Not for redistribution without written consent of Morgan Stanley

Morgan Stanley | RESEARCH

UPDATE

July 1, 2026 04:14 AM GMT

Semiconductors | North America

Semiconductor Inventory Tracker: Not Restocking Yet

Supply chain inventory rose q/q but outperformed seasonality, with below-seasonal producer builds and distributor declines. Supply is tightening, but meaningful restocking has yet to emerge.

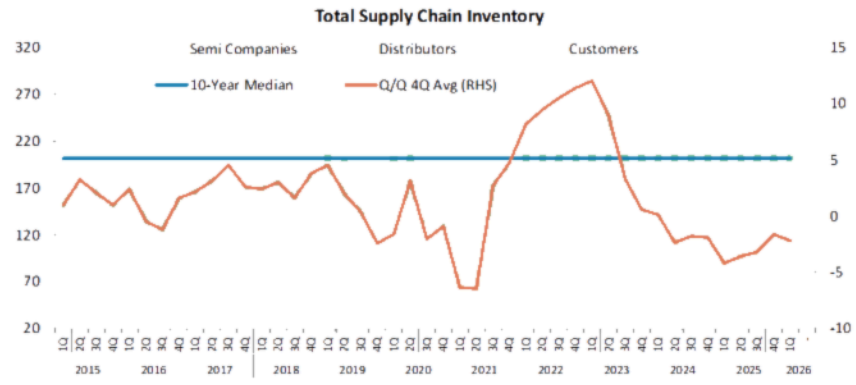
Key Takeaways

- Overall supply chain outperformed seasonality, increasing by less than the typical 1Q increase.
- Producer and disti DOIs outperformed seasonality; customers were ~in-line.
- Auto OEM DOI moved above historical median, while Auto Supplier DOI declined to in-line with historical levels.

Overall supply chain inventory increased q/q in 1Q, but the build was below typical 1Q seasonality. We remain above historical median levels, as distributors declined and producers built less than seasonal levels, while customers were ~in-line. While this is a step in the right direction, we still remain 33 days above historical median for the supply chain, and have not yet seen a broader restocking cycle.

The quarter reflected a mix of normal 1Q inventory build and continued discipline across the supply chain rather than broad restocking. Distributors continue to lean out, producer builds remain relatively steady, and customer trends were mixed. For stocks, we prefer areas where supply/demand is tightening or inventory risk is more defensible, including premium-end analog exposure in ADI and NXP, compute/networking names NVDA, AVGO, and CBRS, memory names MU and SNDK, and semicap names MKSI, KLAC, LRCX and ONTO.

Exhibit 1: Stacked DOI increased 9 days vs. a seasonal 19-day increase and is 33 days above the historical median. Trailing decreased ~2 days.



Source: FactSet, Morgan Stanley Research

MORGAN STANLEY & CO. LLC

Joseph Moore
Equity Analyst
Joseph.Moore@morganstanley.com

Nicole Kozhukhov
Research Associate
Nicole.Kozhukhov@morganstanley.com

Ella Tulchinsky
Research Associate
Ella.Tulchinsky@morganstanley.com +1 212 761-2332

Shane Brett
Equity Analyst
Shane.Brett@morganstanley.com

Mason Wayne
Research Associate
Mason.Wayne@morganstanley.com +1 212 761-6012

SEMICONDUCTORS
North America
Industry View **Attractive**

SEMICONDUCTOR CAPITAL EQUIPMENT
North America
Industry View **In-Line**

Morgan Stanley does and seeks to do business with companies covered in Morgan Stanley Research. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of Morgan Stanley Research. Investors should consider Morgan Stanley Research as only a single factor in making their investment decision.

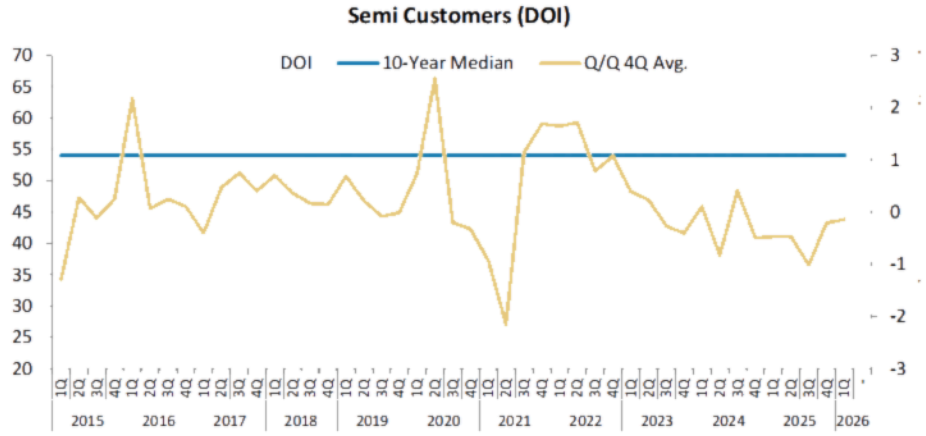
For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

Supply Chain Inventory Overview

Supply chain inventory increased q/q in 1Q, but by less than typical seasonality, with customer inventory ~in-line, distributors declining, and producers building less than seasonal levels. Total supply chain DOI increased 9 days q/q vs. a seasonal increase of 19 days, leaving DOI 33 days above the historical median. The improvement was led by distributor lean-out and muted producer builds, while customers were mixed by end market.

