

Electronic Components Industry Trends & Outlook



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Survey Introduction/Mechanics

- **Frequency/Reminders**

- Survey is conducted monthly, 1st notification is typically emailed the 1st of the month
- There will be 2 additional reminders set by the system
- Results of published for the ERA members on the ERA Website
- Survey delivered by no-reply@mail.client.edgewaterresearch.com



Survey Introduction/Mechanics

LAST CALL: The ERA Industry Trends Survey Closes Soon



no-reply@mail.client.edgewaterresearch.com

To ● Dennis Reed

 If there are problems with how this message is displayed, click here to view it in a web browser.



ERA Electronic Components Industry Trends Survey

We've noticed the October, 2023 ERA Electronic Components Industry Trends Survey has not been started.

- The ERA Electronic Components Industry Trends Survey provides a summarized analysis of trends and insights garnered from the data of all participating ERA members.

[Access and complete the survey here.](#)

Results of the survey will be shared with participants via the ERA members' webpage.

[View the latest survey results HERE](#)

If you'd like to delegate the survey completion to another person please send the name and email of delegatee to: support@EdgewaterRC.com

Please contact [Dennis Reed](#) if you have any questions about completing the survey.

Please contact [Erin Collins](#) if you have any questions about this important member benefit.

Thank you in advance for your participation.

[Survey Access](#)



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About Edgewater

Who is Edgewater Research?

- An **Independent Research Company** specializing in Technology, Internet & Consumer/Ecommerce
- We service many of the **largest money managers** in the world who invest in technology companies
- We provide **critical business insights** into complex and dynamic industries through **fundamental research**
- **Our reputation dates back two decades** of providing trusted, timely, and unbiased research to the clients we serve



Why Edgewater?

What We Are

- **Deeply connected in the industry**, on a worldwide basis, from foundry to supplier to distributor to end customer; contacts across purchasing/strategy/business development
- A **trusted resource** for the investment community, who provides access to capital and **invests public & private growth opportunities**
- A **critical partner** with the largest global technology companies, assisting in **identifying key trends and assist in shaping a strategy** to address those opportunities



Speaker Background & Contact Information



Dennis Reed

Sr. Research Analyst

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Dennis@edgewaterRC.com



- Started as a Research Analyst in Technology in 2005 and **has over 10 years of experience** in semiconductors, memory, storage, and distribution with several respected firms including Edgewater Research.
- Developed an extensive network of technology industry professionals throughout the world and is a **trusted resource to his contacts and clients alike.**
- Worked in several roles of increasing responsibility in **strategy, product development, sales management & field sales at Travelers Insurance.**
- A 2002 graduate from Ohio University with a B.S. in Sports Administration



We Have 20 Months of Data!

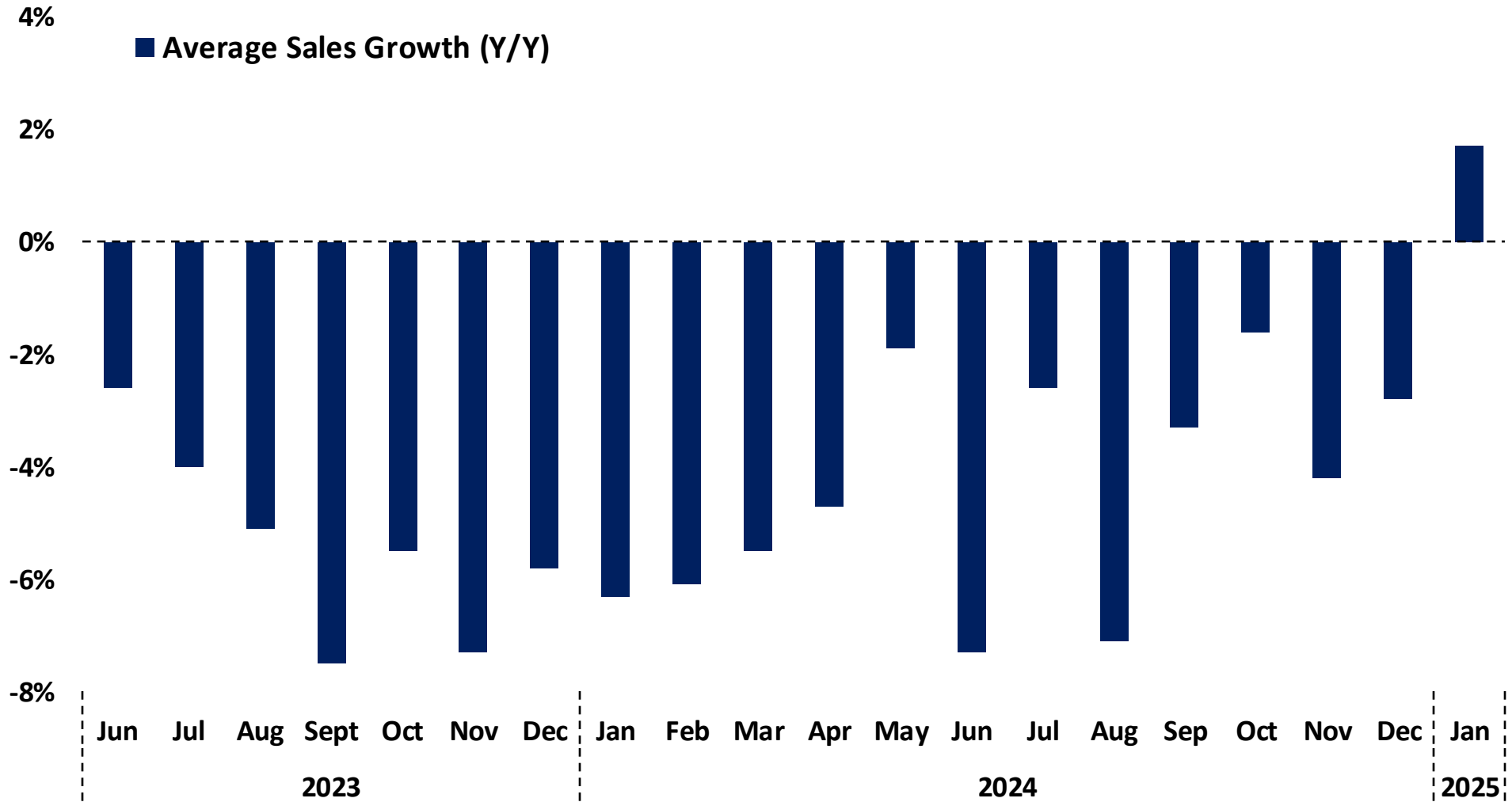


Source: GIPHY



ERA Survey Sales Growth (Y/Y)

January sales +1.7% on 1.3% price and ~0.4% volume growth compared to -3.1% in December



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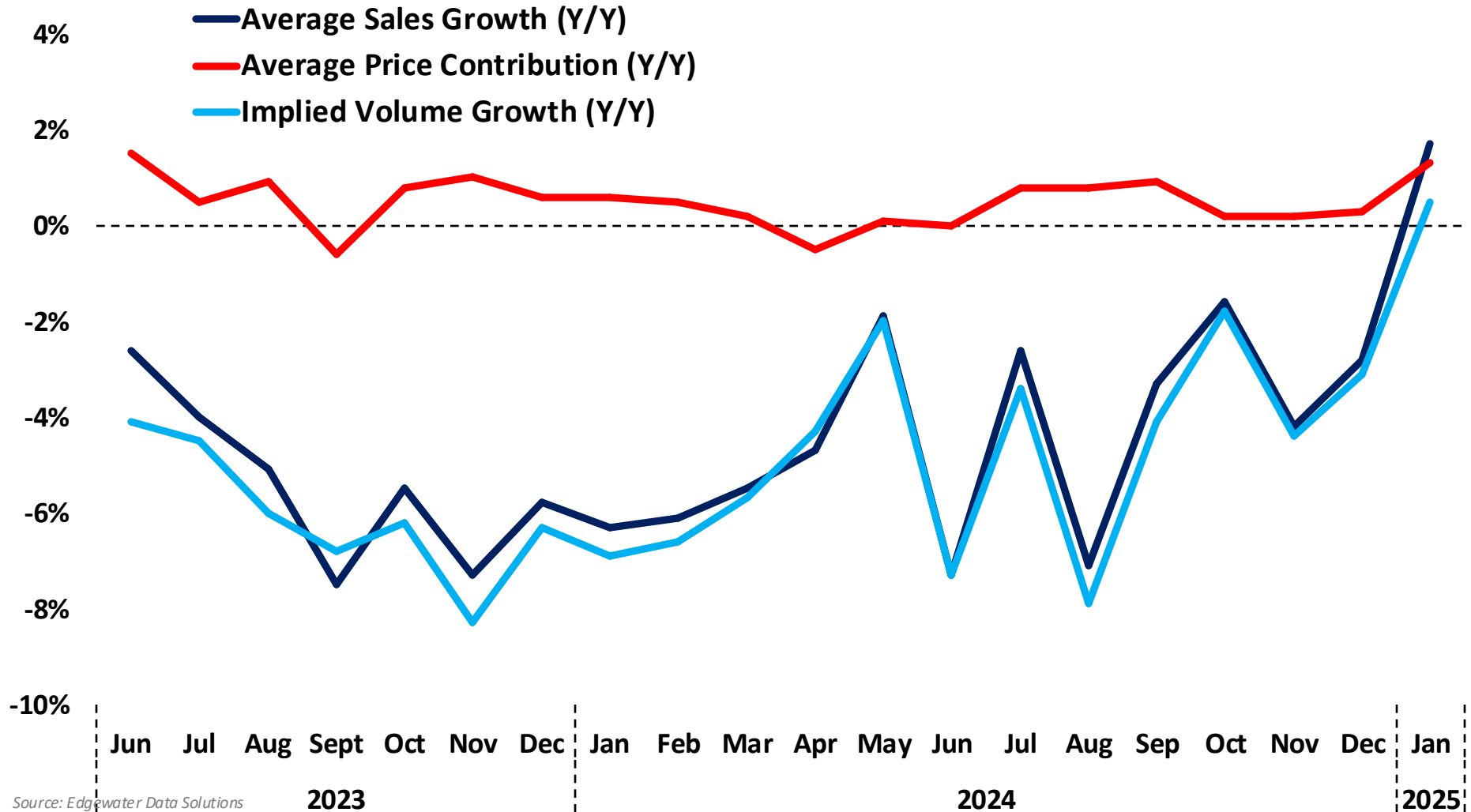


