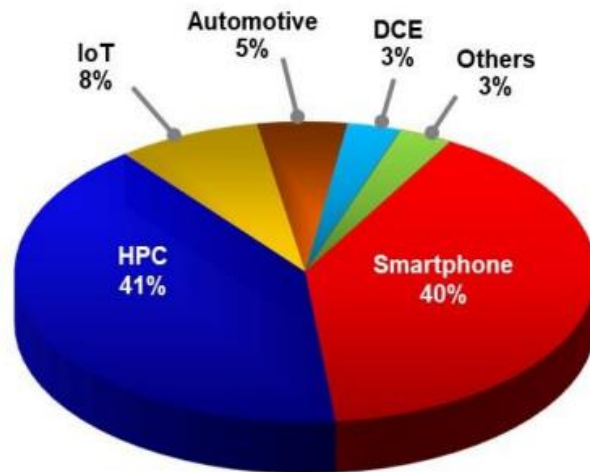
Semiconductor Market Transitioning From Cyclical to Growth



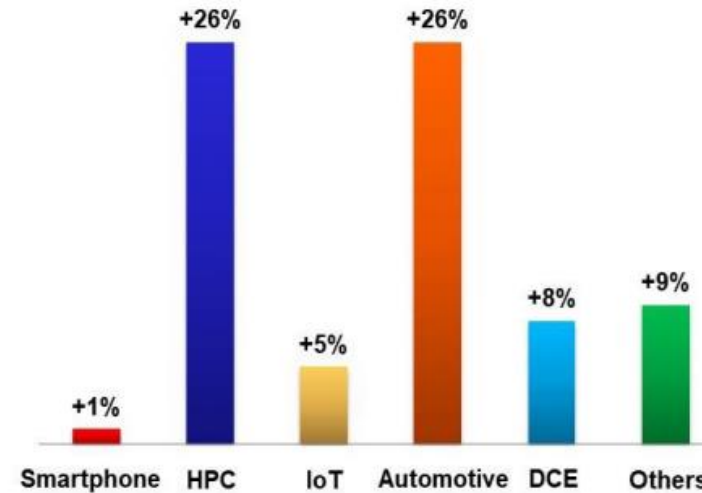
Source: Historic WFE: Jeffries Semiconductor Report, January 2022 and 2021-2025 Estimated WFE: Needham, January 2022

What Companies Say

1Q22 Revenue by Platform



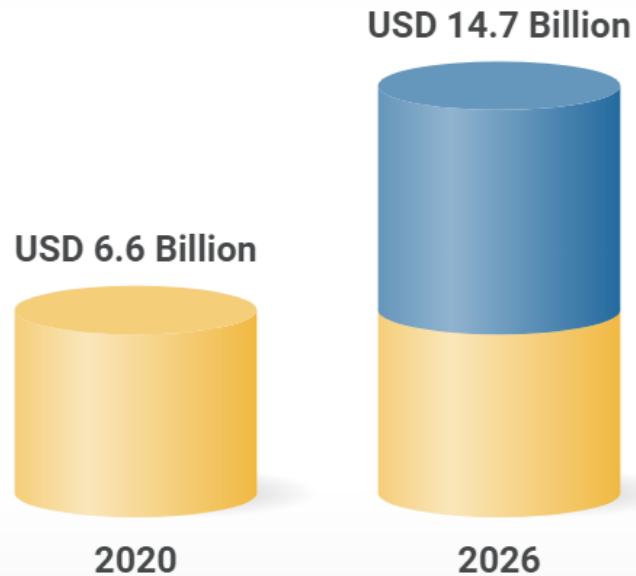
Growth Rate by Platform (QoQ)



Semiconductor Packaging Becoming More Complex

Global Market for 3D Semiconductor Packaging

Market forecast to grow at CAGR of 14.6%



Semiconductor Packaging Becoming More Complex

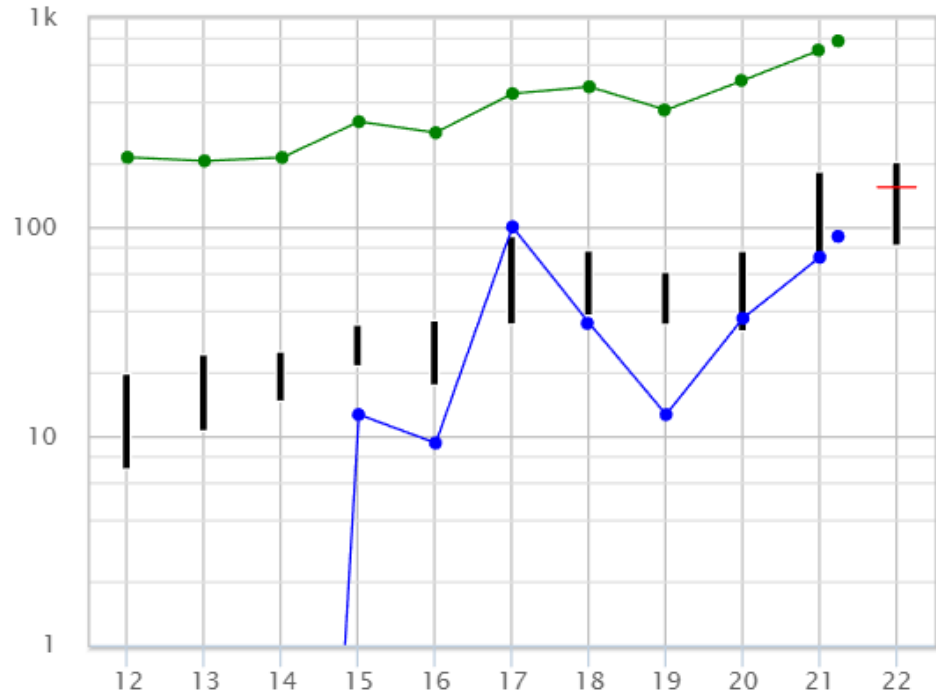
- Advanced packaging is a general grouping of a variety of distinct techniques, including 2.5D, 3D-IC, fan-out wafer-level packaging and system-in-package
- Autonomous Vehicles may require
 - High resolution video
 - Real-time video processing
 - Supercomputer in the trunk!
- HBM - High Bandwidth memory
- GPU-CPU Integration (NVDA)

Search for Small Semiconductor Equipment Stocks – First Pass

- Use Search Tool in BI to identify small Semi-Equip. companies
- Examine previews to identify QUALITY companies
- Put up, straight & parallel charts in good pile
- Put downward trend, short history and erratic charts in bad pile
- Make maybe pile for companies you can't decide on

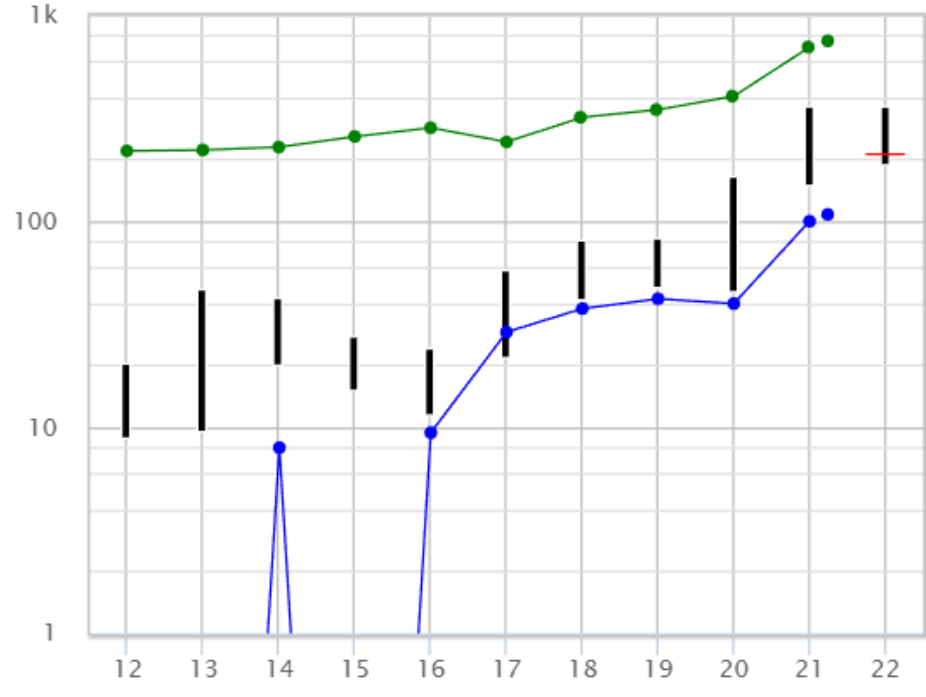
Search for Small Semiconductor Equipment Stocks – First Pass: Good (5)

ACLS - Axcelis Technologies Inc - Data Preview



High/Low Sales Earnings Current Price

CAMT - Camtek Ltd - Data Preview



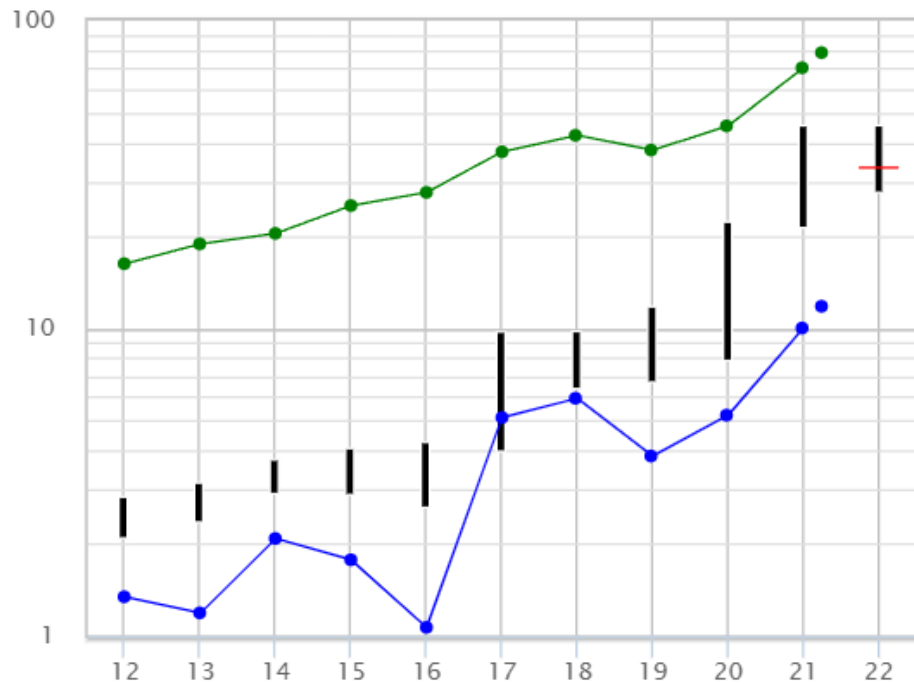
High/Low Sales Earnings Current Price

Search for Small Semiconductor Equipment Stocks – First Pass: Good (5)

NVMI - Nova Ltd - Data Preview



Navigation icons: back, forward, search, and a yellow pin icon labeled "Saved to filtered list".