Semiconductor customer inventory increased by 9 days, ~in-line with the seasonal increase of 8 days, and now sits above the historical median by 6 days. The only semi customer where DOI decreased was Auto Suppliers (-1 day). Communications (+17 days) and ODMs (+16 days) saw the largest increases q/q. Storage remains slightly below its historical median, while other customers are now in-line (Auto suppliers, Auto OEMs, Consumer) or above (Industrials, Machinery, Computing/Mobile, Contract Manufacturers, and ODMs). Trailing four-quarter inventory increased from last quarter.

Exhibit 2: Semi Customer DOI increased 9 days sequentially to 60 days vs a seasonal increase of 8 days. DOI is above the historical median and trailing 4 quarters increased from last quarter.



Source: FactSet, Morgan Stanley Research

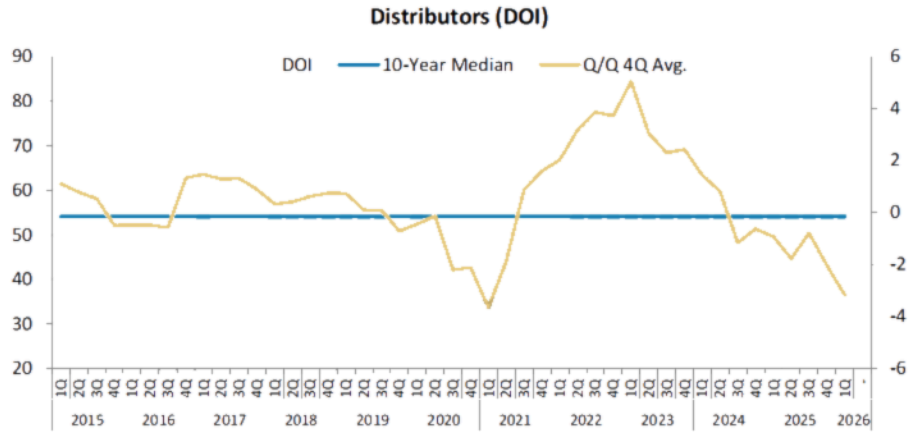
Exhibit 3: Sequential and y/y change in semi customer inventory levels

		Q/Q		Y/Y	
		Change in DOI	Change in $ Inventory	Change in DOI	Change in $ Inventory
Customers	AUTO OEMS	7	7%	-1	3%
	AUTO SUPPLIERS	-1	1%	-2	2%
	US INDUSTRIALS	8	4%	-4	7%
	MACHINERY	5	7%	-10	9%
	COMMUNICATIONS	17	11%	6	21%
	COMPUTING/MOBILE	11	27%	3	42%
	STORAGE	0	1%	-12	4%
	CONSUMER	4	-5%	-6	-7%
	CONTRACT MANUFACTURERS	13	8%	-5	24%
	ODM'S	16	45%	13	108%
	TOTAL	**9**	**11%**	**-1**	**15%**

Source: FactSet, Morgan Stanley Research

Distributor inventory decreased by 2 days q/q, below a seasonal increase of 4 days, but still sits 7 days above the historical median of 54 days. DOI declined q/q at WPG and Avnet, driven by COGS growth outpacing inventory growth (WPG: inventory +18% vs. COGS +21%; Avnet: inventory +3% vs. COGS +13%), while Arrow's DOI increased by 2 days. Absolute $ of inventory increased for each distributor. Trailing 4-quarter decreased in the first quarter. *(Arrow and Avnet are not covered by Morgan Stanley Research. WPG is covered by Daniel Yen.)*

Exhibit 4: Distributor inventory is at 61 days, down 2 days q/q, below the seasonal increase of 4 days. DOI is 7 days above the historical median while trailing 4-quarters decreased sequentially.



Source: FactSet, Morgan Stanley Research

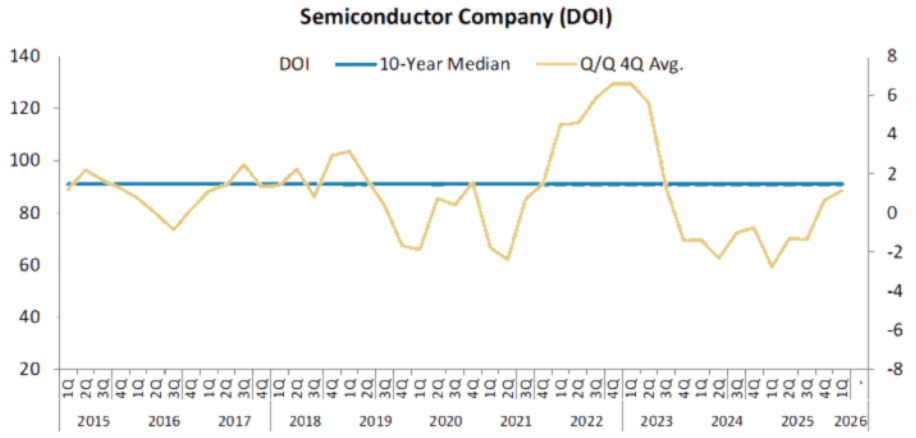
Exhibit 5: Sequential and y/y change in distributor inventory levels