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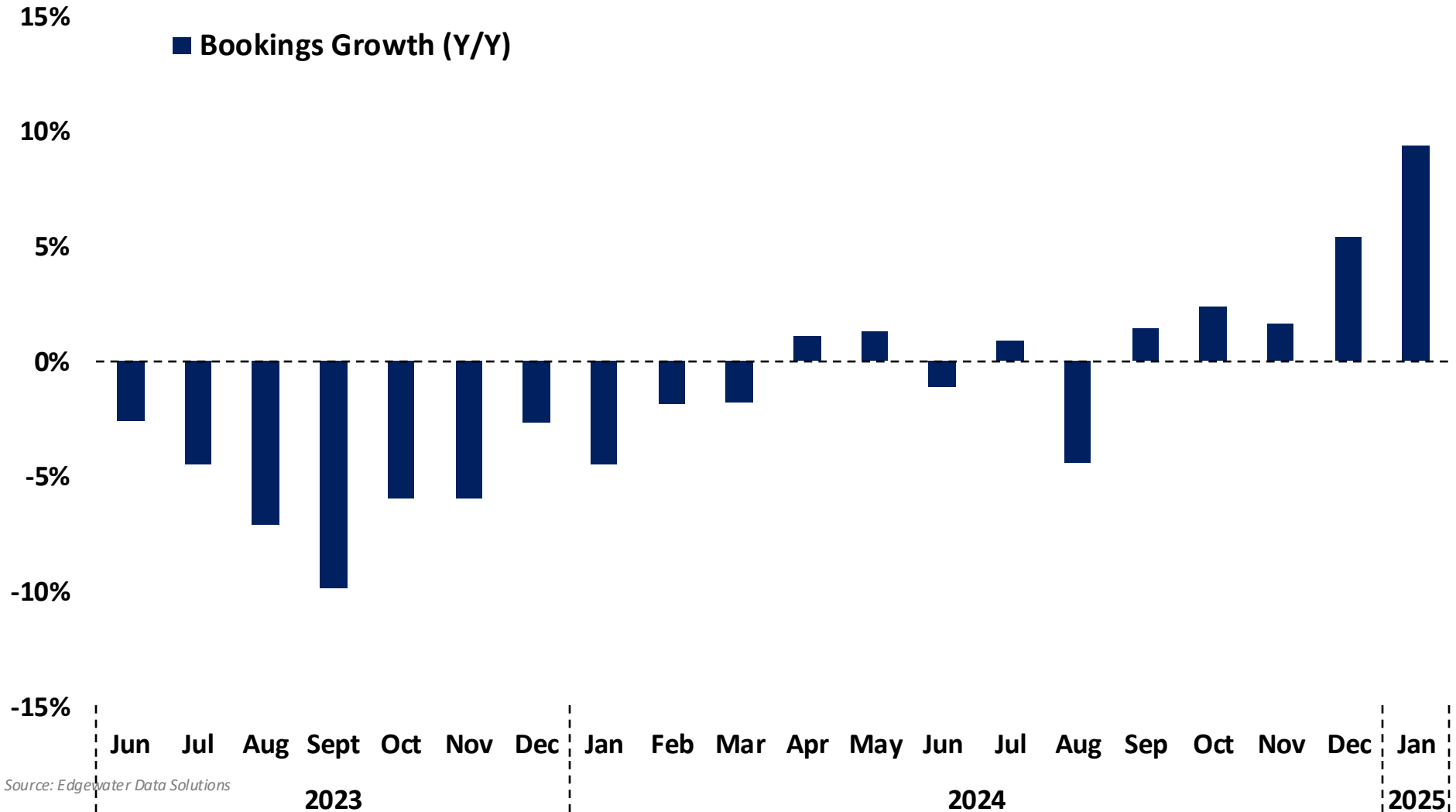
ERA Survey Sales Growth

Monthly sales growth vs. price contribution (Y/Y)



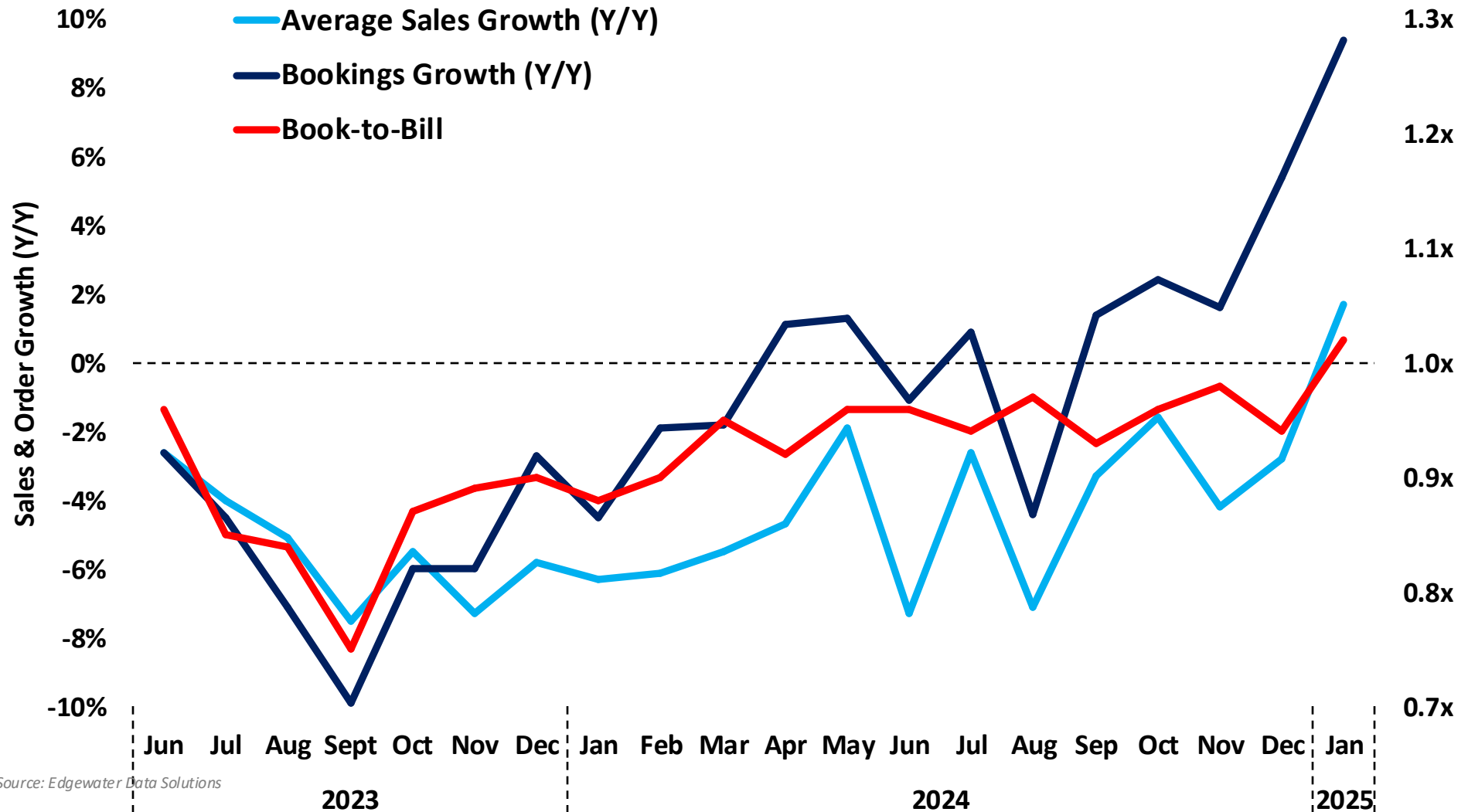
ERA Survey Bookings Trends

January bookings up 9.4% Y/Y, the 5th consecutive month of Y/Y bookings growth



ERA Survey Sales Growth vs. Bookings Growth

January book-to-bill of 1.02x marks 1st positive book-to-bill in 20 month history



Source: Edgewater Data Solutions

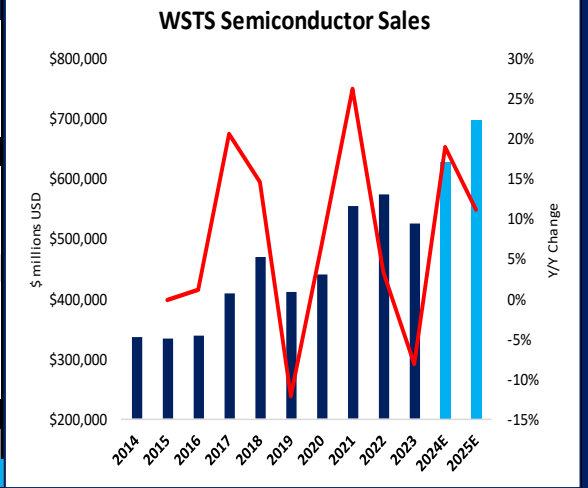


WSTS Updated Sales Forecast

2020-2024 CAGR more than triple pre-Covid levels, how much inventory was actually built?

WSTS Forecast													CAGR		
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024E	2025E	2014-2019 CAGR	2014-2025E CAGR	2020-2025E CAGR
Americas	\$69,324	\$68,738	\$65,537	\$86,458	\$102,997	\$78,741	\$95,366	\$121,481	\$141,136	\$134,377	\$186,635	\$215,309	3%	11%	23%
Europe	\$37,459	\$34,258	\$32,707	\$38,048	\$42,957	\$41,609	\$37,520	\$47,757	\$53,853	\$55,763	\$52,031	\$53,736	2%	3%	9%
Japan	\$34,830	\$31,102	\$32,292	\$36,350	\$39,961	\$36,069	\$36,471	\$43,687	\$48,158	\$46,751	\$47,410	\$51,866	1%	4%	9%
APAC	\$194,230	\$201,070	\$208,395	\$247,834	\$282,863	\$255,666	\$271,032	\$342,967	\$330,937	\$289,994	\$340,792	\$376,273	6%	6%	9%
Total (\$M)	\$335,843	\$335,168	\$338,931	\$408,690	\$468,778	\$412,085	\$440,389	\$555,892	\$574,084	\$526,885	\$626,868	\$697,184	4%	7%	12%
Discrete Semis	\$20,170	\$18,612	\$19,418	\$21,498	\$24,102	\$24,450	\$23,804	\$30,337	\$33,993	\$35,530	\$31,546	\$33,377	4%	5%	9%
Optoelectronics	\$29,868	\$33,256	\$31,994	\$34,467	\$38,032	\$37,474	\$40,397	\$43,404	\$43,908	\$43,184	\$42,092	\$43,705	5%	4%	2%
Sensors	\$8,502	\$8,816	\$10,821	\$12,537	\$13,356	\$13,295	\$14,962	\$19,149	\$21,782	\$19,730	\$18,732	\$20,034	9%	8%	8%
Integrated Circuits	\$277,302	\$274,484	\$276,698	\$340,189	\$393,288	\$336,867	\$361,226	\$464,621	\$474,402	\$428,442	\$534,499	\$600,069	4%	7%	14%
Analog	\$44,365	\$45,228	\$47,848	\$52,711	\$58,785	\$55,846	\$55,658	\$74,105	\$88,983	\$81,225	\$79,433	\$83,157	5%	6%	11%
Micro	\$62,072	\$61,298	\$60,585	\$63,147	\$67,233	\$66,519	\$69,678	\$80,221	\$79,073	\$76,340	\$79,291	\$83,723	1%	3%	5%
Logic	\$91,633	\$90,753	\$91,498	\$101,413	\$109,303	\$104,912	\$118,408	\$154,837	\$176,578	\$178,589	\$208,723	\$243,782	3%	9%	20%
Memory	\$79,232	\$77,205	\$76,767	\$122,918	\$157,967	\$109,590	\$117,482	\$155,458	\$129,767	\$92,288	\$167,053	\$189,407	7%	8%	13%
Total (\$M)	\$335,842	\$335,168	\$338,931	\$408,691	\$468,778	\$412,086	\$440,389	\$557,511	\$574,085	\$526,886	\$626,869	\$697,185	4%	7%	12%
Total (ex-Memory)	\$256,610	\$257,963	\$262,164	\$285,773	\$310,811	\$302,496	\$322,907	\$402,053	\$444,318	\$434,598	\$459,816	\$507,778	3%	6%	12%
Total (ex-Memory)/logic	\$164,977	\$167,210	\$170,666	\$184,360	\$201,508	\$197,584	\$204,499	\$247,216	\$267,740	\$256,009	\$251,093	\$263,996	4%	4%	7%