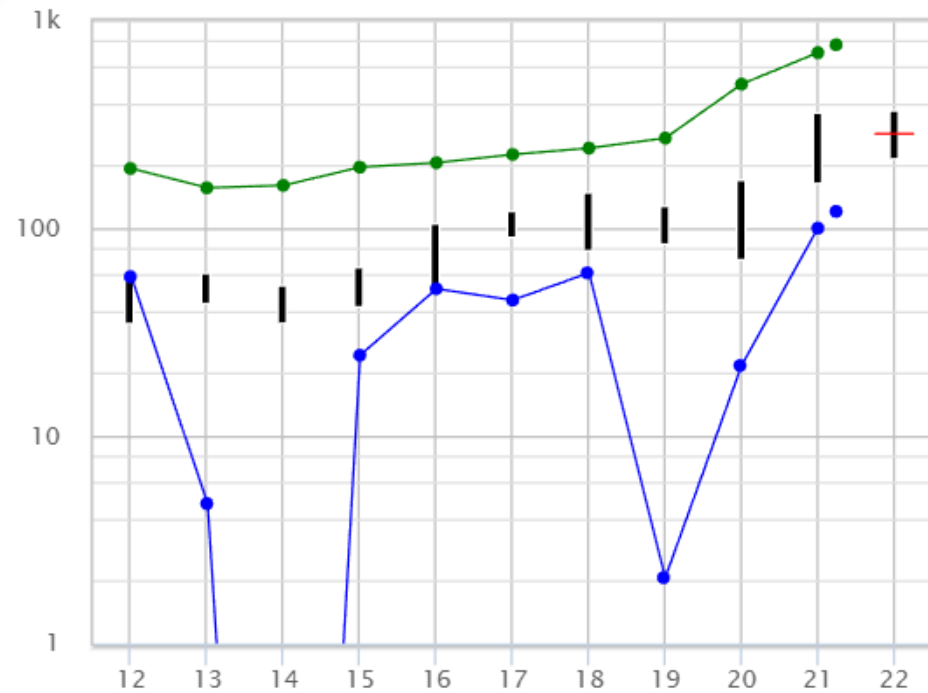


Legend: High/Low (black vertical bar), Sales (green line with dots), Earnings (blue line with dots), Current Price (red horizontal line).

ONTO - Onto Innovation Inc - Data Preview



Navigation icons: back, forward, search, and a yellow pin icon labeled "Saved to filtered list".



Legend: High/Low (black vertical bar), Sales (green line with dots), Earnings (blue line with dots), Current Price (red horizontal line).

Search for Small Semiconductor Equipment Stocks – First Pass: Good (5)

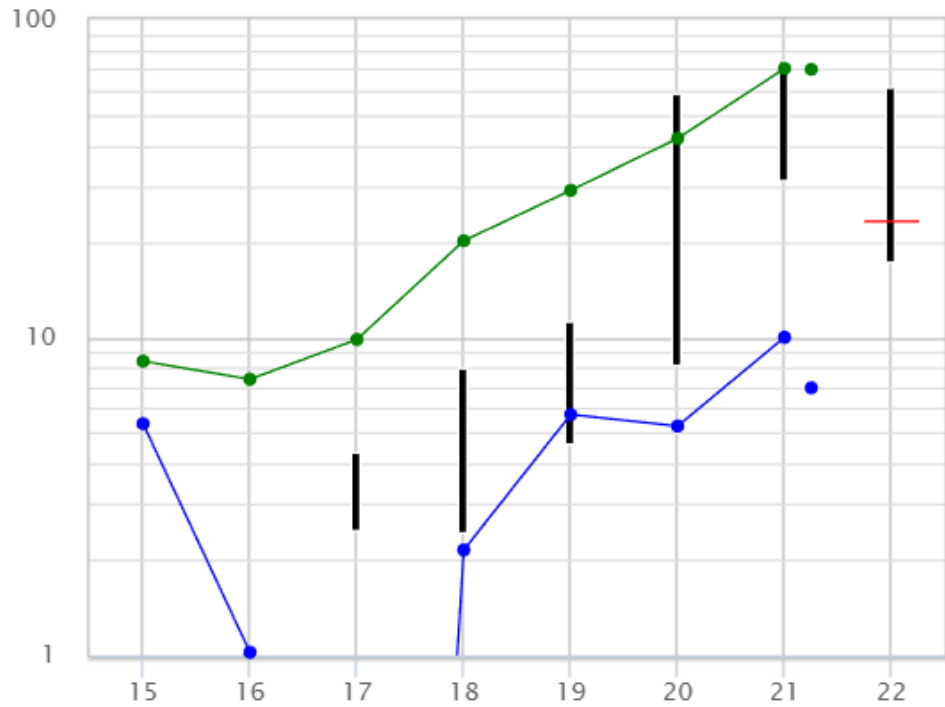


Search for Small Semiconductor Equipment Stocks – First Pass: Maybe (3)

ACMR - ACM Research Inc - Data Preview



Navigation icons: back, forward, search, and a yellow pin icon labeled "Saved to filtered list".

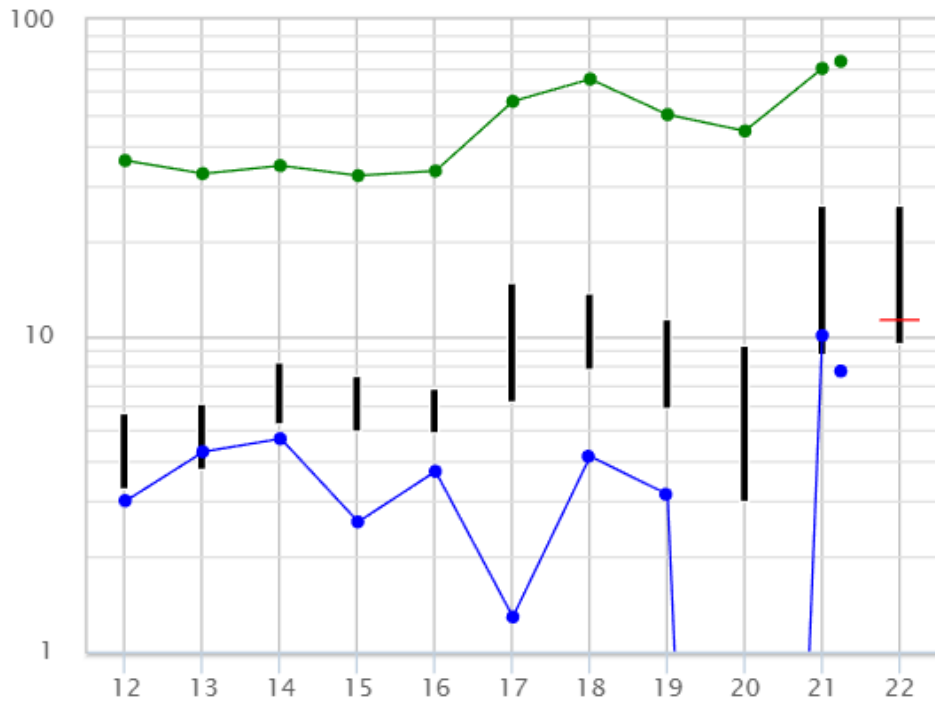


Legend: High/Low (black vertical bar), Sales (green line with dots), Earnings (blue line with dots), Current Price (red horizontal line)

INTT - inTest Corp - Data Preview



Navigation icons: back, forward, search, and a star icon.



Legend: High/Low (black vertical bar), Sales (green line with dots), Earnings (blue line with dots), Current Price (red horizontal line)

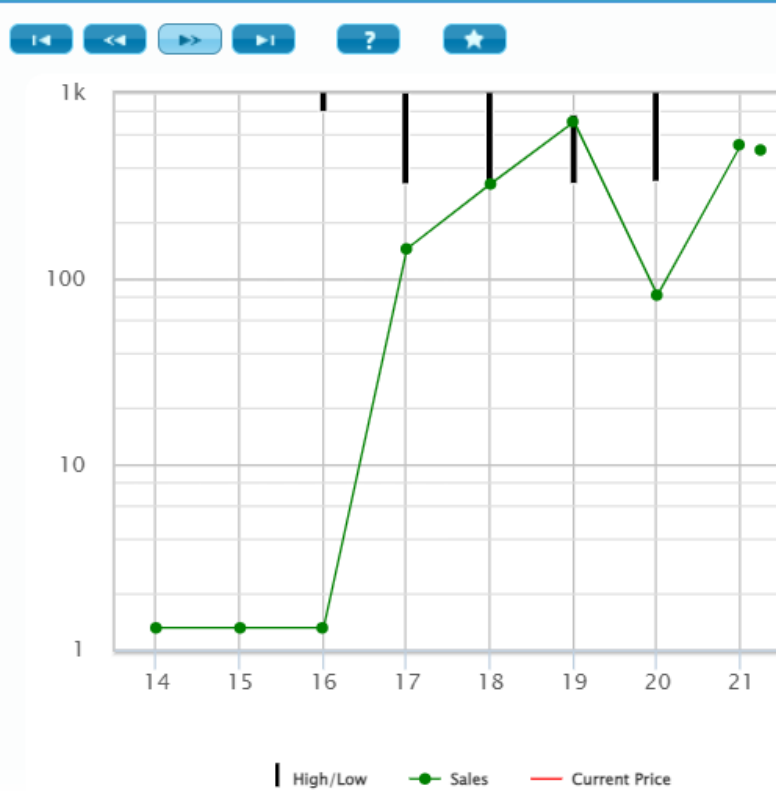
Search for Small Semiconductor Equipment Stocks – First Pass: Maybe (3)