		Q/Q		Y/Y	
		Change in DOI	Change in $ Inventory	Change in DOI	Change in $ Inventory
Distributors	Distributors	-2	11%	-13	11%

Source : FactSet, Morgan Stanley Research

Semiconductor company inventory days went up by 2 days q/q, below the seasonal increase of 5 days, and is now 23 days above the historical median. The DOI increase was driven by Smartphones (20.8%) and Foundries (10.8%), while other sectors showed marginal changes in the range of -3.5% (Semi Cap Equipment) to +1.9% (Computing). Change in absolute $ inventory was broadly up across the board both q/q and y/y, with the exception of Memory holding ~flat y/y. Trailing 4-quarters DOI across semi companies slightly increased in 1Q.

Exhibit 6: Semiconductor Company inventory is at 114 days, up 2 days q/q, below the seasonal increase of 5 days. DOI is 23 days above the historical median and trailing 4-quarters increased.



Source : FactSet, Morgan Stanley Research

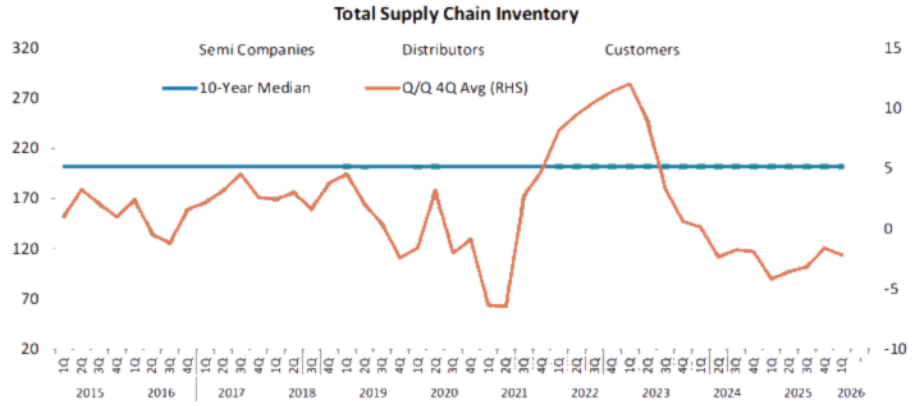
Exhibit 7: Sequential and y/y change in semi company inventory levels

		Q/Q		Y/Y	
		Change in DOI	Change in $ Inventory	Change in DOI	Change in $ Inventory
Semi Companies	Computing	2	13%	31	54%
	Analog/MCU	-2	0%	-9	5%
	Smartphones/Networking/PLD's/I	21	10%	28	31%
	Memory	0	3%	-40	-1%
	Foundries	8	6%	1	15%
	Semi Cap Equipment	-6	0%	-24	5%
	Components	0	10%	-2	25%
	Others	1	3%	3	5%
	TOTAL	**2**	**5%**	**5**	**16%**

Source: FactSet, Morgan Stanley Research

Total supply chain DOI across producers, distributors, and consumers increased 9 days q/q, increasing 10 days less than seasonality, and is now tracking 33 days above the historical median. Distributor and Company DOI both outperformed seasonality, with Distributors showing the greatest seasonal difference, decreasing by 2 days compared to a seasonal increase of 4. Customers DOI was ~in-line with seasonality, increasing by 1 day more than seasonal levels. Distributors in particular appear to be leaning out, driven by high COGS and revenue growth. Trailing 4-quarter DOI average was ~flat for the supply chain overall.

Exhibit 8: Total supply chain inventory increased 9 days q/q, less than the seasonal increase of 19 days. DOI is 33 days above the historical median, and trailing 4-quarters was flat.



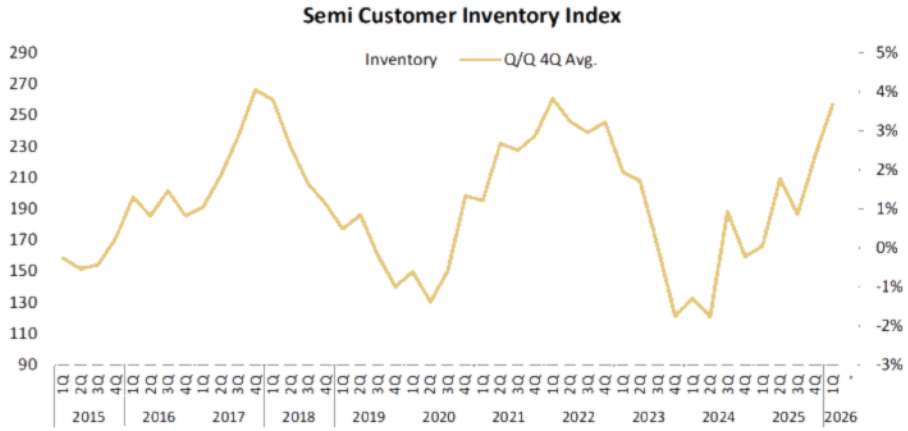
Source: FactSet, Morgan Stanley Research

Semi Inventory Analysis: DOI ~flat at Customers, lower at Producers and Distributors.