Y/Y	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024E	2025E
Americas	-1%	-5%	32%	19%	-24%	21%	27%	16%	-5%	39%	15%	
Europe	-9%	-5%	16%	13%	-3%	-10%	27%	13%	4%	-7%	3%	
Japan	-11%	4%	13%	10%	-10%	1%	20%	10%	-3%	1%	9%	
APAC	4%	4%	19%	14%	-10%	6%	27%	-4%	-12%	18%	10%	
Total	0%	1%	21%	15%	-12%	7%	26%	3%	-8%	19%	11%	
Discrete Semis	-8%	4%	11%	12%	1%	-3%	27%	12%	5%	-11%	6%	
Optoelectronics	11%	-4%	8%	10%	-1%	8%	7%	1%	-2%	-3%	4%	
Sensors	4%	23%	16%	7%	0%	13%	28%	14%	-9%	-5%	7%	
Integrated Circuits	-1%	1%	23%	16%	-14%	7%	29%	2%	-10%	25%	12%	
Analog	2%	6%	10%	12%	-5%	0%	33%	20%	-9%	-2%	5%	
Micro	-1%	-1%	4%	6%	-1%	5%	15%	-1%	-3%	4%	6%	
Logic	-1%	1%	11%	8%	-4%	13%	31%	14%	1%	17%	17%	
Memory	-3%	-1%	60%	29%	-31%	7%	32%	-17%	-29%	81%	13%	
Total	0%	1%	21%	15%	-12%	7%	27%	3%	-8%	19%	11%	
Total (ex-Memory)	1%	2%	9%	9%	-3%	7%	25%	11%	-2%	6%	10%	
Total (ex-Memory)/logic	1%	2%	8%	9%	-2%	3%	21%	8%	-4%	-2%	5%	



Source: WSTS, Edgewater Research



The AI Impact is Real but Not Raising All Ships!

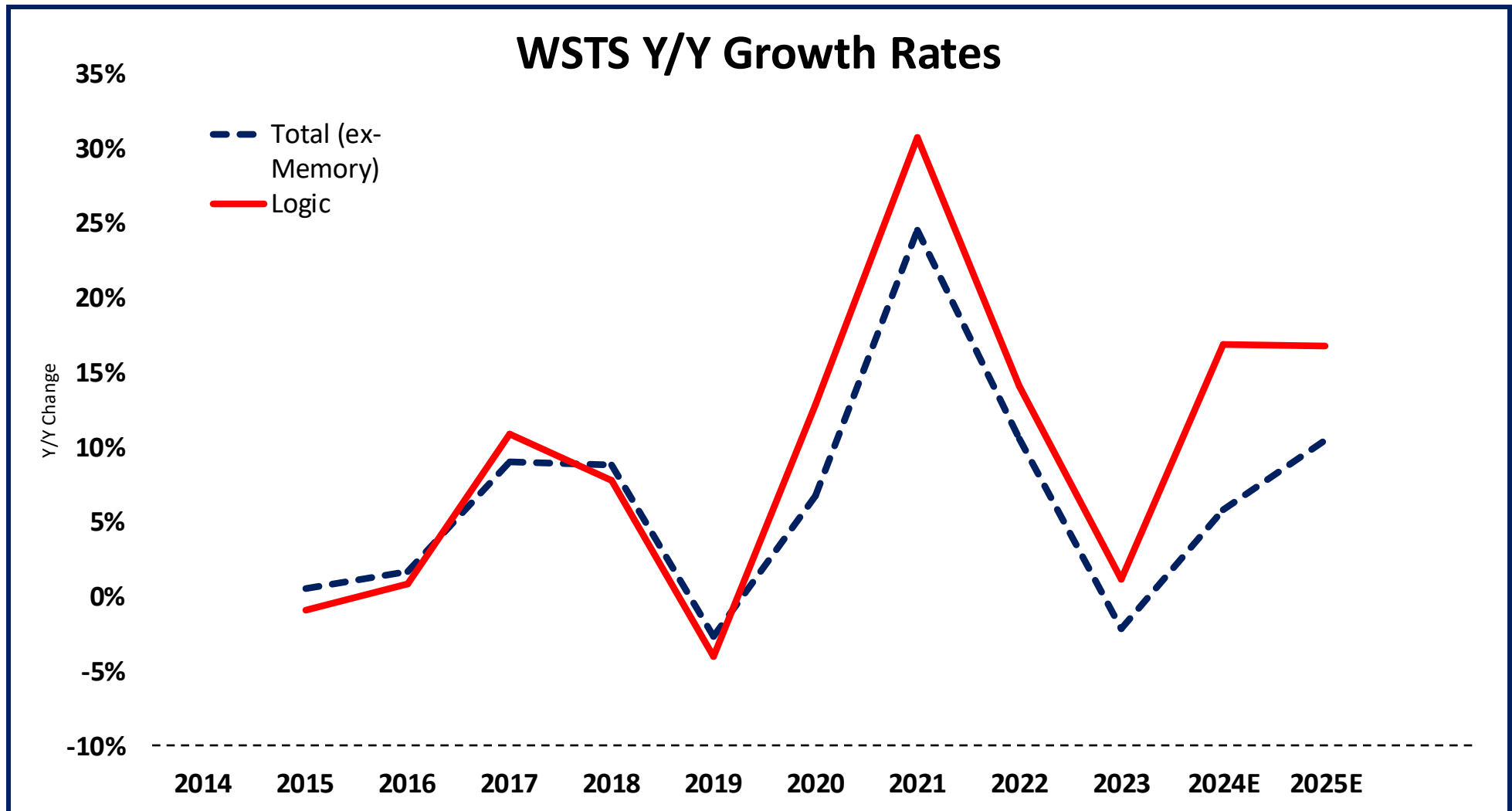


Source: GIPHY



The Bifurcation of Logic & Total Market Ex-Memory

Industry likely still facing >\$100 billion of excess entering 2023 roughly equal to 1 inventory turn



Source: WSTS, Factset, Edgewater Research



ERA Survey End Market Trends

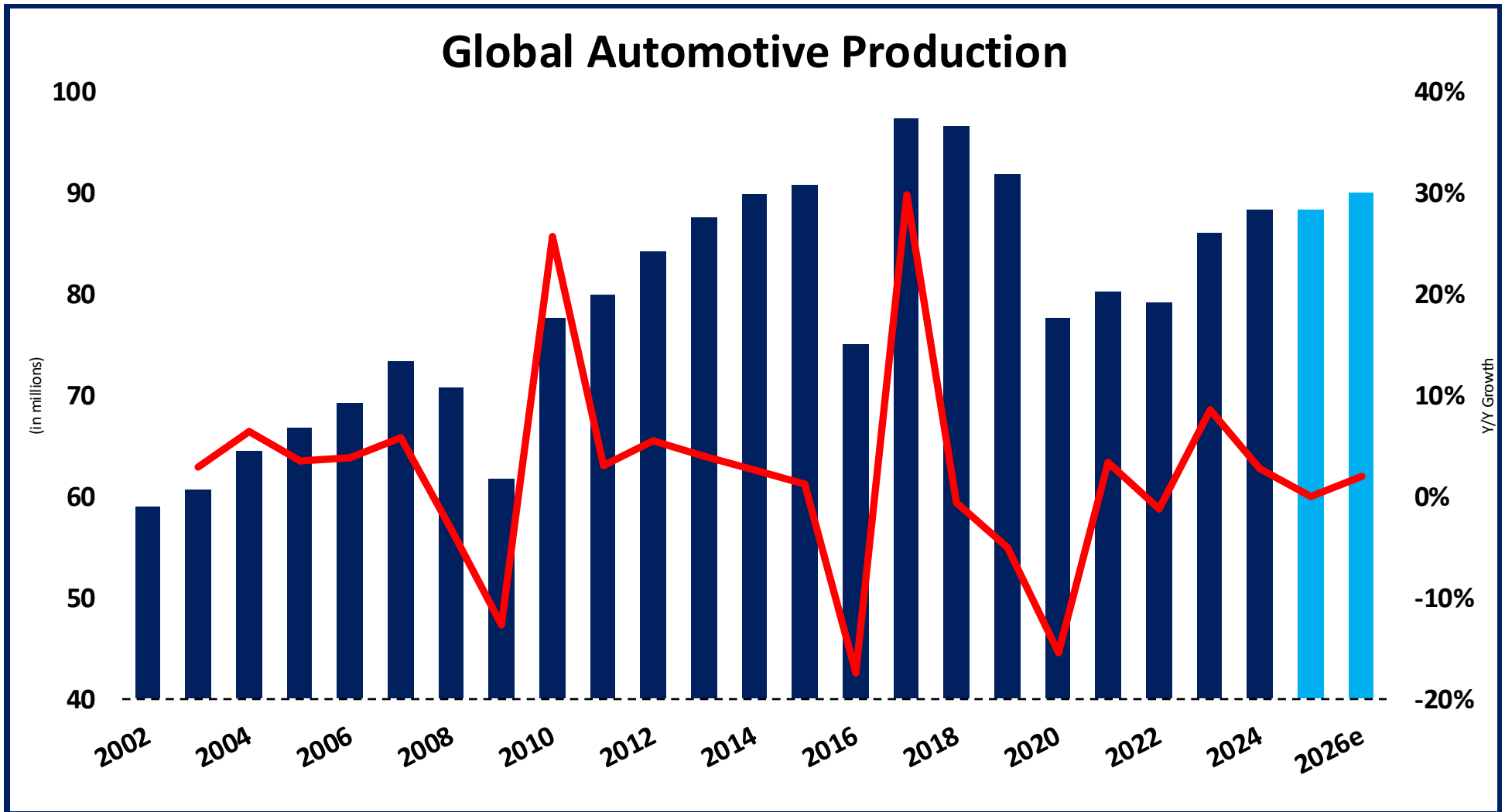
End Market	2023							2024												2025
	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1
Aerospace	89%	95%	71%	67%	93%	95%	81%	54%	72%	62%	61%	80%	58%	62%	80%	74%	81%	73%	76%	78%
Appliances	-46%	-22%	-41%	-50%	-59%	-29%	-59%	-30%	-38%	-47%	-45%	-28%	-71%	-48%	-43%	-50%	-50%	-60%	-59%	-39%
Automotive	72%	67%	41%	32%	3%	20%	7%	6%	-4%	-11%	-13%	35%	-20%	-33%	0%	-40%	-24%	-37%	-46%	-33%
Consumer Electronics	-57%	-32%	-50%	-50%	-49%	-48%	-41%	-10%	-43%	-37%	-3%	-3%	-24%	-29%	-24%	-24%	-29%	-41%	-45%	-48%
Industrial	18%	49%	9%	29%	10%	11%	11%	5%	23%	34%	20%	23%	0%	-15%	-9%	-5%	-6%	-16%	10%	3%
IT Hardware	-24%	-16%	-21%	-4%	-13%	-21%	-16%	-6%	-29%	25%	19%	11%	23%	-3%	-13%	-22%	0%	0%	-20%	5%
Medical	42%	40%	41%	53%	34%	47%	41%	44%	44%	31%	13%	38%	55%	31%	41%	39%	39%	22%	26%	34%
Military												97%	96%	69%	76%	92%	110%	75%	100%	103%
Mobile Equipment	30%	56%	35%	56%	24%	42%	20%	26%	3%	33%	26%	42%	8%	-18%	-4%	-31%	-25%	-31%	-17%	0%
Mobile Networks	-29%	-23%	-32%	14%	-24%	0%	-6%	-17%	-11%	-5%	0%	-5%	-25%	-18%	0%	-19%	-47%	-50%	-33%	0%
PCs	-94%	-67%	-73%	-79%	-82%	-67%	-46%	-47%	-36%	-54%	-11%	-7%	-30%	-33%	-47%	-47%	-54%	-58%	-60%	-43%
Smart Phones	-67%	-50%	-70%	-60%	-75%	-27%	-63%	-29%	-50%	-38%	-8%	-8%	-9%	-13%	0%	0%	-44%	25%	-25%	0%
Overall Average	-6%	9%	-8%	1%	-12%	2%	-7%	0%	-6%	0%	5%	23%	5%	-4%	5%	-3%	-4%	-8%	-8%	5%