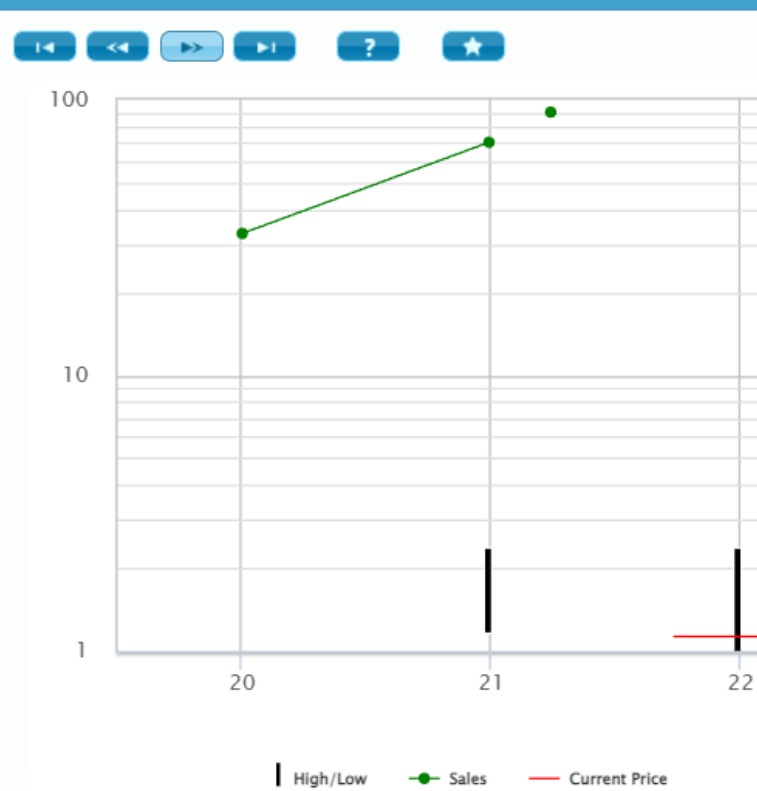
Search for Small Semiconductor Equipment Stocks - First Pass: Bad (12)

Too young and No earnings (3)

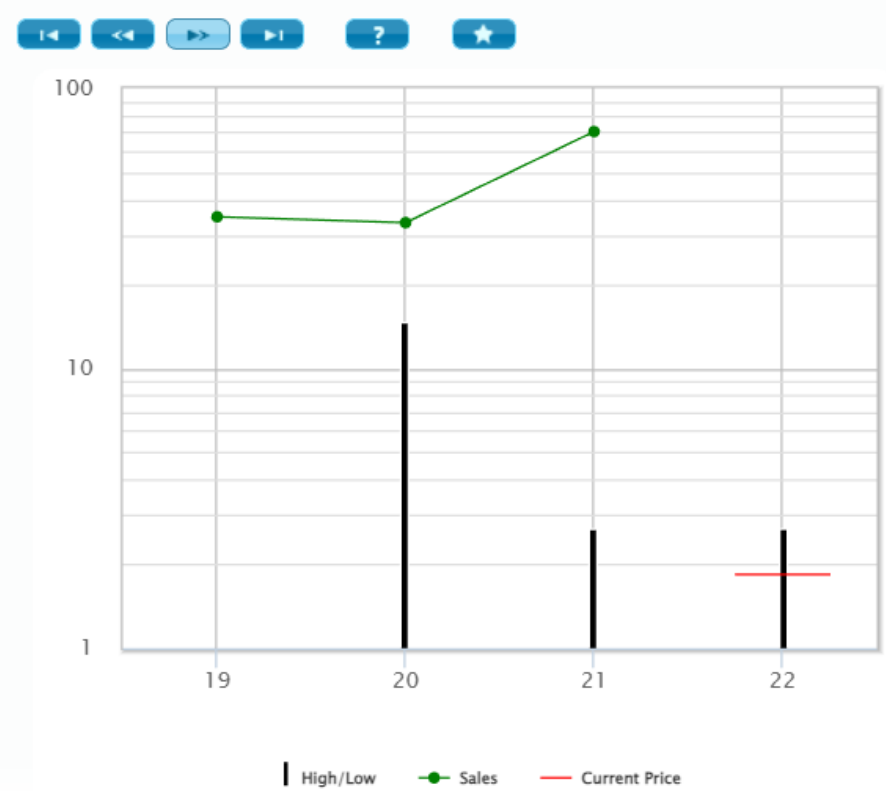
ATOM - Atomera Inc - Data Preview



INDI - Indie Semiconductor Inc - Data Preview

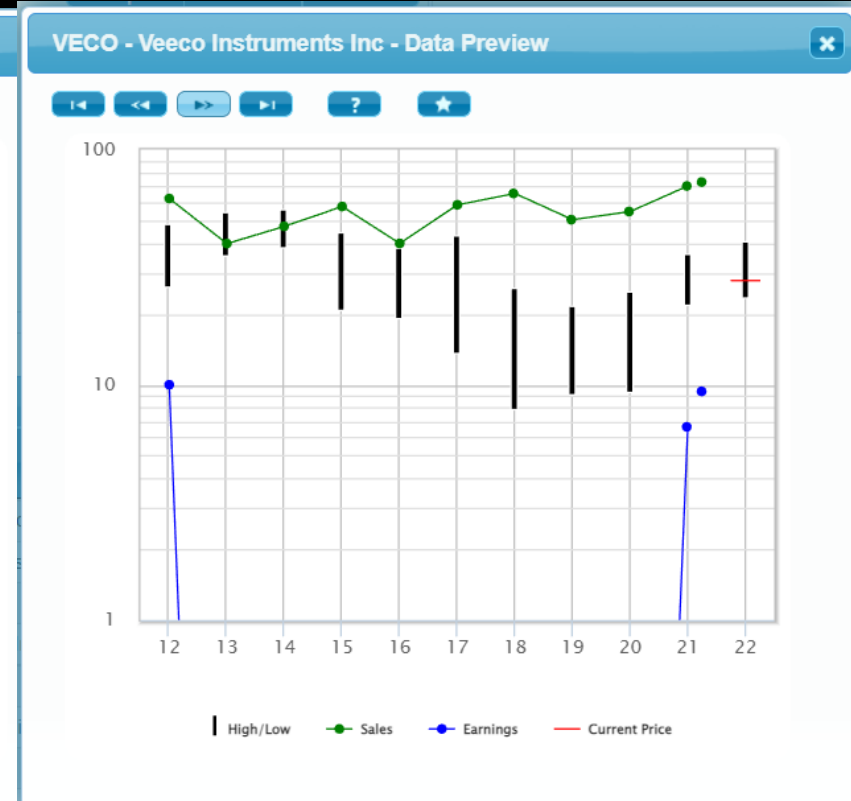
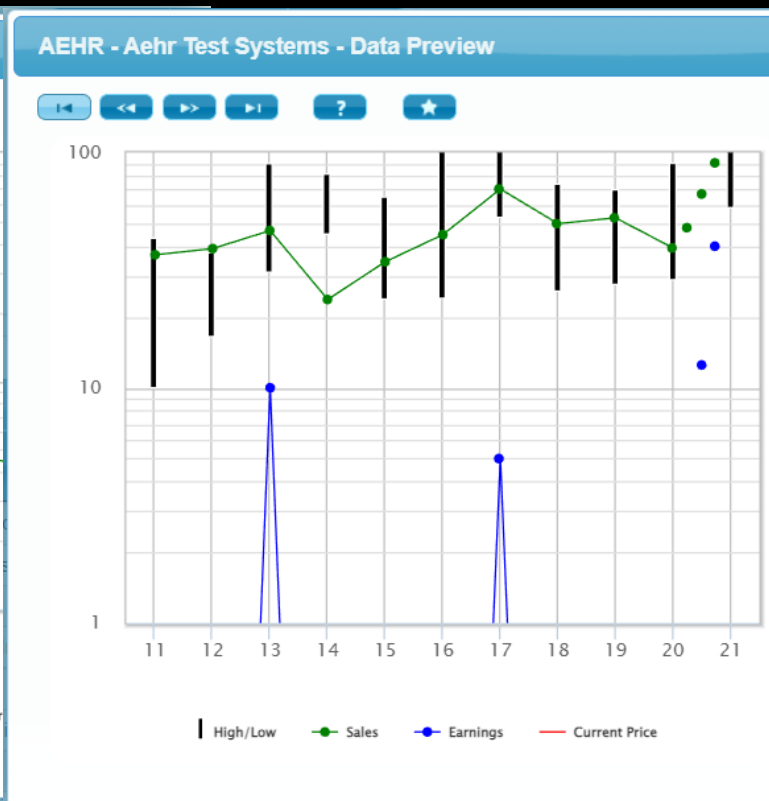


TGAN - Transform Inc - Data Preview



Search for Small Semiconductor Equipment Stocks - First Pass: Bad (12)