Customer Inventory

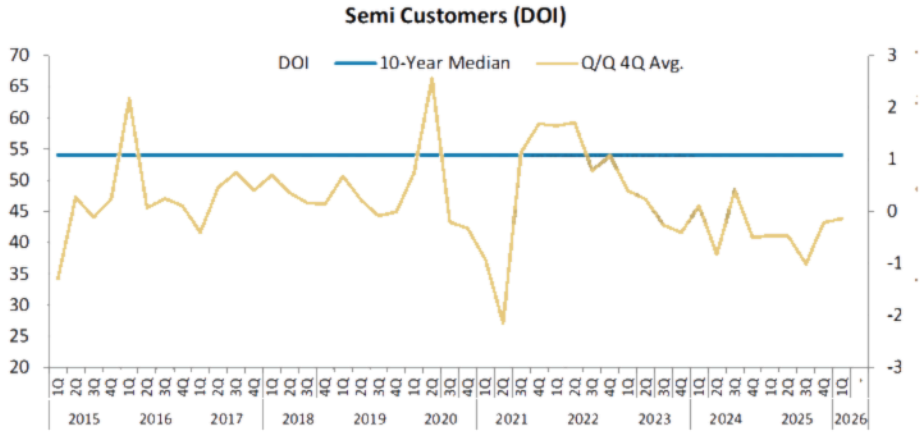
Semi customer inventory DOI increased more than seasonality. Absolute inventory levels increased q/q for all end markets except for Consumer. COGS decreased in Auto OEMs, US Industrials, Communications, Computing/Mobile, Consumer, and Contract Manufacturers, and increased in Auto Suppliers, Machinery, Storage, and ODM's.

Exhibit 9: Semi Customer Inventory Index increased 10.8% and trailing 4-quarters increased 3.7%.



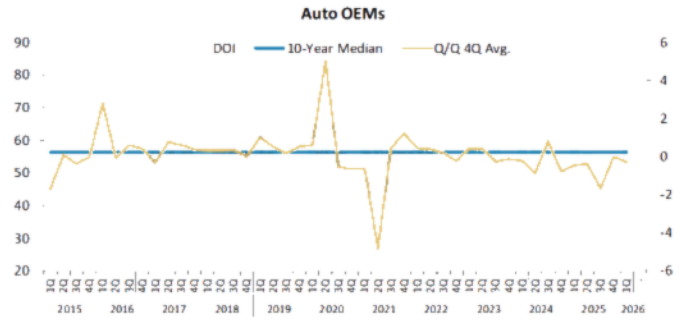
Source: FactSet, Morgan Stanley Research

Exhibit 10: Semi Customer DOI increased 9 days sequentially to 60 days vs a seasonal increase of 8 days. DOI is above the historical median and trailing 4 quarters increased from last quarter.



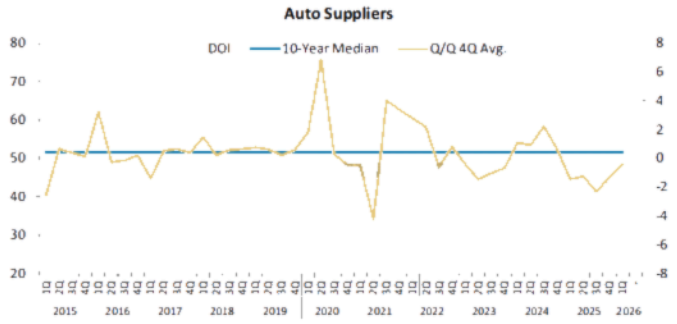
Source: FactSet, Morgan Stanley Research

Exhibit 11: Auto OEM DOI increased 7 days q/q and is above the historical median (56). Trailing 4-quarters decreased from last quarter.



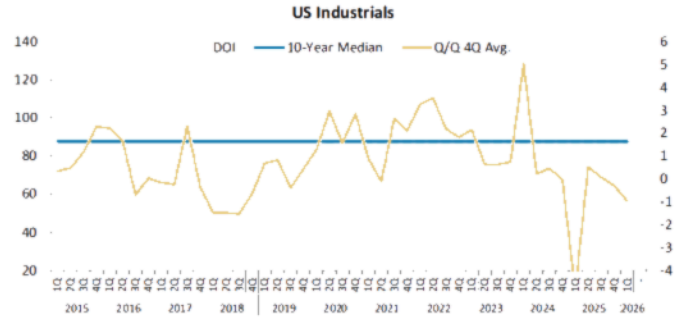
Source: FactSet, Morgan Stanley Research

Exhibit 12: Auto suppliers DOI decreased 1 day q/q and is in-line with the historical median. Trailing 4-quarters increased q/q.