Source: Edgewater Data Solutions



2025 Auto Outlook

2024 Production of 88.3 million up 3% Y/Y, 2025 & 2026 outlook stable

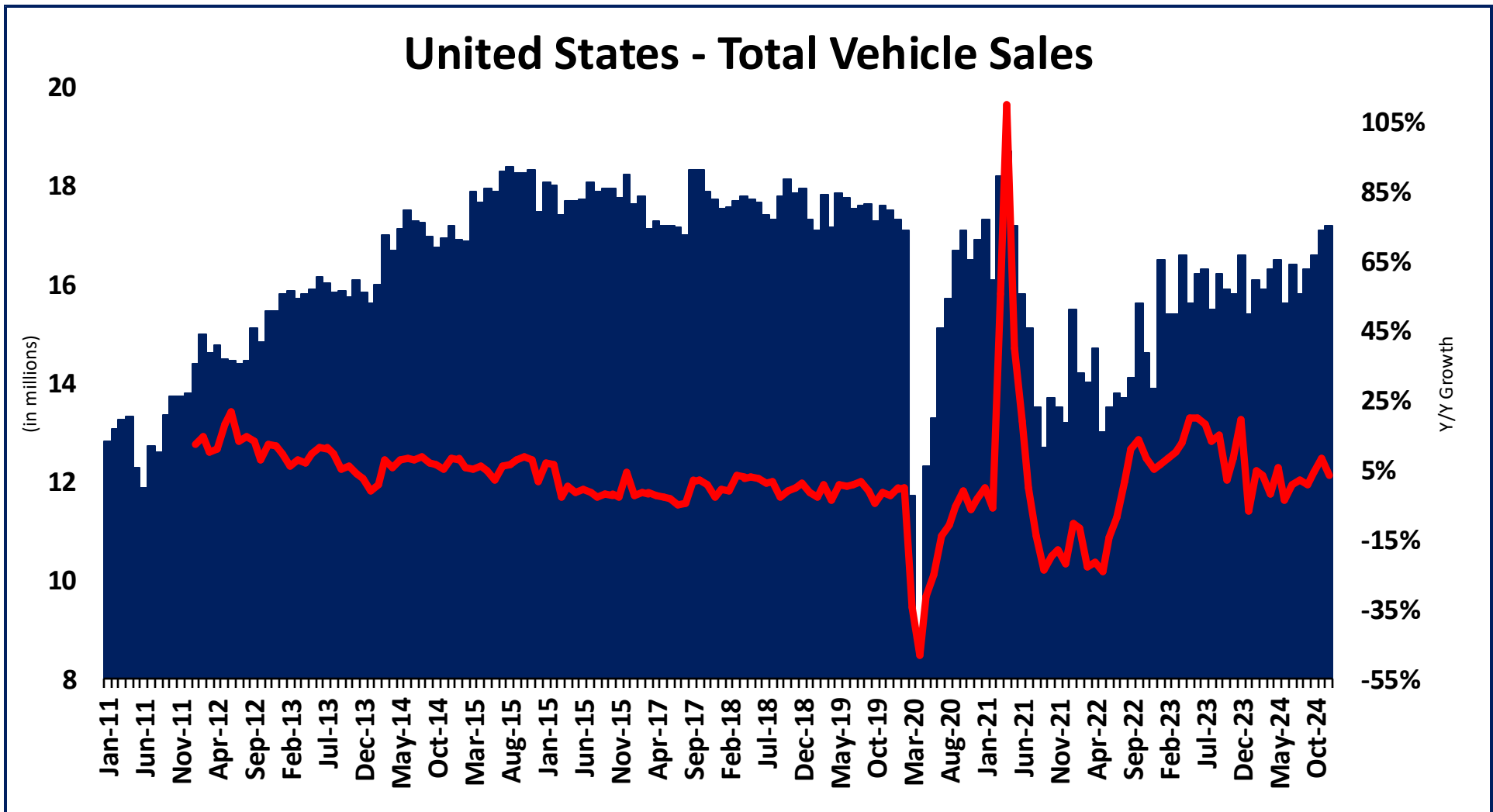


Source: Factset, Company Reports Edgewater Research estimates



2025 Auto Outlook

2024 SAAR OF 16.3 on strong year end push, 2025 outlook flattish



Source: Factset, Company Reports Edgewater Research estimates



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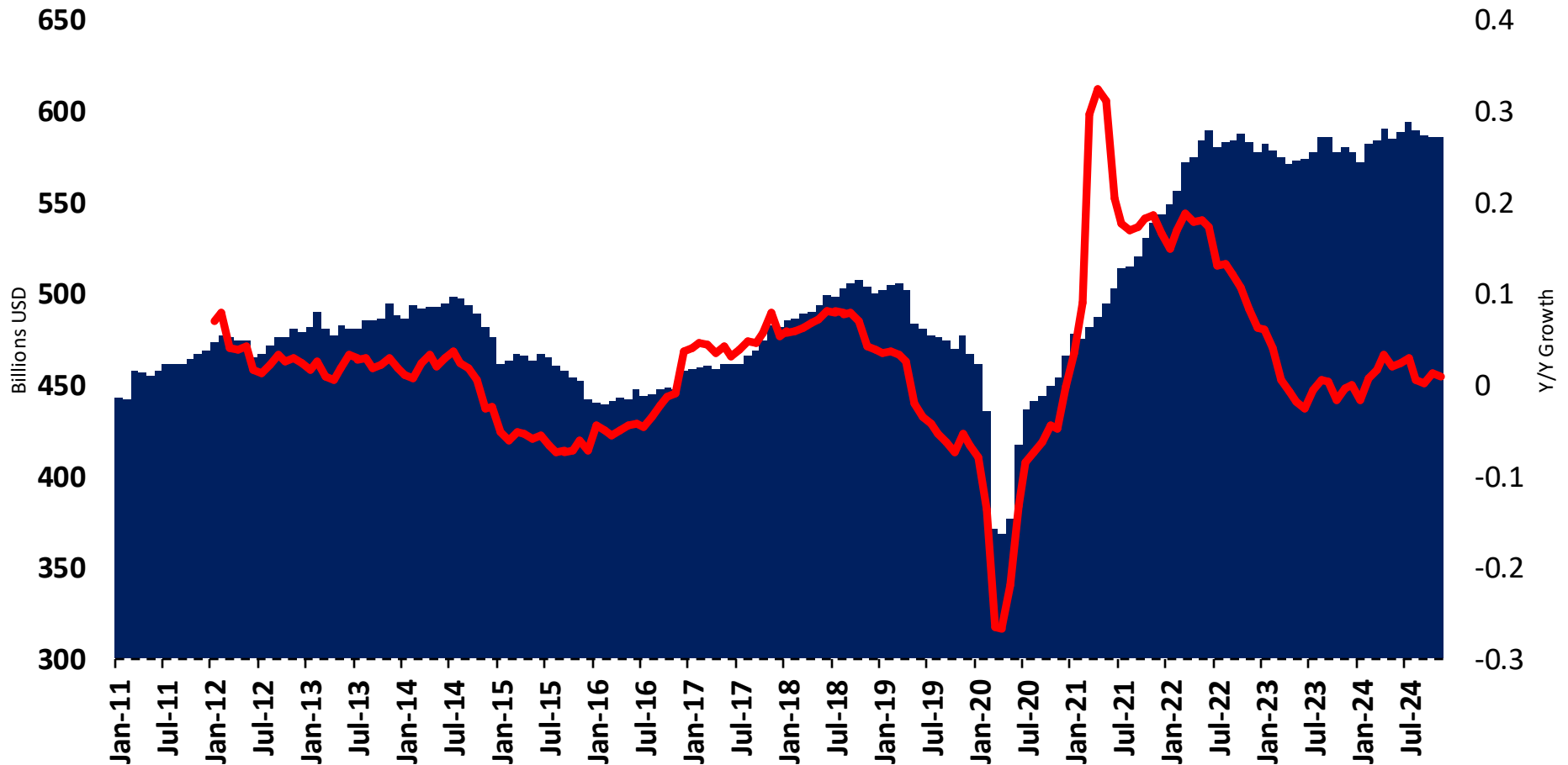
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2025 Industrial Outlook