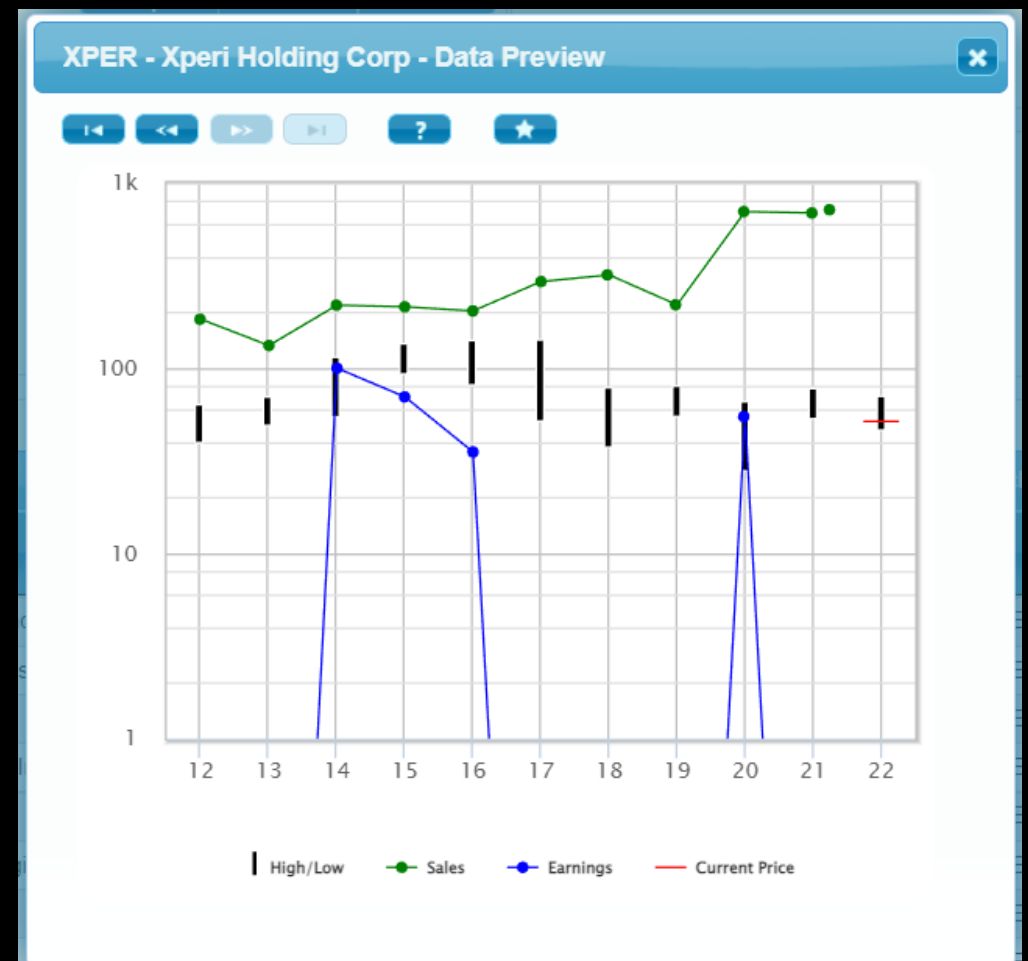
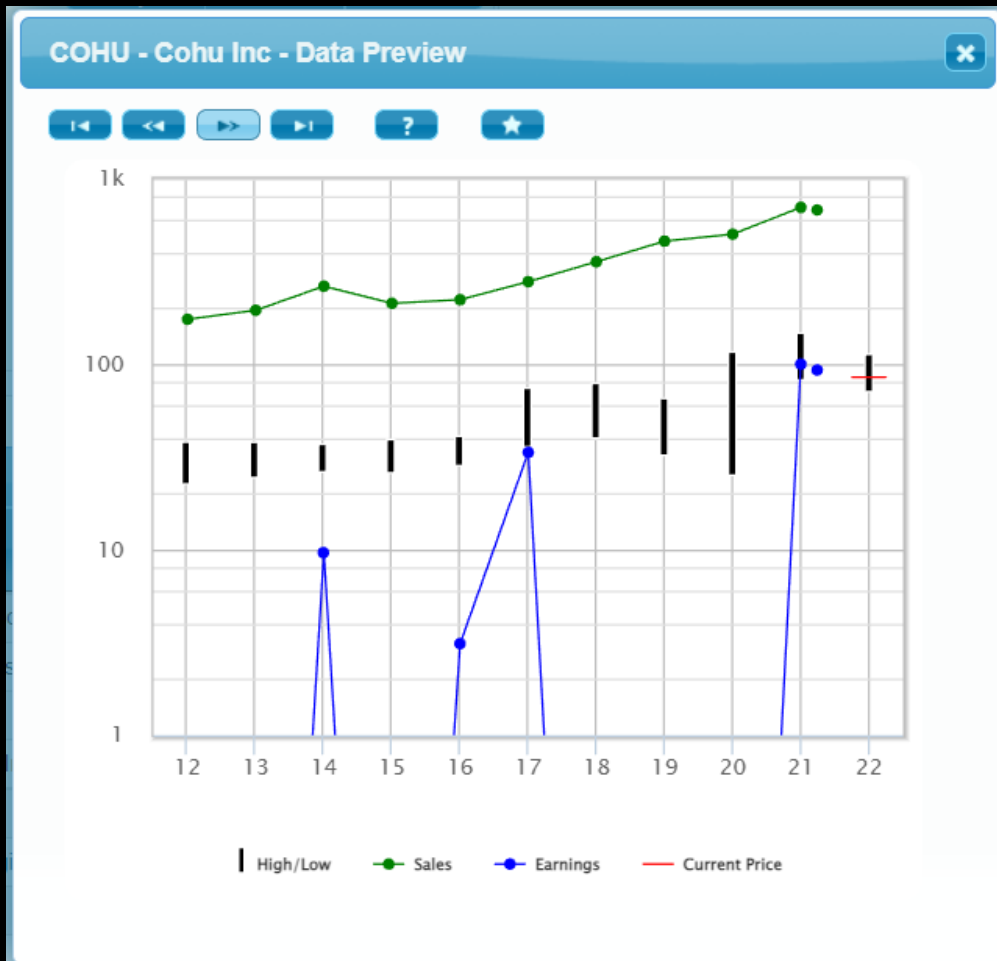
Not enough sales growth or earnings (7)
(3 Examples Shown)



AEHR
ASYS
ATOM
AXTI
RBCN
TRT
VECO

Search for Small Semiconductor Equipment Stocks - First Pass: Bad (12)

Erratic earnings (2)

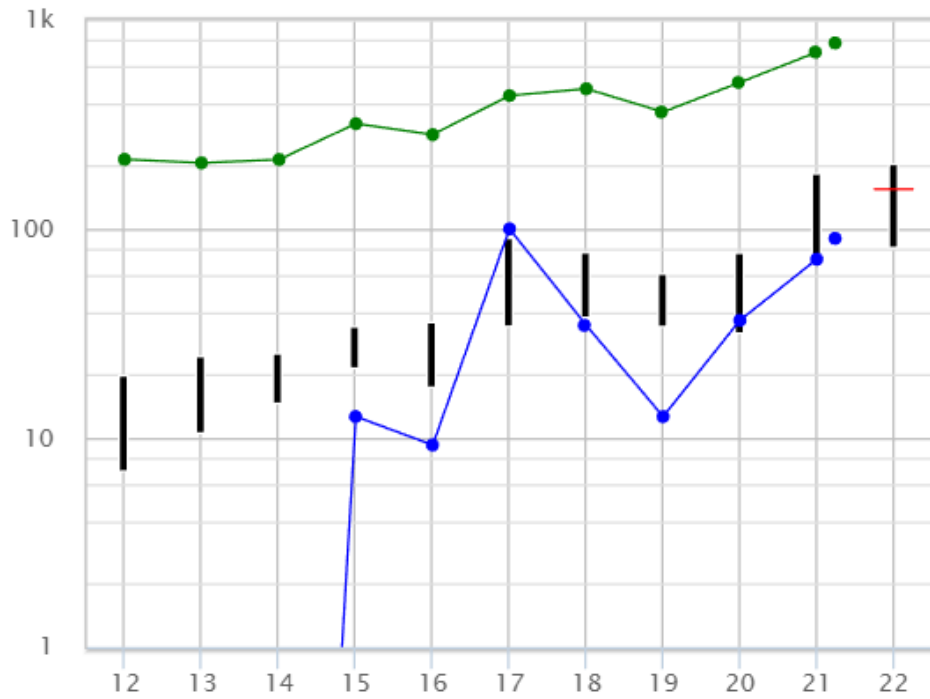


Thin List

- Keep Companies that Sell to Foundries
 - Foundry construction boom?
 - OLED sells screens for phones, TV, computer displays
 - Others sell equipment & service to foundries
 - Eliminate OLED (more consumer electronics)
- Don't need maybes
 - We have 3 better companies

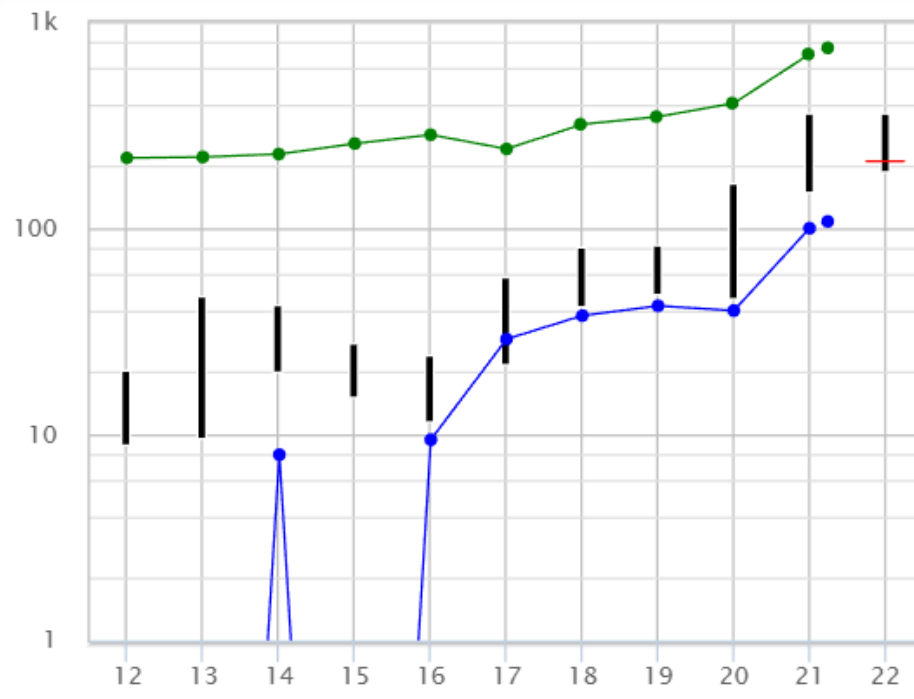
Small Semiconductor Equipment Stocks - Preliminary List(4)

ACLS - Axcelis Technologies Inc - Data Preview



High/Low Sales Earnings Current Price

CAMT - Camtek Ltd - Data Preview



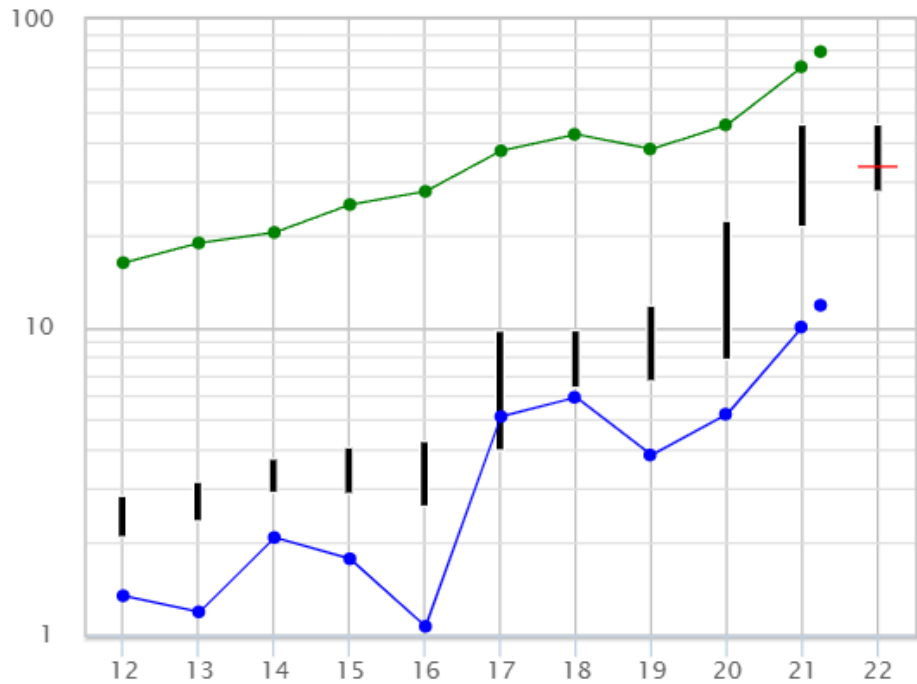
High/Low Sales Earnings Current Price

ACLS
CAMT
NVMI
ONTO

Small Semiconductor Equipment Stocks - Preliminary List(4)