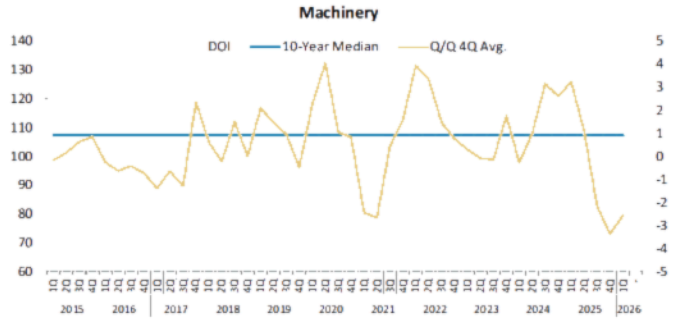
Source: FactSet, Morgan Stanley Research

Exhibit 13: Industrial DOI increased 8 days q/q, tracking 19 days above the historical median. Trailing 4-quarters declined q/q.



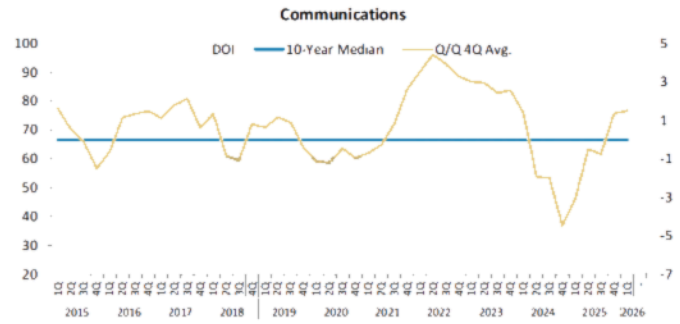
Source: FactSet, Morgan Stanley Research

Exhibit 14: Machinery DOI increased by 5 days q/q, tracking 13 days above the historical median. Trailing 4-quarters increased q/q.



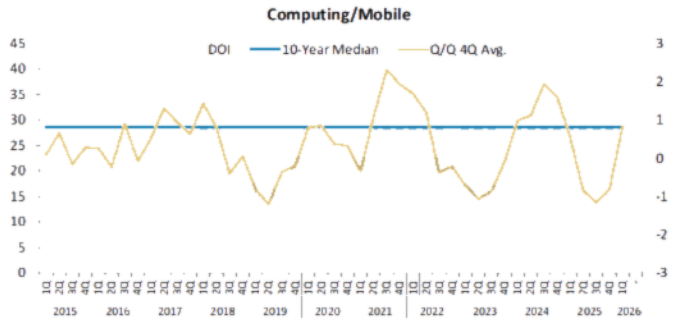
Source: FactSet, Morgan Stanley Research

Exhibit 15: Communications DOI increased 17 days q/q, tracking 23 days above the historical median. Trailing 4-quarters increased q/q.



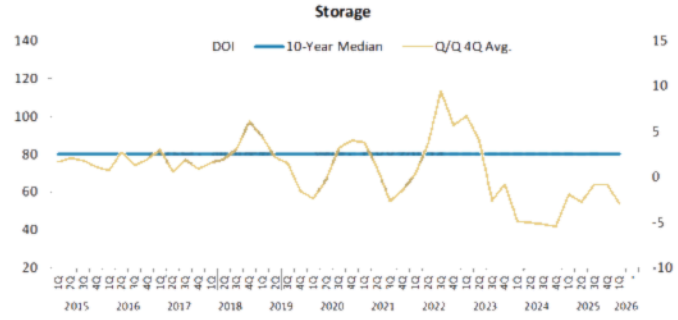
Source: FactSet, Morgan Stanley Research

Exhibit 16: Computing/Mobile company DOI increased by 11 days q/q, tracking 12 days above the historical median. Trailing 4-quarters increased sequentially.



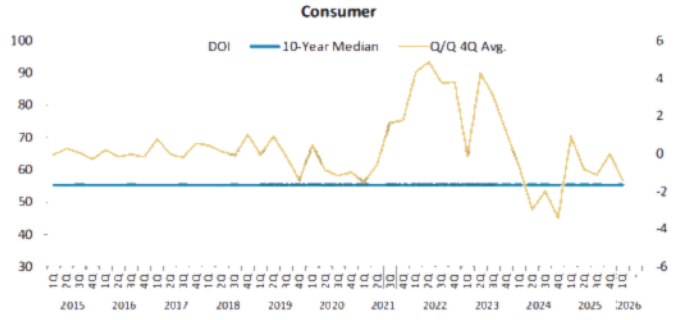
Source: FactSet, Morgan Stanley Research

Exhibit 17: Storage DOI remained flat q/q, now tracking 2 days below the historical median. Trailing 4-quarters increased from last quarter.