Limited change since March 2023, component inventories remain barrier to growth

United States - Total Manufacturing



Source: Factset, Company Reports Edgewater Research estimates



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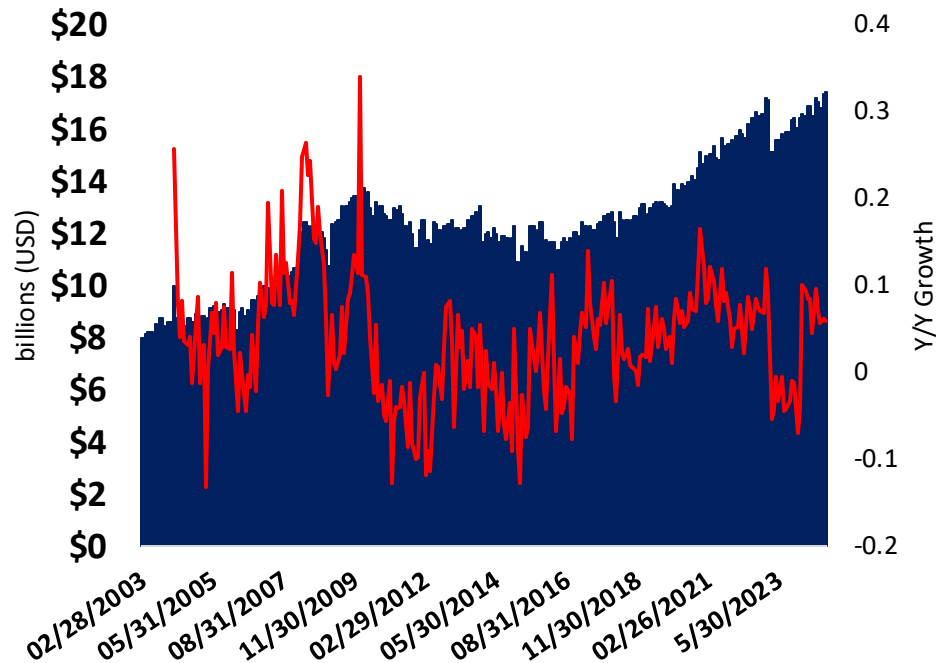
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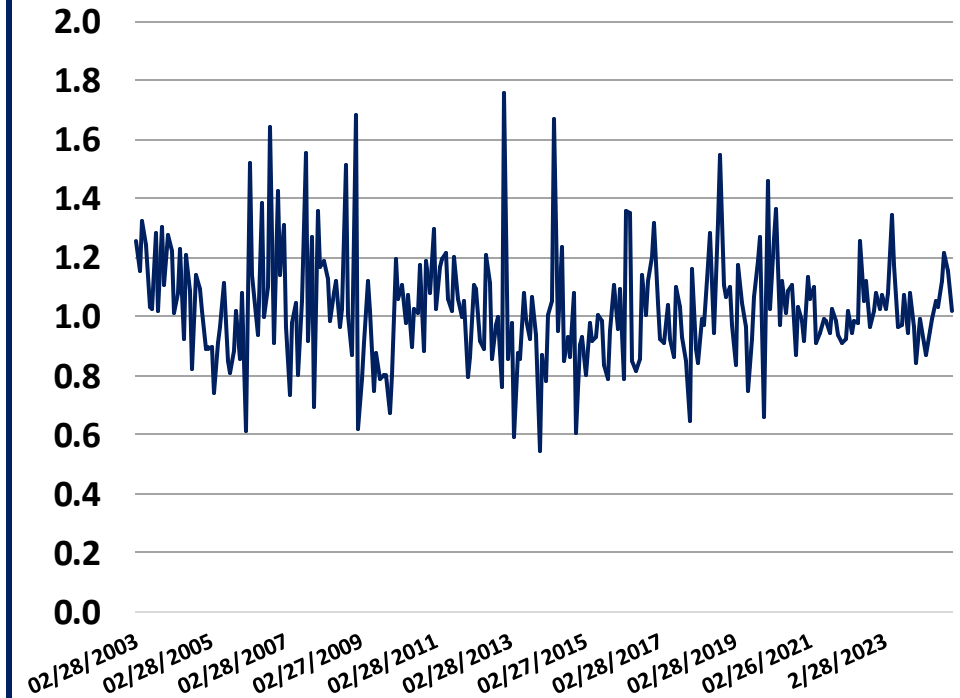
2025 Military Outlook

Growth rates continue to moderate but remain positive

Total Defense Manufacturing - Shipments



Defense B2B



Source: Factset, Company Reports Edgewater Research estimates



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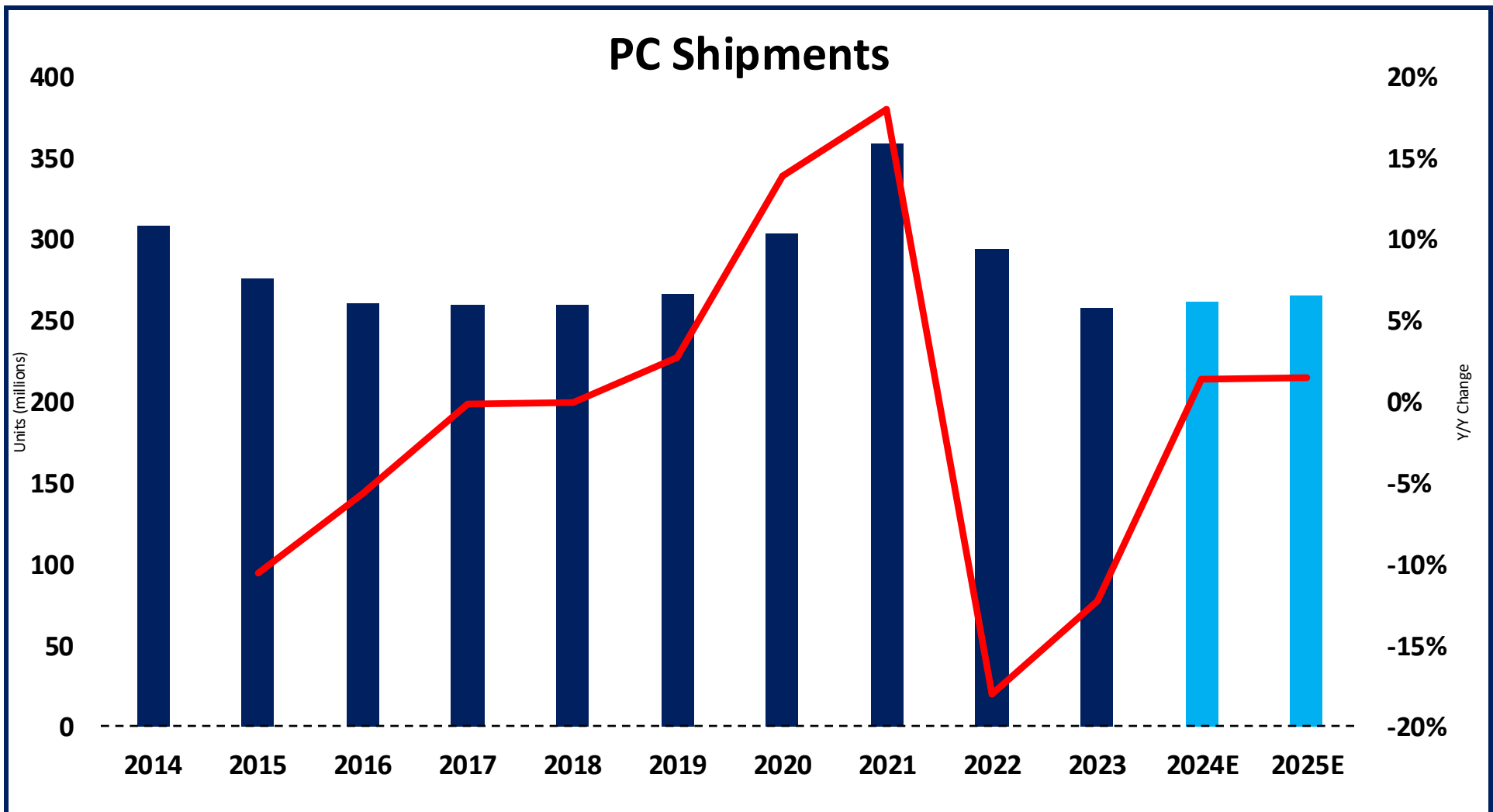


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2025 PC Outlook

PC Outlook remains muted, no meaningful improvements in growth rates seen in near-term