NVMI - Nova Ltd - Data Preview

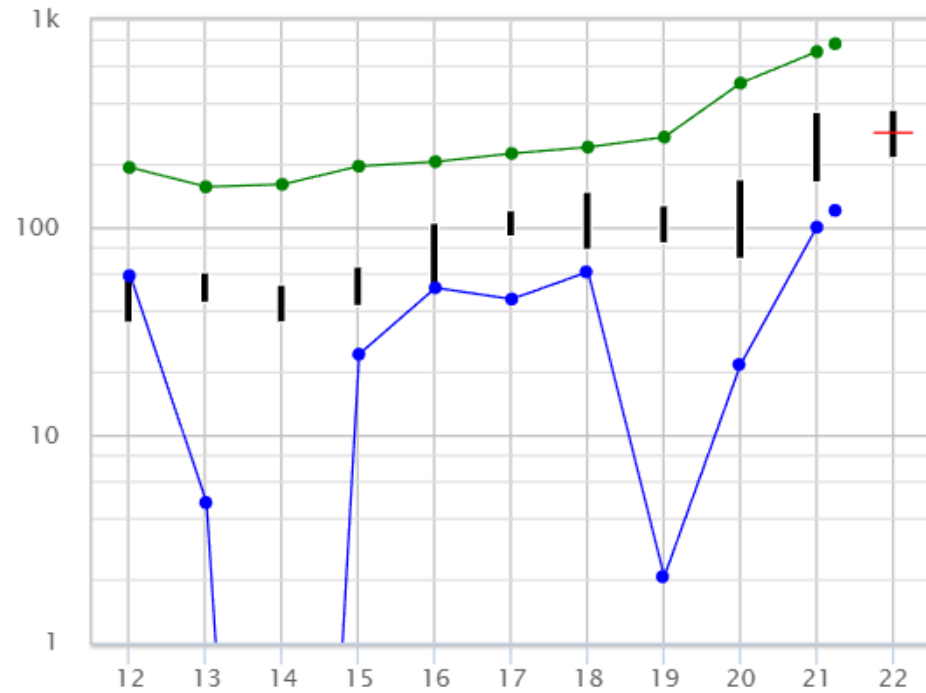
Navigation icons: Home, Previous, Next, Stop, Help. Status: Saved to filtered list



High/Low Sales Earnings Current Price

ONTO - Onto Innovation Inc - Data Preview

Navigation icons: Home, Previous, Next, Stop, Help. Status: Saved to filtered list



High/Low Sales Earnings Current Price

ACLS
CAMT
NVMI
ONTO

Preliminary SSGs

- All by one (experienced) person
- Spend no more than 10 minutes each
- Make the same kind of conservative judgements for each
- Use same source for sales growth, if possible
- Do not mess too much with PEs
- Compare using Stock Comparison Guide

Comparison:

Axcelis Technologies <u>ACLS 6/8/22</u> Small Semiconductor Equi... Count: 4	Camtek <u>CAMT 6/8/22</u> Small Semiconductor Equi... Count: 3	Nova <u>NVMI 6/8/22</u> Small Semiconductor Equi... Count: 3	Onto Innovation <u>ONTO 6/8/22</u> Small Semiconductor Equi... Count: 3
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Pick study or type ticker:

Industry averages:
Semiconductor Equipment & Materials

▶ Growth Comparisons

	Hist. Sales Growth Rate - 10 YR (%)	13.6%	11.0%	15.9%	14.9%	13.8%
	Hist. Sales Growth Rate - 5 YR (%)	10.8%	26.5%	14.2%	34.5%	15.2%
	Estimated Sales Growth Rate (%)	19.2%	11.0%	15.8%	16.0%	
	Hist. Earnings/Share Growth Rate - 10 YR (%)	162.5%	93.7%	24.6%	10.1%	30.2%
	Hist. Earnings/Share Growth Rate - 5 YR (%)	-4.6%	94.1%	12.3%	6.4%	23.4%
	Estimated Earnings Per Share Growth Rate (%)	16.7%	9.0%	12.6%	13.9%	
	Earnings Stability (R-squared) - 10 YR	.12	.00	.74	.01	.70
	Earnings Stability (R-squared) - 5 YR	.01	.73	.29	.00	.68

▶ Management Comparisons




	% Pretax Profit on Sales (Last 5 Year Average)	11.8%	14.4%	23.5%	13.4%	24.8%
	% Earned on Equity (Last 5 Year Average)	18.5%	14.8%	17.0%	7.0%	32.6%
	% Debt to Capital (Last 5 Year Average)	10.0%	8.3%	15.6%	0.9%	32.2%











Comparison:

Axcelis Technologies <u>ACLS 6/8/22</u> Small Semiconductor Equi... Count: 4	Camtek <u>CAMT 6/8/22</u> Small Semiconductor Equi... Count: 3	Nova <u>NVMI 6/8/22</u> Small Semiconductor Equi... Count: 3	Onto Innovation <u>ONTO 6/8/22</u> Small Semiconductor Equi... Count: 3	Pick study or type ticker: <input type="text"/>	Industry averages: Semiconductor E Semiconductor Equipment & Materials
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Valuation Comparisons

	ACLS	CAMT	NVMI	ONT		
Present Price	63.64	28.69	109.12	83.67		
Present Price / Estimated Total EPS	2.2	3.1	4.2	3.2		
Price Range (Last 5 Years)	12.99 - 75.40	3.00 - 49.60	13.04 - 148.94	20.32 - 103.77		
Current High P/E	26.2	37.0	47.7	36.3		22.6
Average High P/E	23.7	26.6	32.0	29.5		31.0
Average P/E	16.9	19.8	23.1	23.1		23.4
Average Low P/E	10.1	12.9	14.2	16.7		15.9
Current Low P/E	9.9	15.3	22.2	16.6		11.2
Current P/E	17.5	20.1	30.4	24.3		22.1
Lower Buy Price Zone (25%)	28.40 - 67.85	20.50 - 30.01	69.00 - 100.49	47.30 - 83.42		
Middle Hold Price Zone (50%)	67.85 - 146.76	30.01 - 49.02	100.49 - 163.46	83.42 - 155.67		
Upper Sell Price Zone (25%)	146.76 - 186.21	49.02 - 58.53	163.46 - 194.94	155.67 - 191.79		
Present Price Indicator	Buy	Buy	Hold	Hold		
Upside/Downside Ratio	3.5 to 1	3.6 to 1	2.1 to 1	3.0 to 1		
Relative Value	103.6%	101.8%	131.4%	105.2%		98.8%
P/E: Projected Growth Rate (PEG)	0.9	2.0	2.1	1.5		

Comparison:   

Axcelis Technologies ACLS 6/8/22 Small Semiconductor Equi... Count: 4  	Camtek CAMT 6/8/22 Small Semiconductor Equi... Count: 3  	Nova NVMI 6/8/22 Small Semiconductor Equi... Count: 3  	Onto Innovation ONTO 6/8/22 Small Semiconductor Equi... Count: 3  	Pick study or type ticker: <input type="text" value=""/> 	Industry averages: Semiconductor E  Semiconductor Equipment & Materials
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▶ Potential Return Comparisons

 Present Yield	0.00%	0.00%	0.00%	0.00%	0.9%
 Avg. Percent Payout	0.00%	0.00%	0.00%	0.00%	22.7%
Compound Annual Return - Forecast High P/E	24.0%	15.3%	12.3%	18.1%	
Compound Annual Return - Forecast Avg P/E	15.9%	8.7%	5.7%	12.6%	

▶ Other Comparisons

Sector	Technology	Technology	Technology	Technology	
Industry	Semiconductor Equipment & Materials	Semiconductor Equipment & Materials	Semiconductor Equipment & Materials	Semiconductor Equipment & Materials	
Total Sales Last FY	662.4 (Small)	269.7 (Small)	416.1 (Small)	788.9 (Small)	
Current Diluted Shares Outstanding (M)	34.0	48.1	32.0	49.9	
% Insider Ownership	8.6%	--	--	5.9%	
% Institutional Ownership	84.6%	25.4%	51.2%	99.6%	
Price Date	Jun 07, 2022	Jun 07, 2022	Jun 07, 2022	Jun 07, 2022	
Last Reported Quarter	Mar 31, 2022	Mar 31, 2022	Mar 31, 2022	Mar 31, 2022	
Judgment Date	Jun 08, 2022	Jun 08, 2022	Jun 08, 2022	Jun 08, 2022	

Which is Best?

- ACLS appears best, BUT
 - Has the highest sales growth (ACE estimate). Is it real?
- CAMT and NVMI also look like high quality companies
- CAMT might have too short of a track record
- ONTO earnings might be too erratic

Next Steps

- Assign each quality stock to one or more people in your club (or committee)
- Complete full research and redo the SSG
- Compare Completed SSGs in a new SCG
- Make decision on best buying opportunity if any
- Quality companies are worth following, even if they are not a BUY now

How to do Industry Studies

3-Part Video Series by Ken Kavula and Ann Cuneaz

- [Sectors, Industries and Your Portfolio](#)
- [A Step-By-Step Approach to an Industry Study](#)
- [Select the Best Using the Stock Comparison Guide](#)

Demo of Using BI Search Tool to Scan through an Industry?

- Is there enough time?



THANKS! QUESTIONS?

Are Semiconductor Stocks Cheap?

Yes,
Relatively
Cheap!