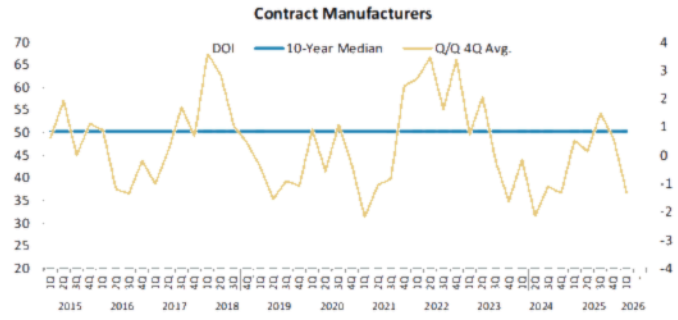
Source: FactSet, Morgan Stanley Research

Exhibit 18: Consumer company DOI increased 4 days q/q, now tracking 2 days above the historical median. Trailing 4-quarters decreased.



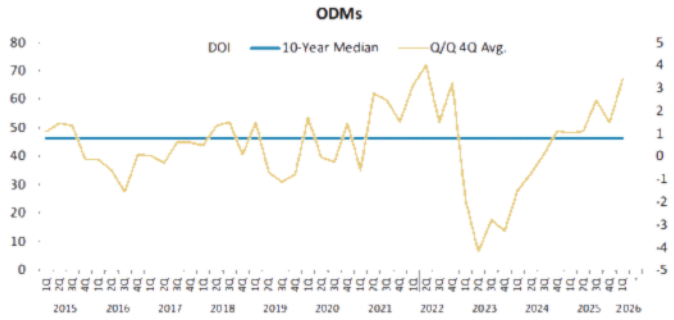
Source: FactSet, Morgan Stanley Research

Exhibit 19: Contract manufacturers DOI increased 13 days q/q, tracking 7 days above the historical median. Trailing 4-quarters decreased from last quarter.



Source: FactSet, Morgan Stanley Research

Exhibit 20: ODM DOI increased 16 days q/q, tracking 21 days above historical median. Trailing 4-quarter increased from last quarter.

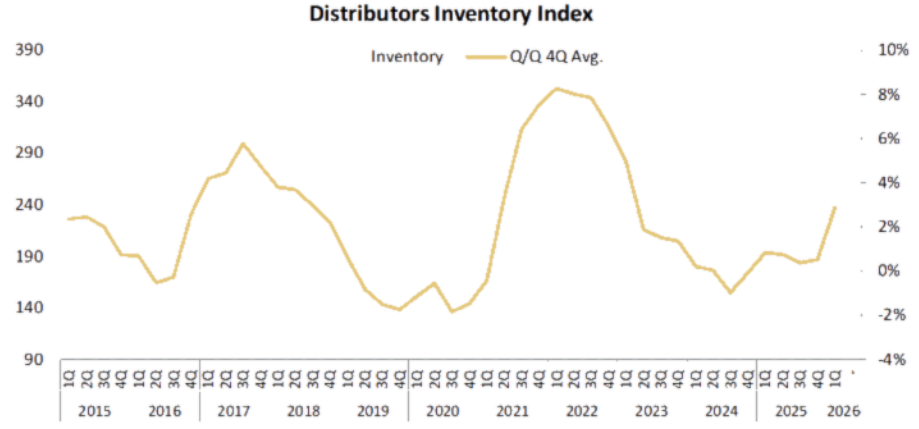


Source: FactSet, Morgan Stanley Research

Distributor Inventory

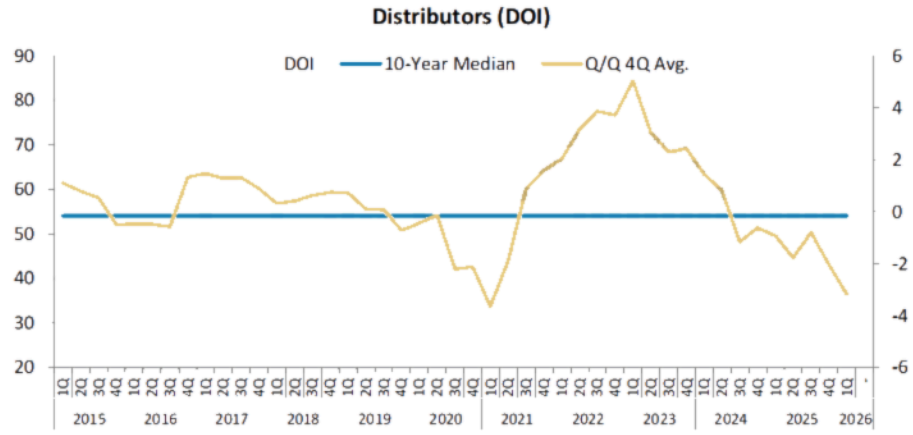
Distributor DOI decreased 2 days q/q, outperforming a seasonal increase of 4 days. DOI is tracking 7 days above the historical median.

Exhibit 21: Distributor Inventory index increased 10.8% sequentially, and trailing 4-quarters increased from last quarter.