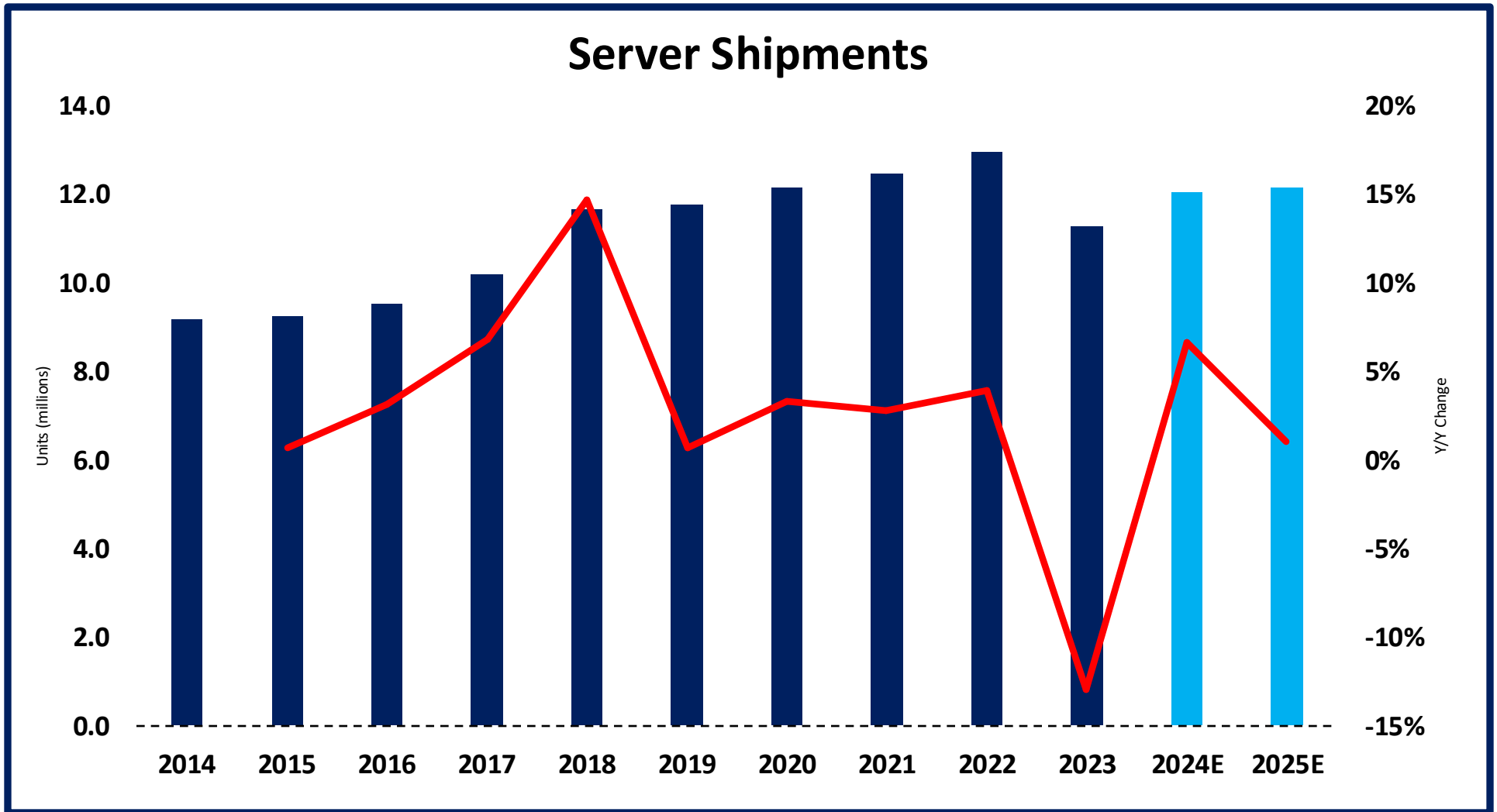


Source: IDC, Edgewater Research estimates



2024 & 2025 Server Outlook

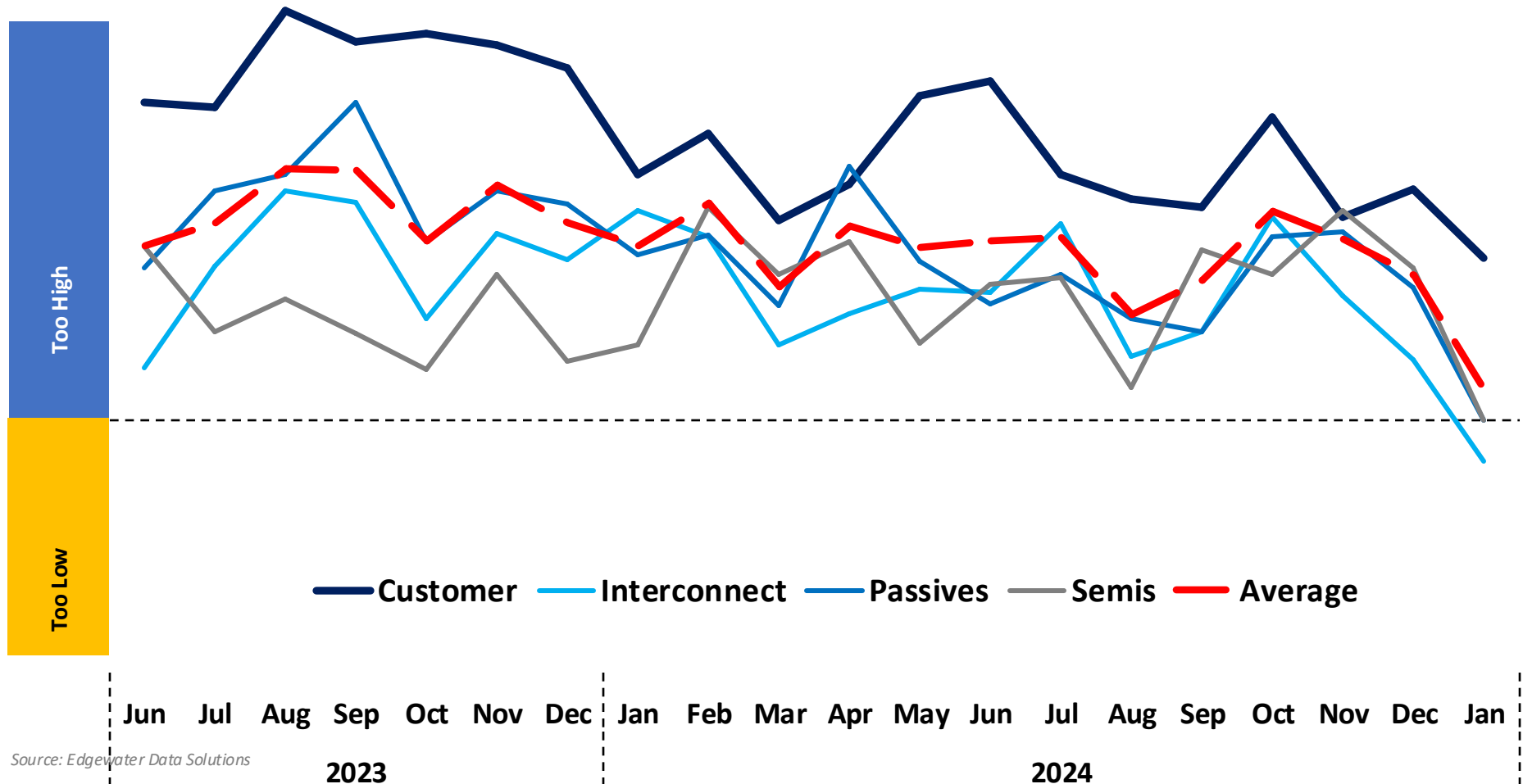
Enterprise on-prem & cloud still seeing moderate growth, AI remains robust



Source: IDC, Edgewater Research estimates



ERA Survey Inventory Trends



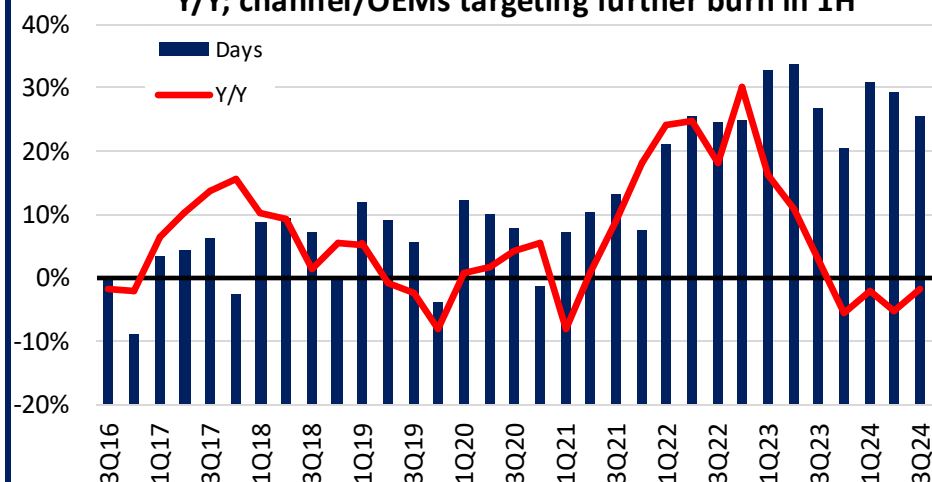
Tech Supply Chain Inventory Levels

Inventory dollars +58% & Days +31% since 2020; progress made but more work remains

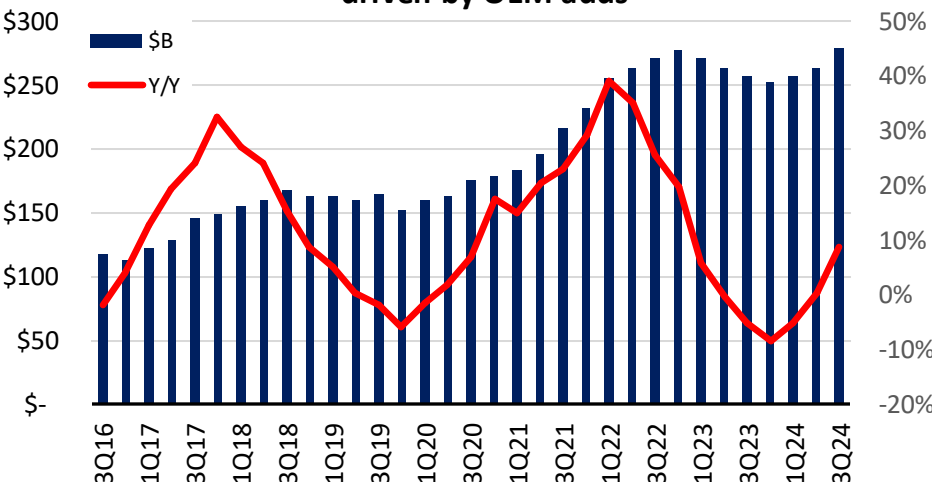
Inventory - Days Improved with Rising Demand but Component Inflation Affecting OEM Inventory Levels

	Dollars (\$B)				Days				Dollars Change			Days Change		
	3Q20	3Q23	2Q24	3Q24	3Q20	3Q23	2Q24	3Q24	vs. 2Q20	Q/Q	Y/Y	vs. 2Q20	Q/Q	Y/Y
Total	\$176	\$257	\$264	\$278	48	64	66	63	58%	6%	9%	31%	-5%	-2%
Analog/Passive	\$21	\$36	\$36	\$38	79	106	108	106	80%	4%	6%	35%	-2%	0%
Compute Suppliers	\$56	\$86	\$86	\$89	84	115	117	107	60%	3%	4%	27%	-9%	-7%
Comms Suppliers	\$4	\$11	\$10	\$11	67	130	112	112	151%	12%	-2%	68%	-0%	-14%
Distributors	\$13	\$26	\$26	\$27	41	58	57	55	108%	4%	5%	35%	-3%	-4%
ODM/EMS	\$55	\$61	\$61	\$65	51	56	57	53	19%	8%	7%	4%	-7%	-5%
OEMs	\$27	\$37	\$45	\$48	21	29	34	34	80%	7%	31%	59%	0%	20%

Tech Inventory: Days -5% Q/Q off 2Q24 peak and -2% Y/Y; channel/OEMs targeting further burn in 1H