GICS Sector: Information Technology

Sub-Industry: Semiconductors

Based on S&P 1500 Indexes

Five-Year market price performance through May 28, 2022



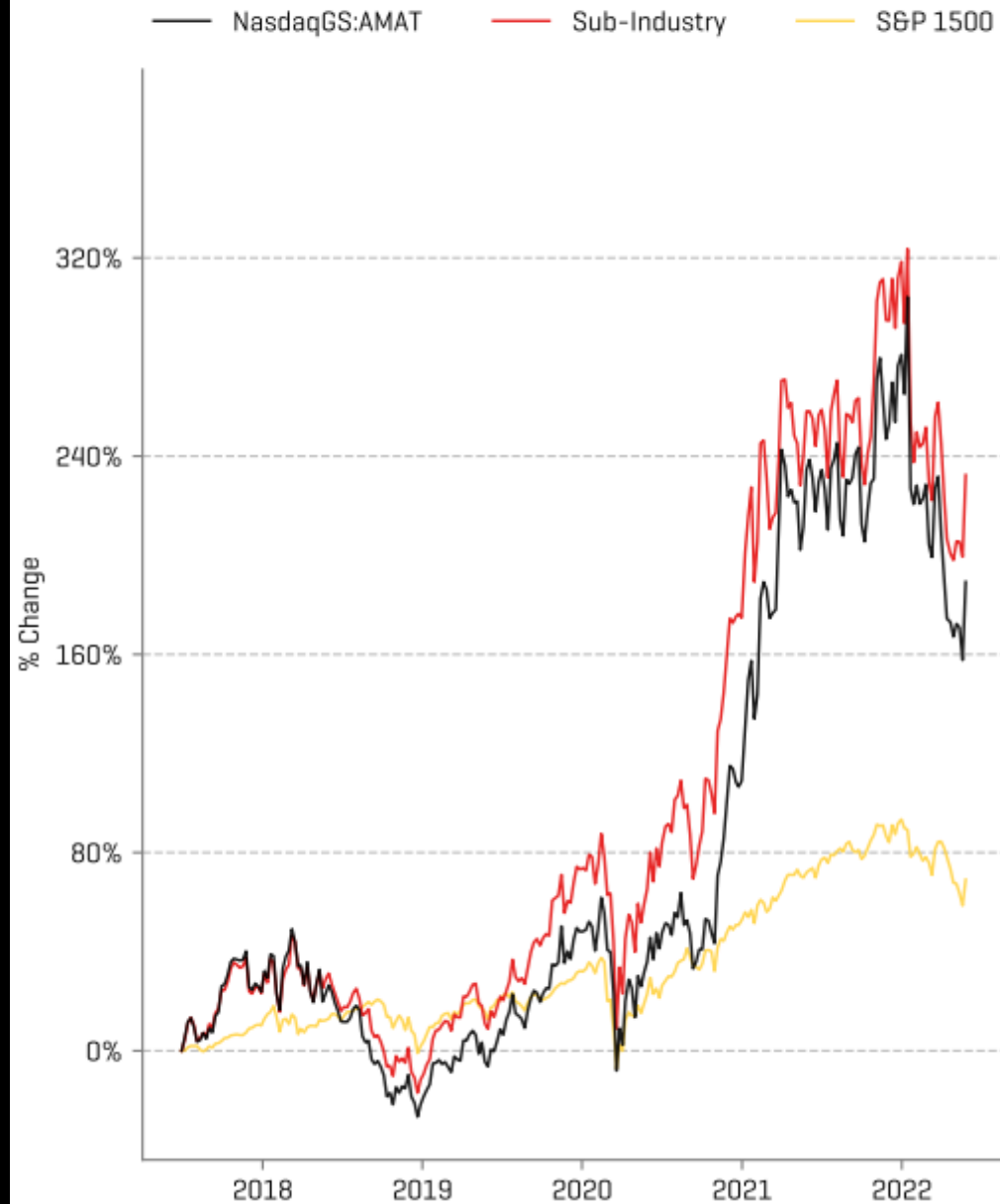
Are Semiconductor Equipment Stocks Cheap?

Yes,
Relatively
Cheap!

GICS Sector: Information Technology Sub-Industry: Semiconductor Equipment

Based on S&P 1500 Indexes

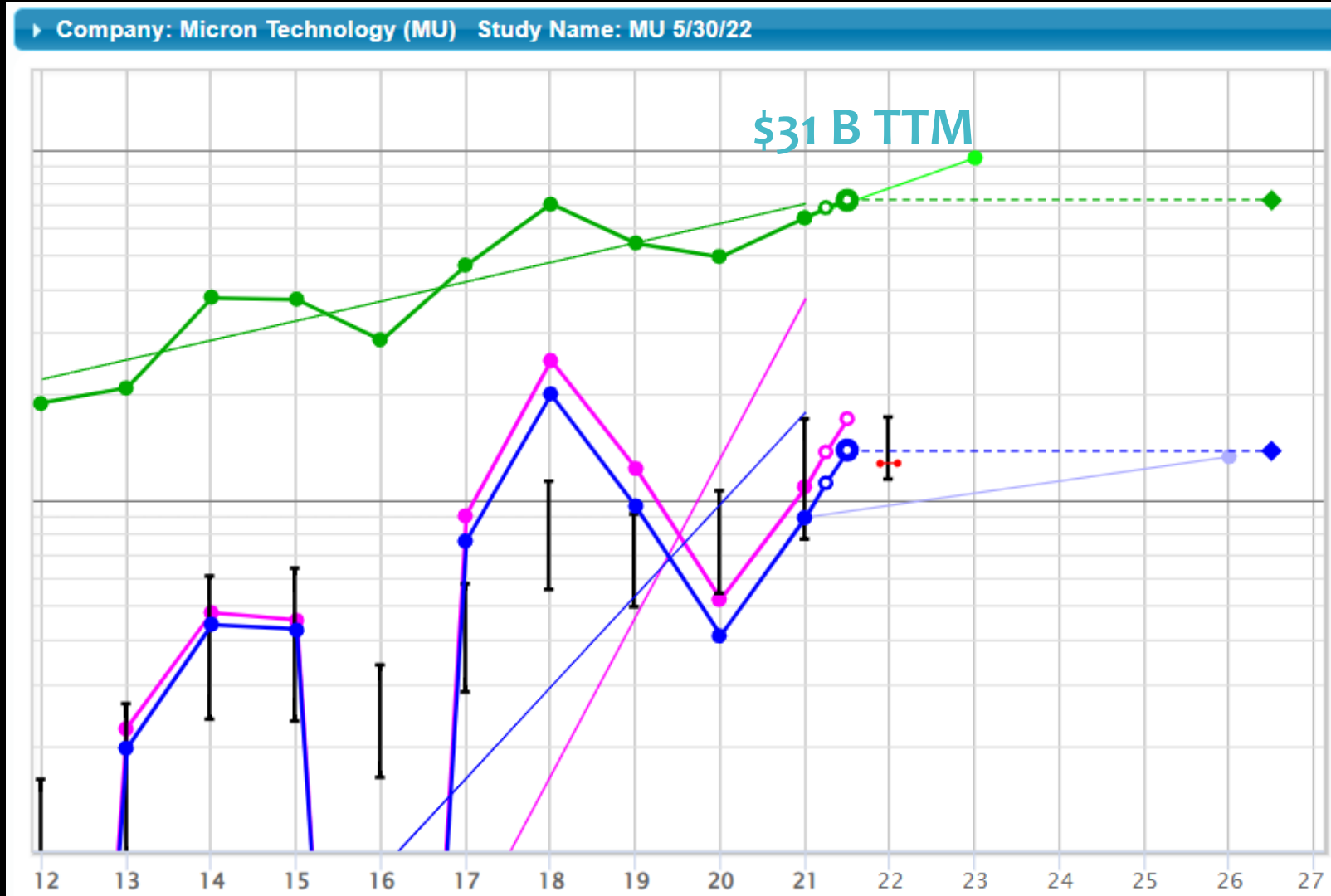
Five-Year market price performance through May 28, 2022



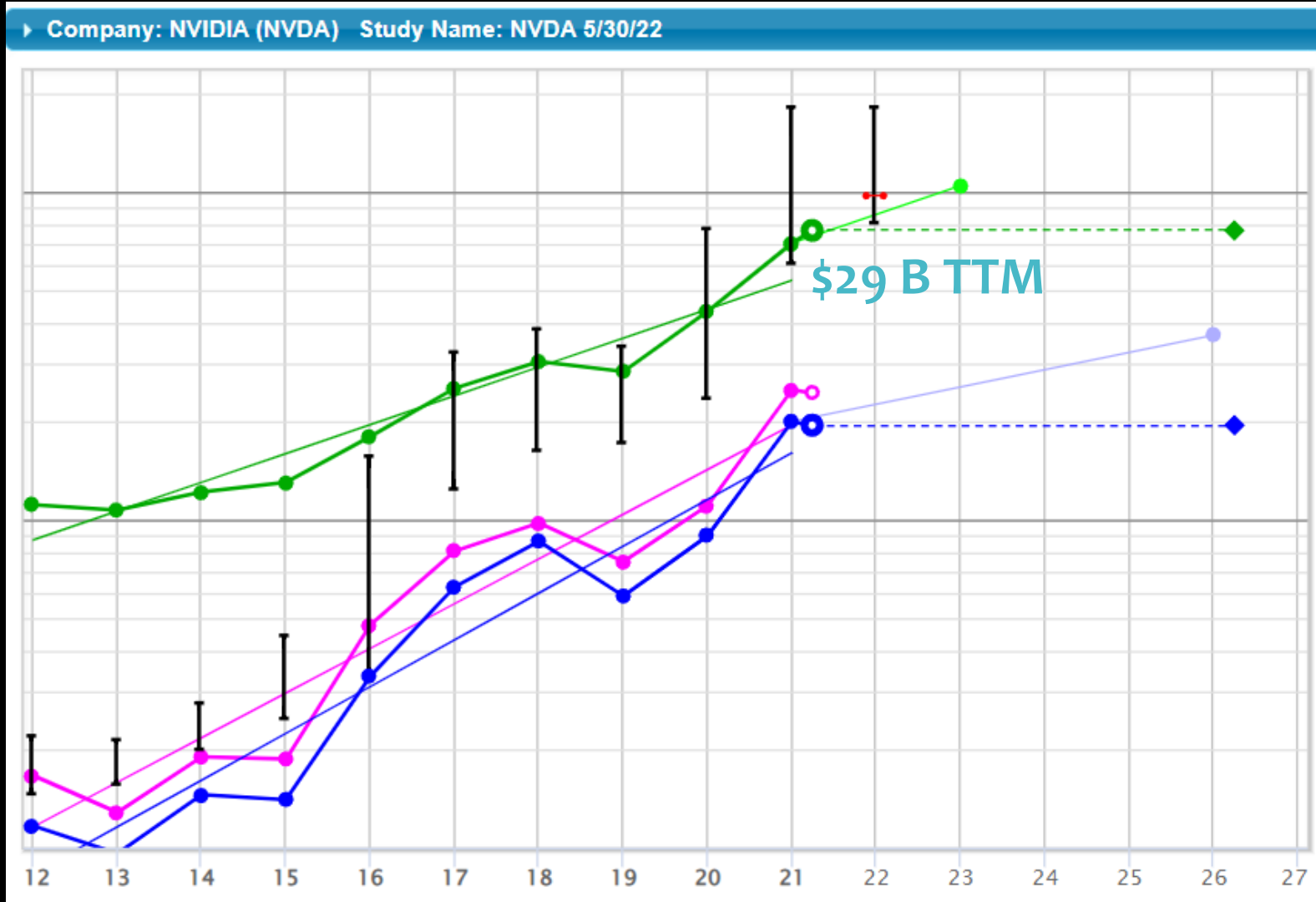
Which Stocks are Cyclic?