Source: FactSet, Morgan Stanley Research

Exhibit 22: Distributor inventory is at 61 days, down 2 days q/q, below the seasonal increase of 4 days. DOI is 7 days above the historical median while trailing 4-quarters decreased sequentially.

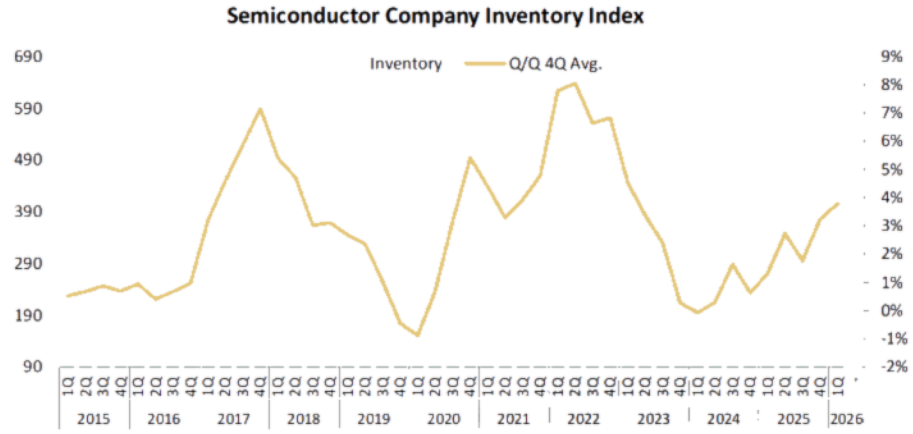


Source: FactSet, Morgan Stanley Research

Producer Inventory

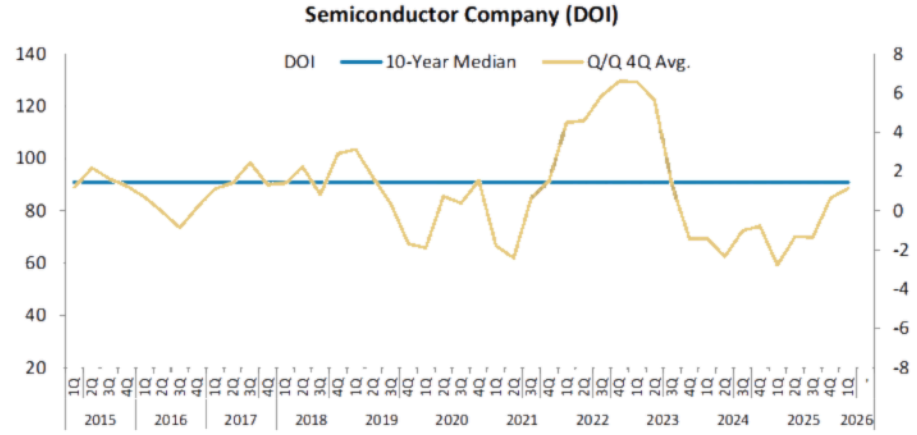
Semiconductor company DOI increased less than seasonality. DOI decreased the most for Semi Cap Equipment and Analog/MCU while Memory was ~flat. Overall DOI momentum increased again consecutively.

Exhibit 23: Semi Company inventory index increased 5.2% q/q, with trailing 4-quarters increasing.



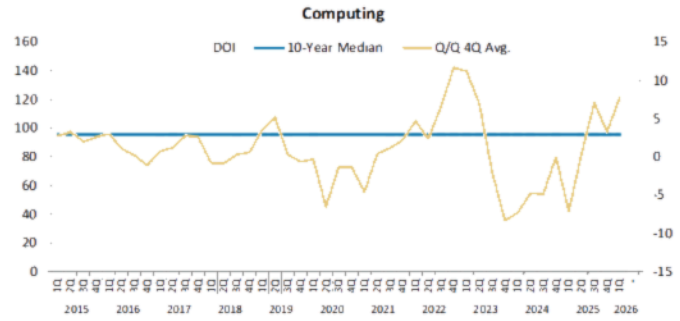
Source: FactSet, Morgan Stanley Research

Exhibit 24: Semiconductor Company inventory is at 114 days, up 2 days q/q, below the seasonal increase of 5 days. DOI is 23 days above the historical median and trailing 4-quarters slightly increased.



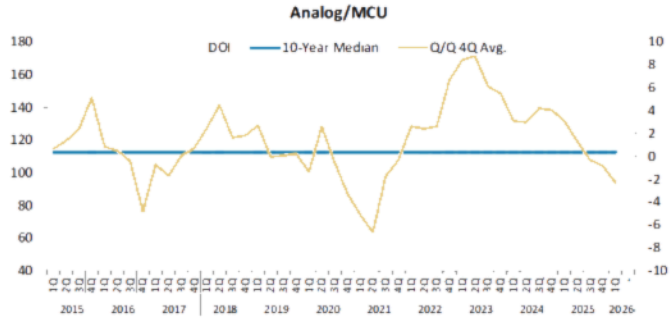
Source: FactSet, Morgan Stanley Research

Exhibit 25: Computing group DOI increased 2 days q/q, now tracking 28 days above the historical median. Trailing 4-quarters increased.