Tech Inventory: Dollars +6% and +9% Y/Y, new high driven by OEM adds



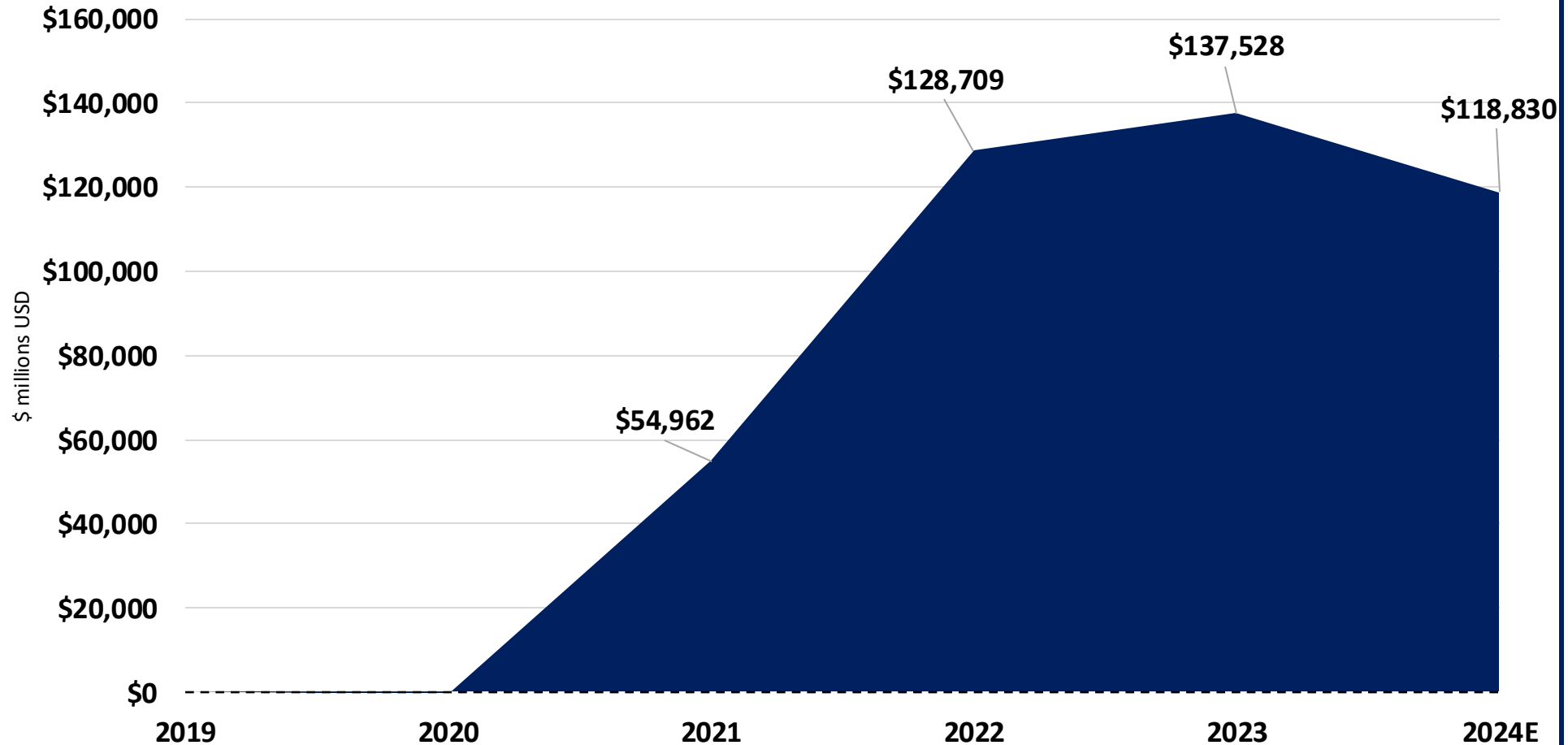
Source: FactSet, Company Reports



How Much Inventory was Actually Built During the Supply Chain Crisis?

Industry likely still facing >\$100 billion of excess entering 2023 roughly equal to 1 inventory turn

Cumulative Inventory Build/Burn Ex-Nvidia AI Growth

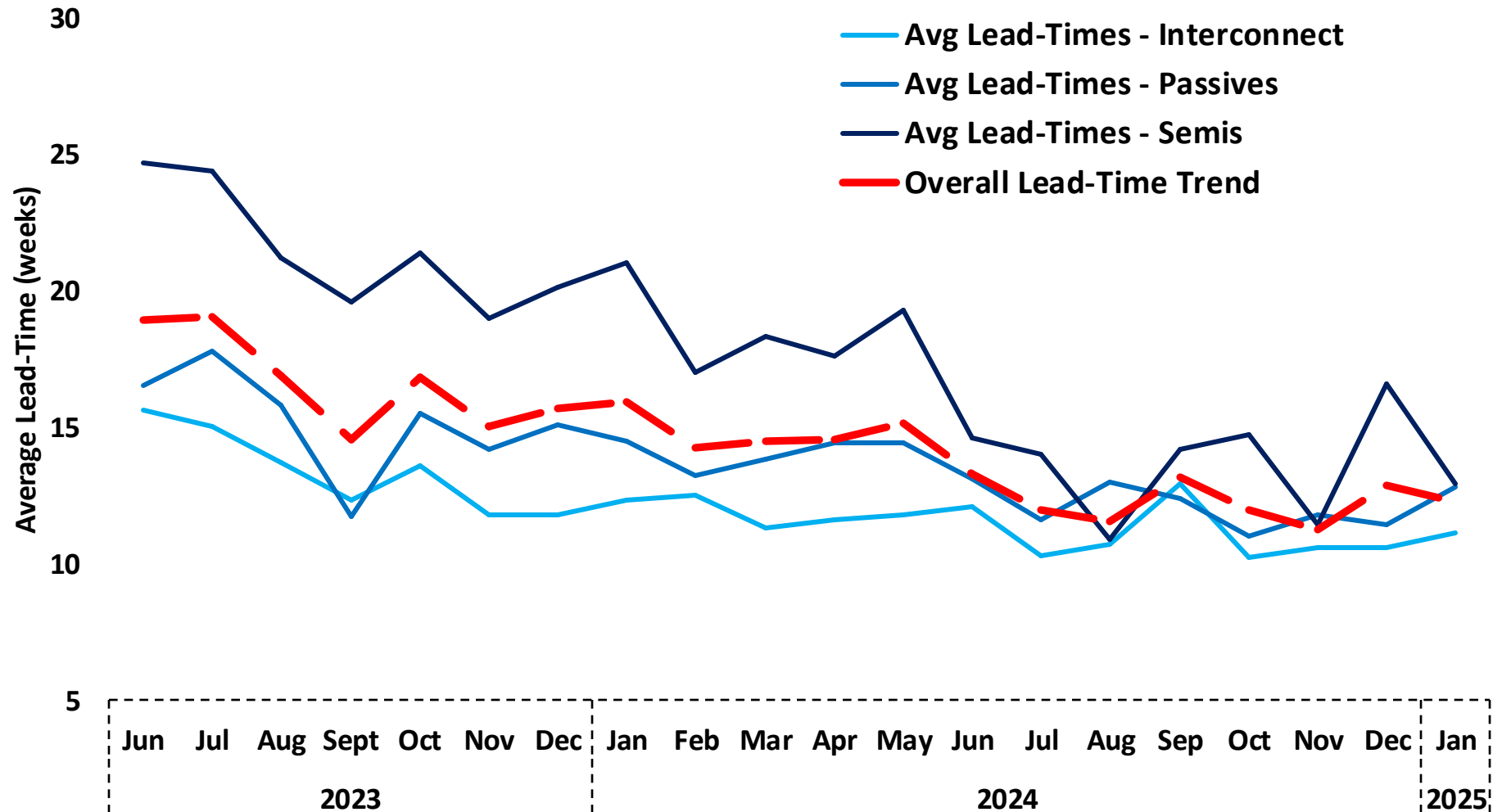


Source: Factset, Edgewater Research



ERA Survey Lead Times (Weeks)

Lead times largely remain at low levels

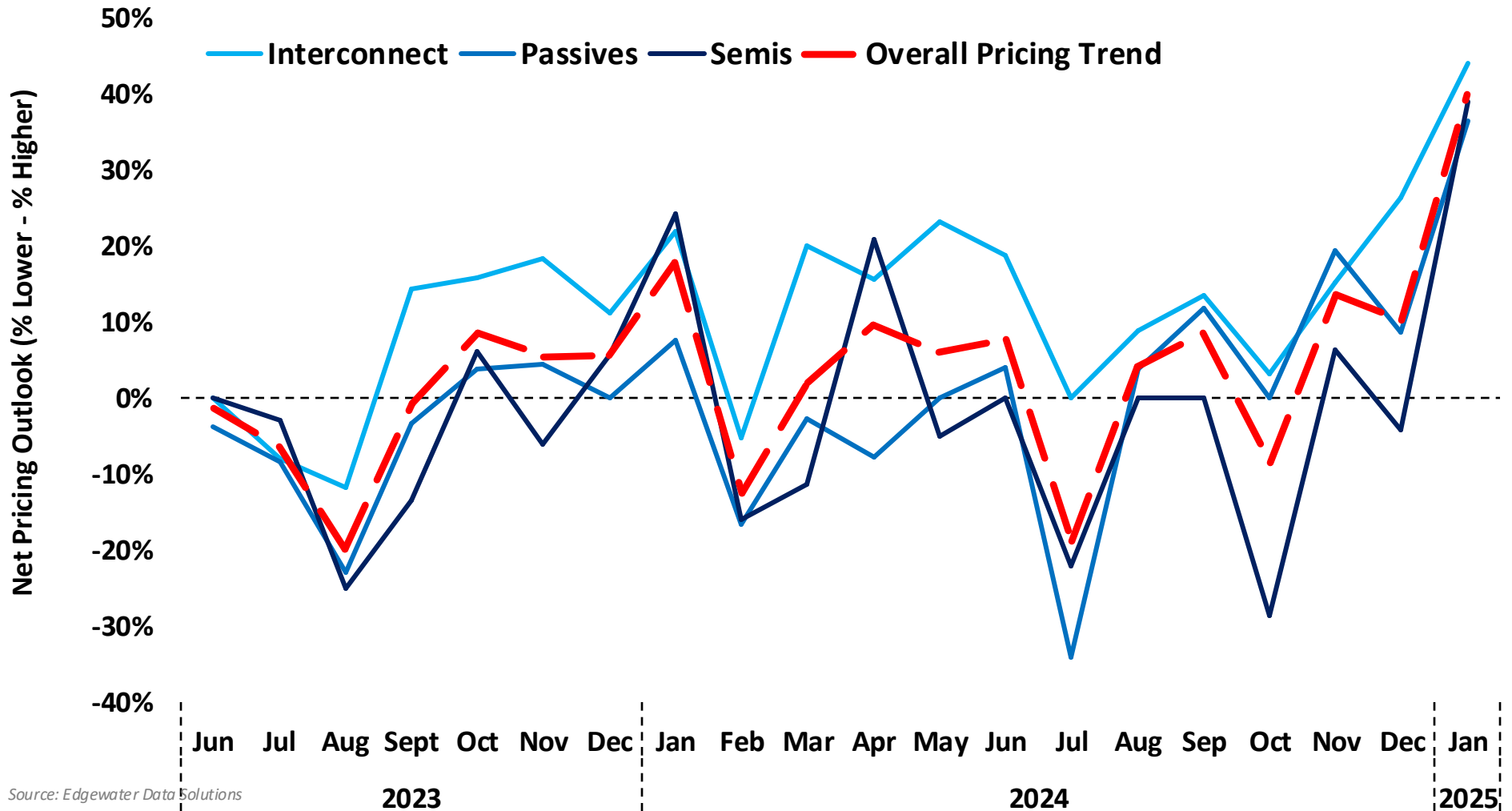


Source: Edgewater Data Solutions



ERA Survey Lead Pricing Outlook (Next 6 Months)