- Semiconductors
 - Large Companies
 - TSM, INTC, GFS, NVDA, MU
- Semiconductor Equipment
 - Large Companies
 - AMAT, ASML, AMKR, LRCX
 - Medium Companies
 - MKSI, TER, TDY, UCTT
 - Small
 - ACLS, CAMT, COHU, ONTO, PLAB

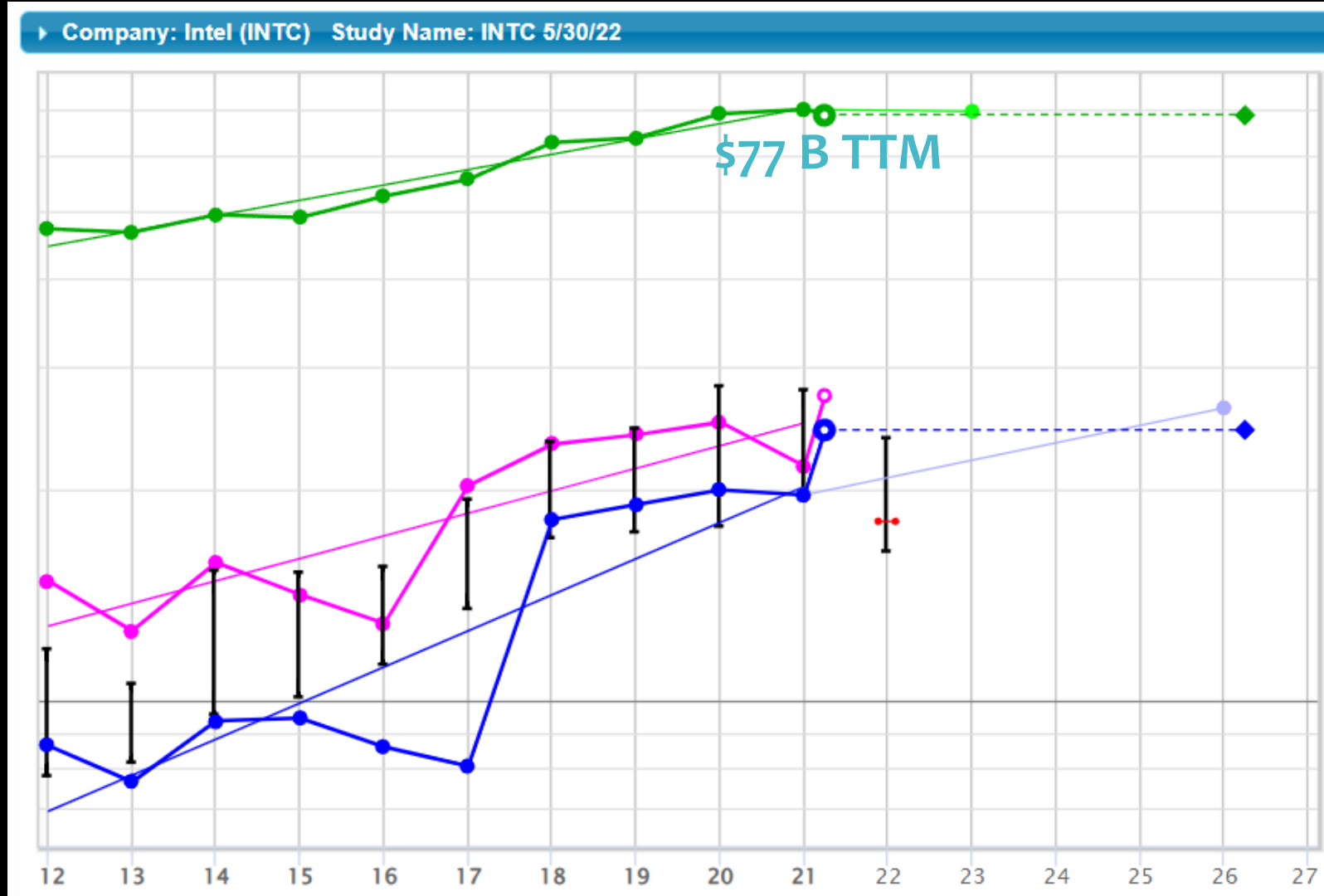
MU – Makes Memory Chips (DRAM & NAND)



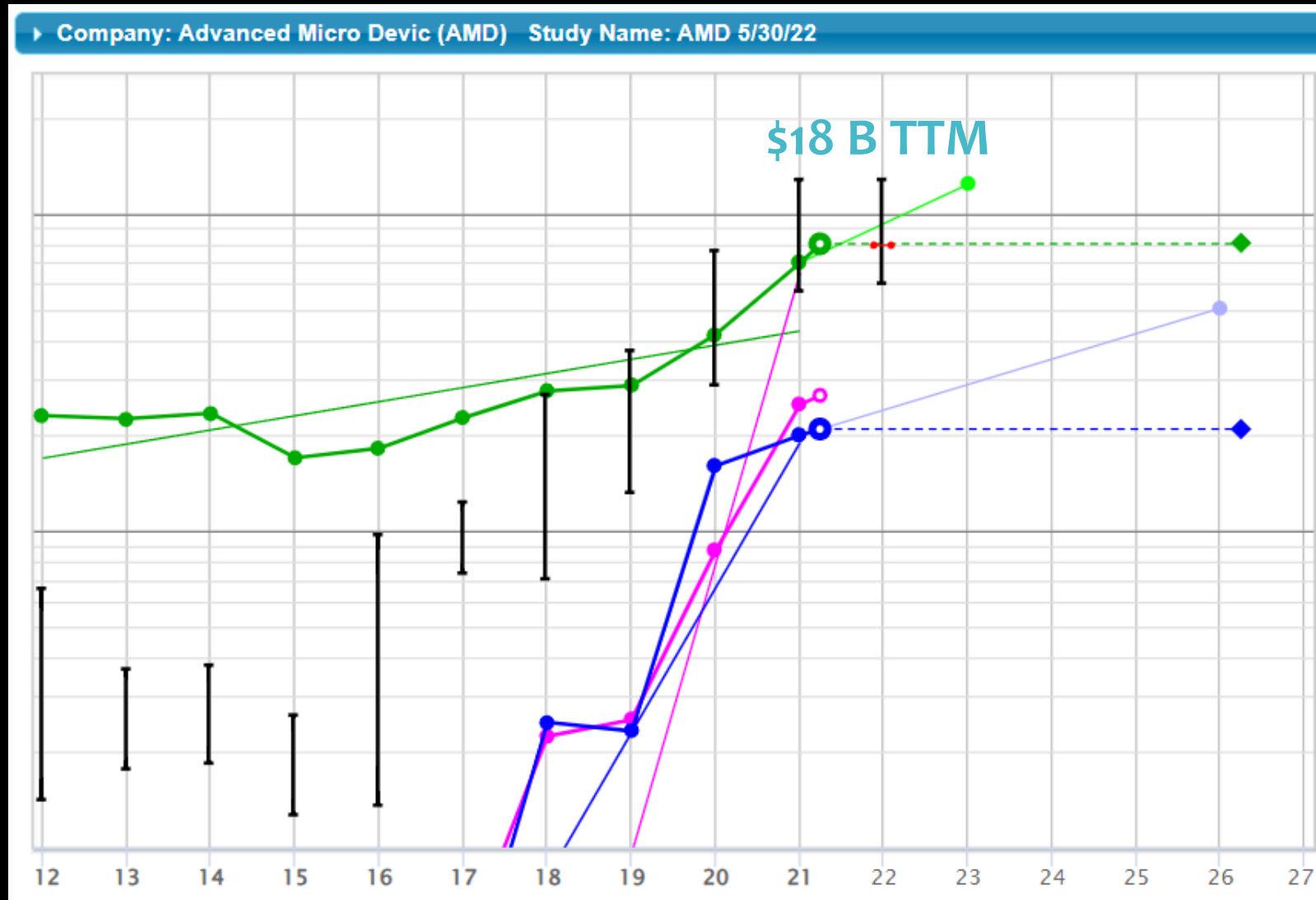
NVDA – Makes GPUs (Graphics Processing Units)



INTC – Makes CPUs (Central Processing Units)