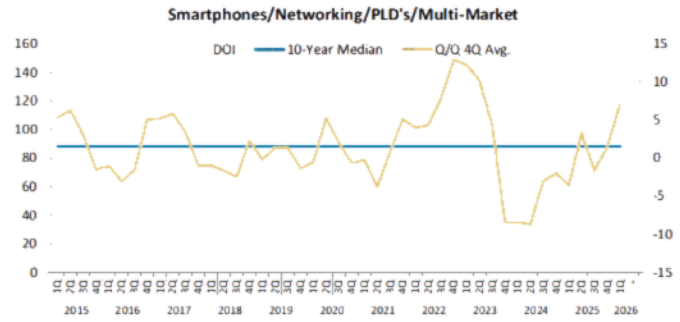
Source: FactSet, Morgan Stanley Research

Exhibit 26: Analog/MCU group DOI decreased 2 days q/q, now tracking 45 days above the historical median. Trailing 4-quarters fell q/q.



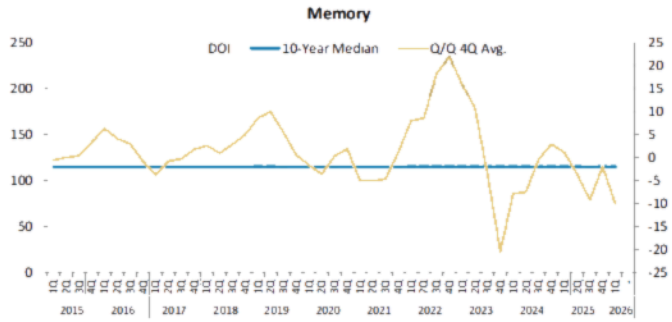
Source: FactSet, Morgan Stanley Research

Exhibit 27: Smartphone DOI increased 21 days q/q, now tracking 37 days above the historical median. Trailing 4-quarters increased q/q.



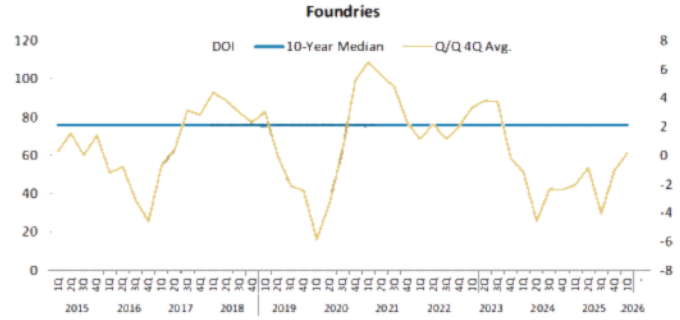
Source: FactSet, Morgan Stanley Research

Exhibit 28: Memory group DOI remained flat q/q, now tracking 8 days above the historical median. Trailing 4-quarters decreased.



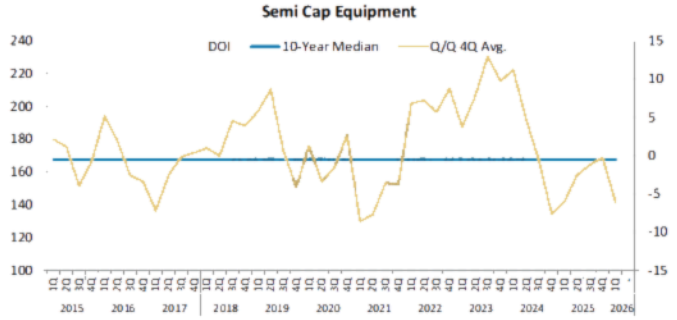
Source: FactSet, Morgan Stanley Research

Exhibit 29: Foundry group DOI increased by 8 days q/q, now tracking 8 days above the historical median. Trailing 4-quarters increased.



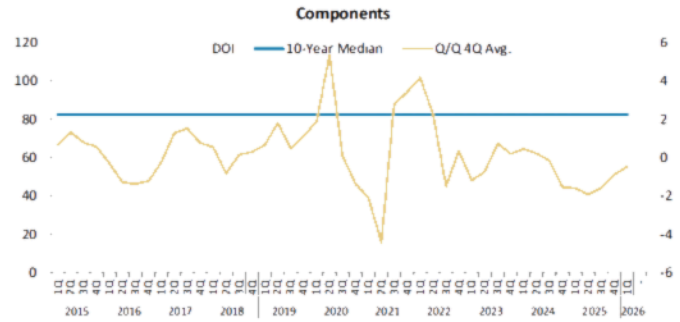
Source: FactSet, Morgan Stanley Research

Exhibit 30: Semi Cap Equipment group DOI decreased 6 days q/q, now tracking 11 days above the historical median. Trailing 4-quarters decreased from last quarter.



Source: FactSet, Morgan Stanley Research

Exhibit 31: Components group DOI was ~flat q/q, now tracking 1 day above the historical median. Trailing 4-quarters increased from last quarter.



Source: FactSet, Morgan Stanley Research