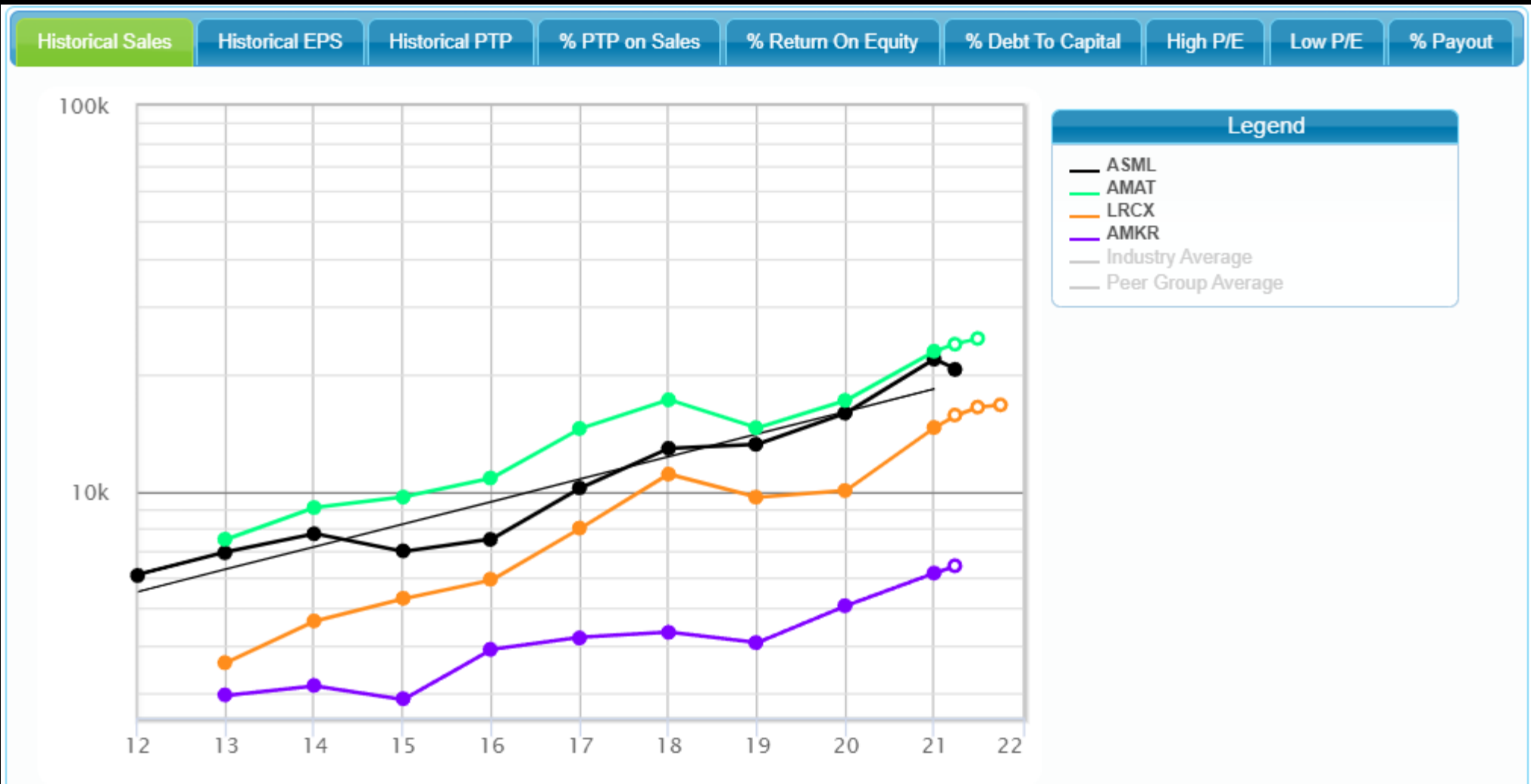
AMD – Makes CPUs (Central Processing Units)



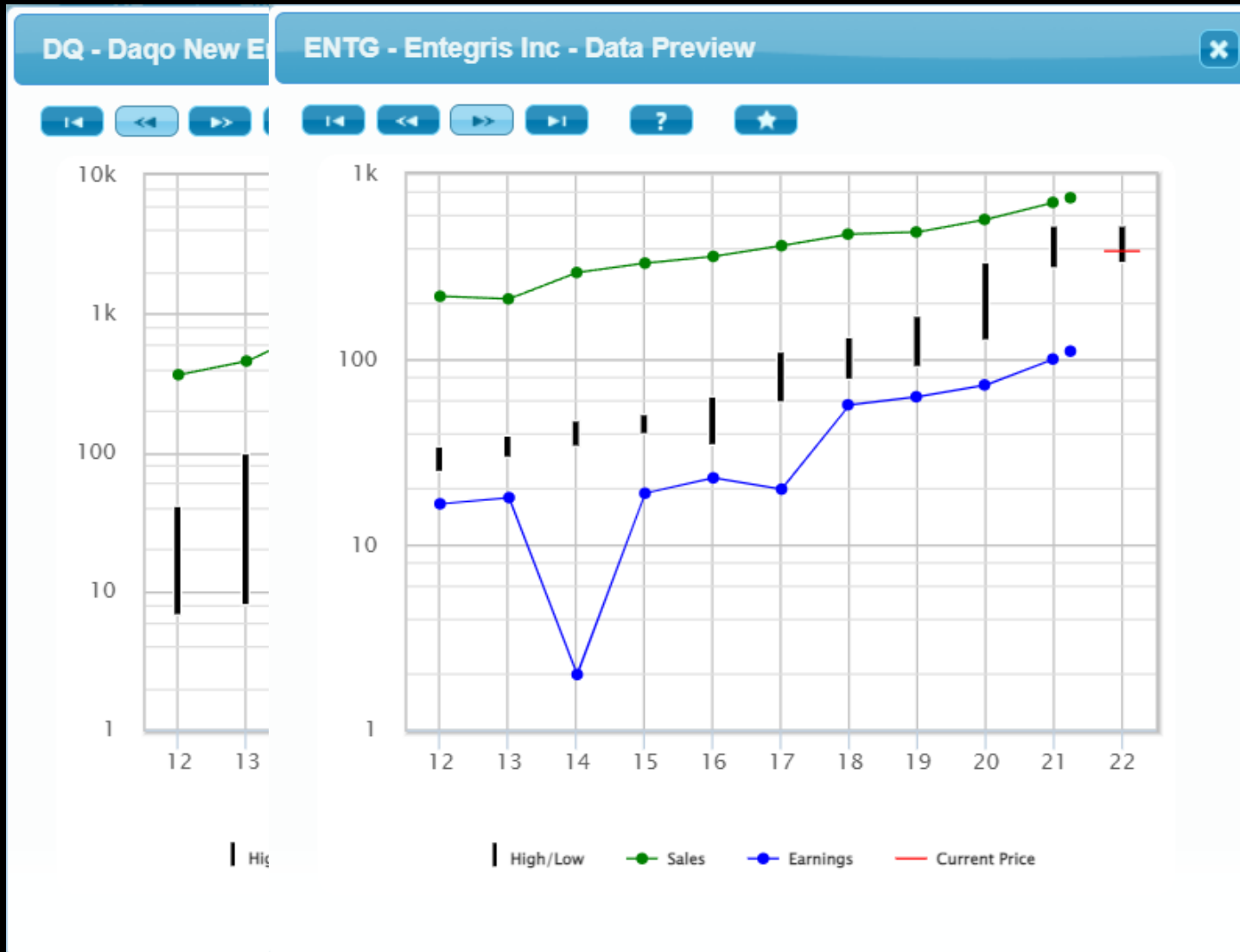
Who's Cyclic, Who's Growth?

- MU (Micron) – cyclic
- NVDA (Nvidia) – growth
- INTC (Intel) – growth?
- AMD (Advanced Micro Devices) – highly volatile growth!

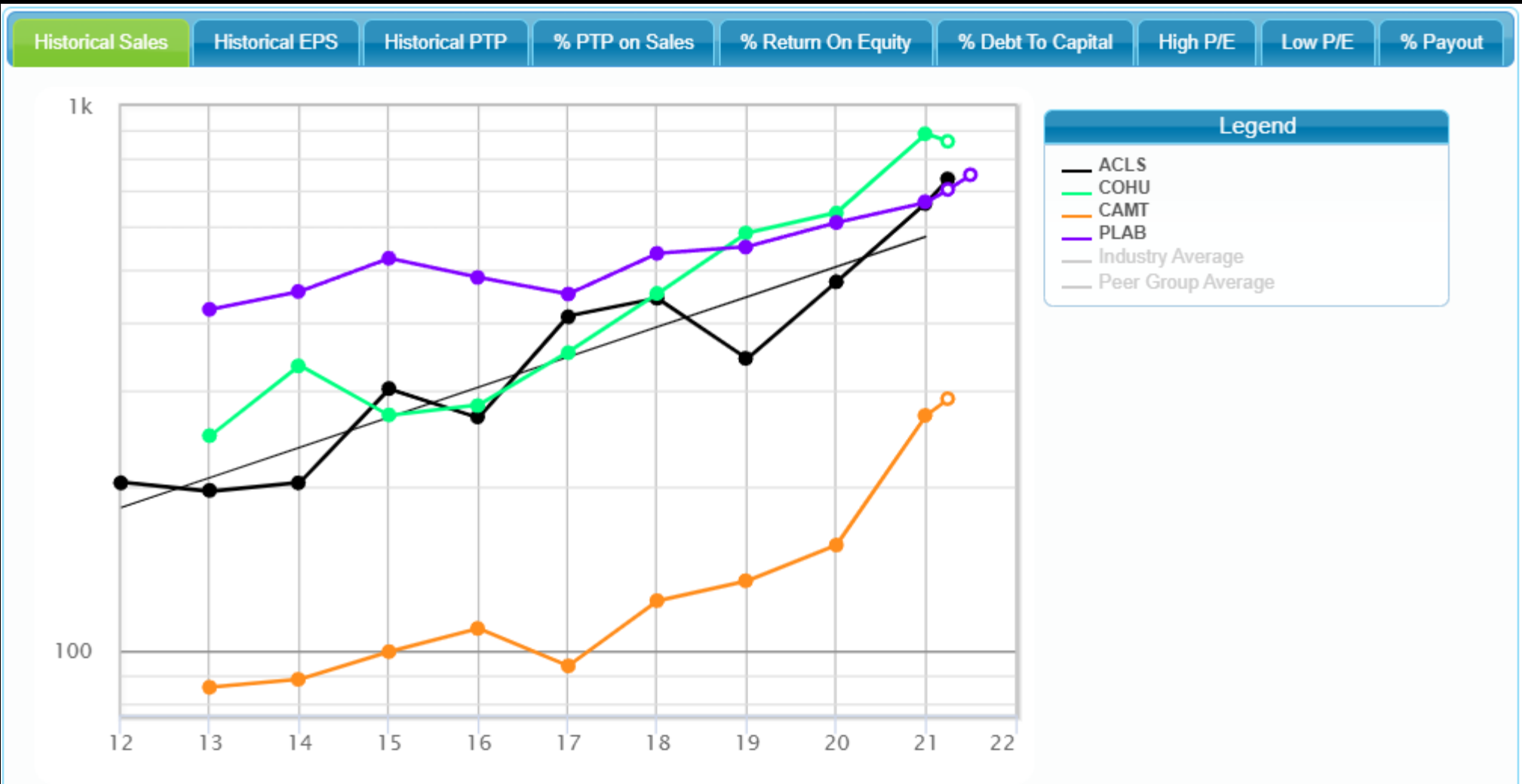
Large Semiconductor Equipment Companies - Sales



Medium Semiconductor Equipment Companies



Small Semiconductor Equipment Companies - Sales



Conclusions

- Demand for semiconductors is high and growing in AI, Autos, 5G, HPC, Cloud, IoT, Virtual Reality
- Some semiconductor companies are quality growth companies!
- Some types of semis (e.g., memory chips) are very volatile commodities (MU, ...)
- Semi equipment makers tend to be more stable
 - Long cycle time for foundry equipment
 - Make money servicing their equipment (~1/3)
- Medium/Small Companies in Semiconductor Equipment sub-sector are worth a look (e.g., MKSI, CAMT, PLAB, COHU)