Pricing outlook remains inflationary and a tailwind to sales growth in 2025



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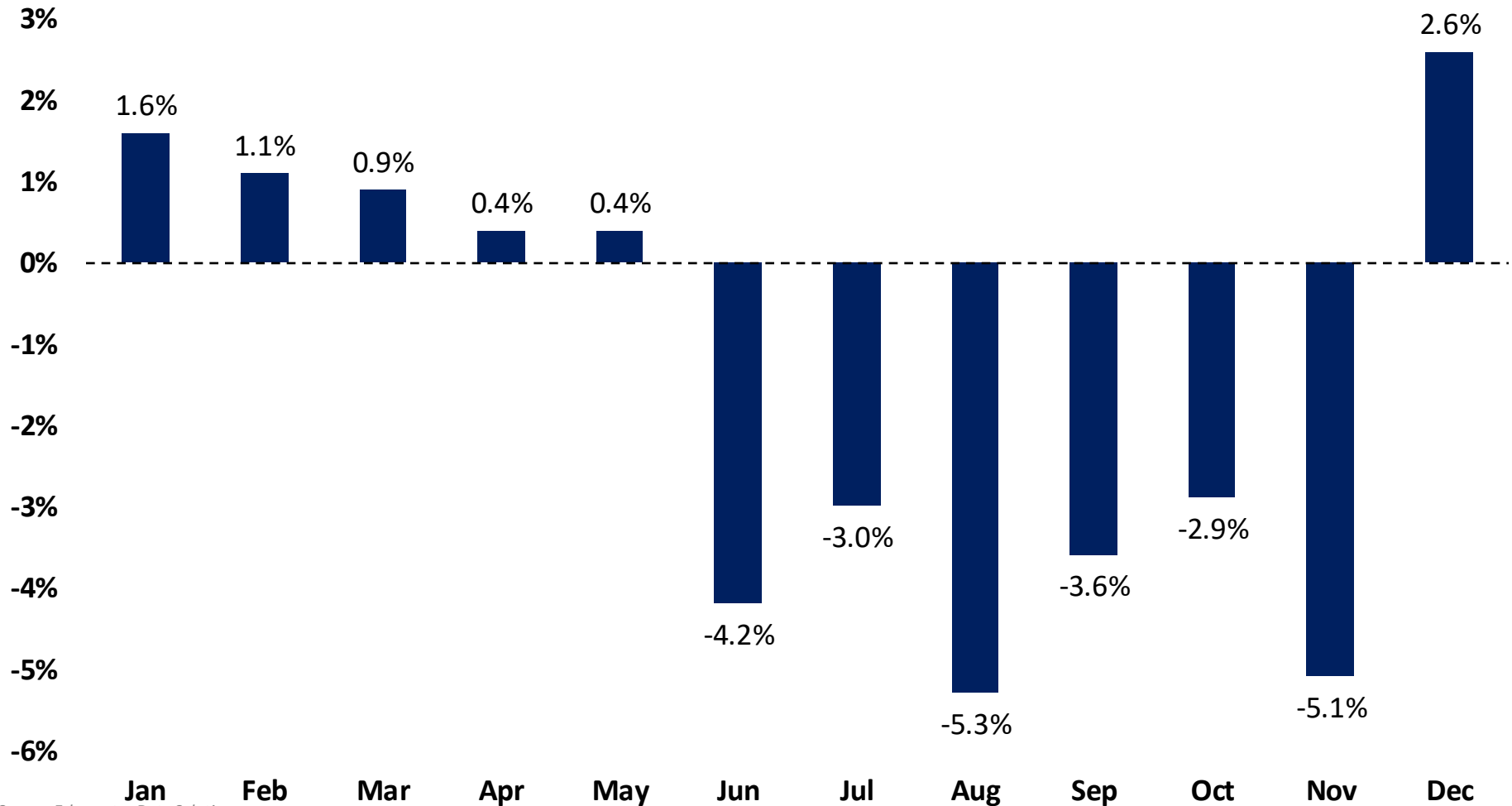


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ERA Survey 2025 Sales Outlook

ERA membership calling for low-single digit growth, slightly more optimistic than 2024



Source: Edgewater Data Solutions



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2025

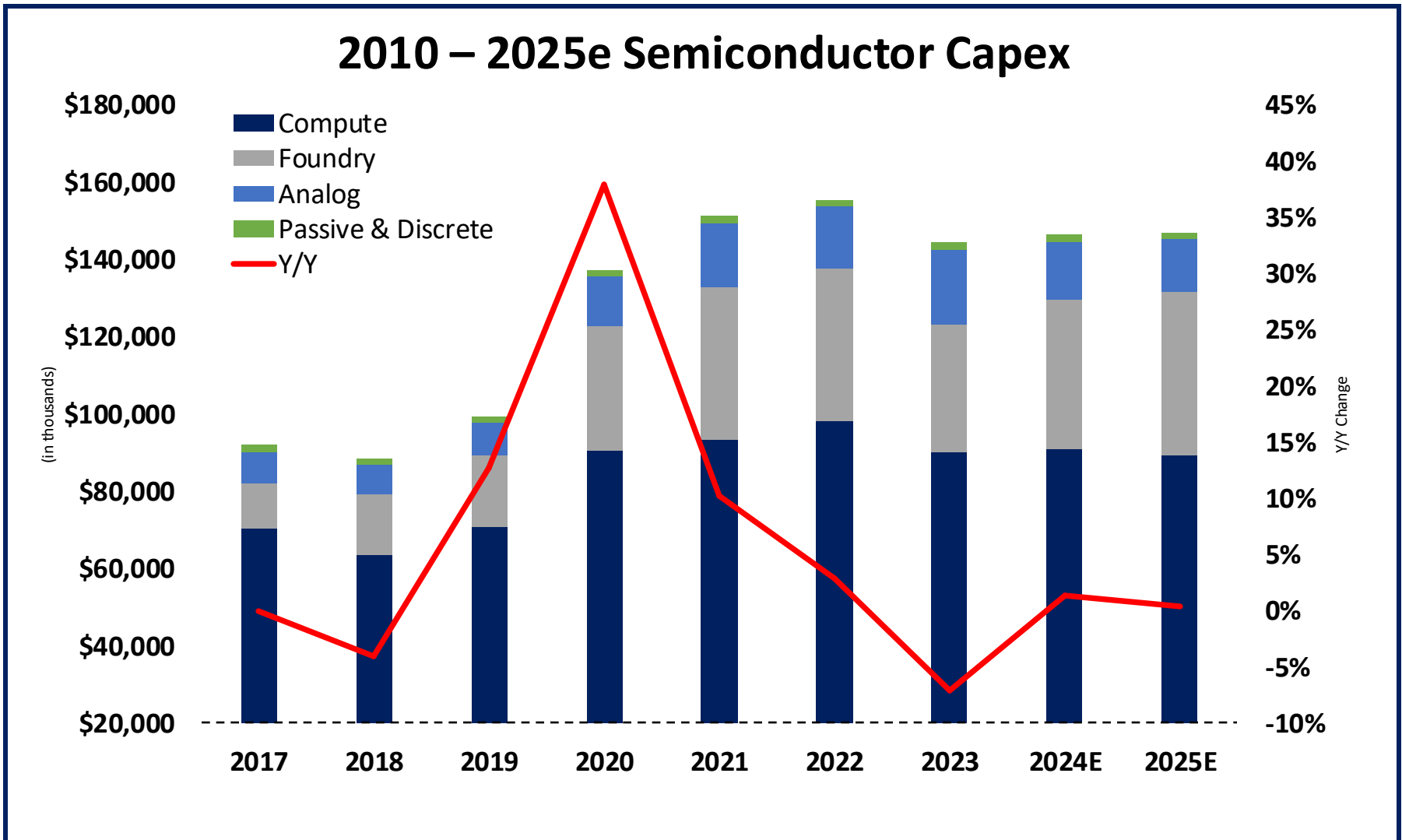
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Capacity Addition Growth Rates still Double Pre-Covid Levels

2025 capacity additions expected to remain muted with industry oversupplied



Source: Factset, Edgewater Research estimates



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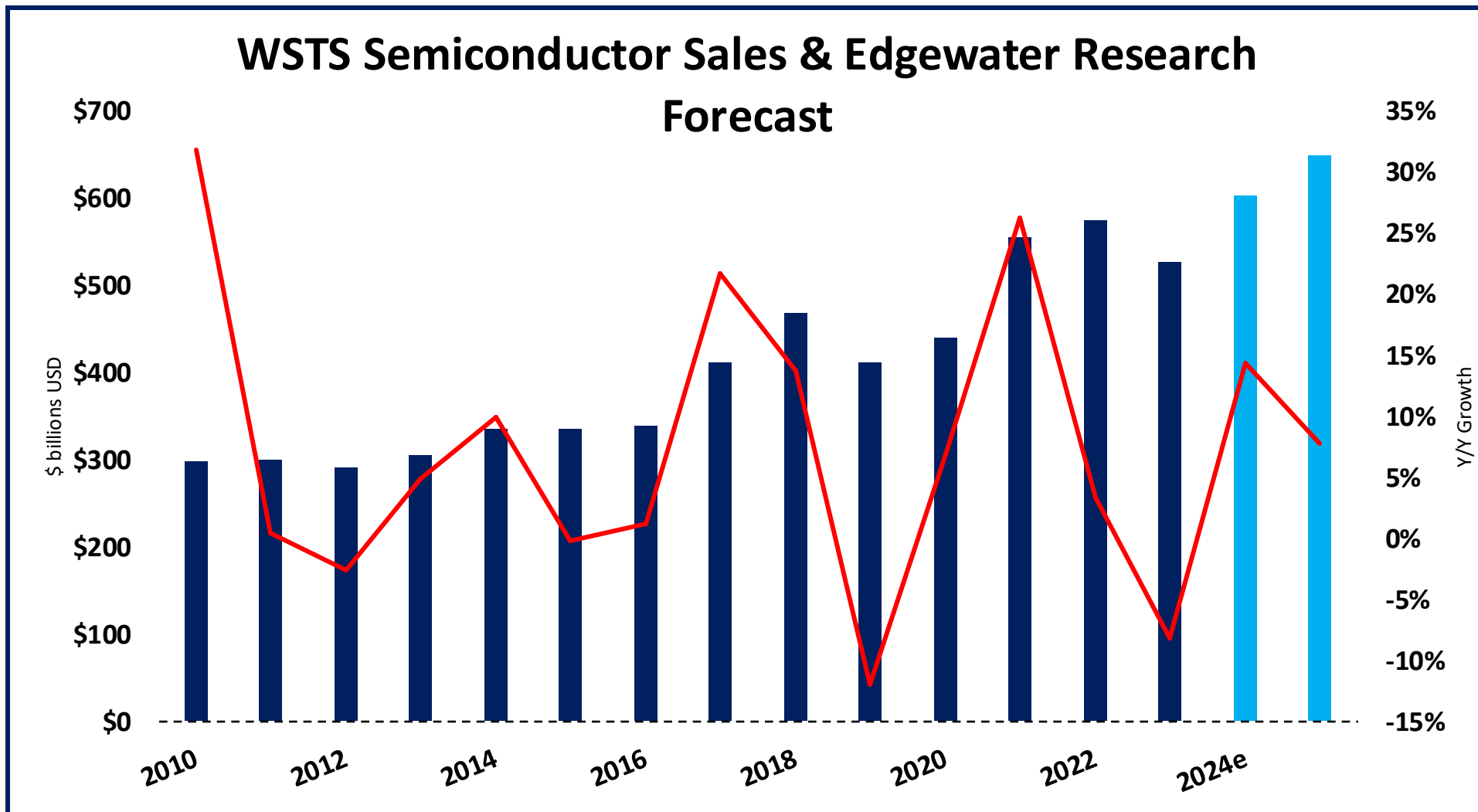


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Edgewater Research Industry Sales Estimates

2025 sales +8%, ex-memory +7%, ex-memory & logic flat



Source: WSTS, Edgewater Research estimates



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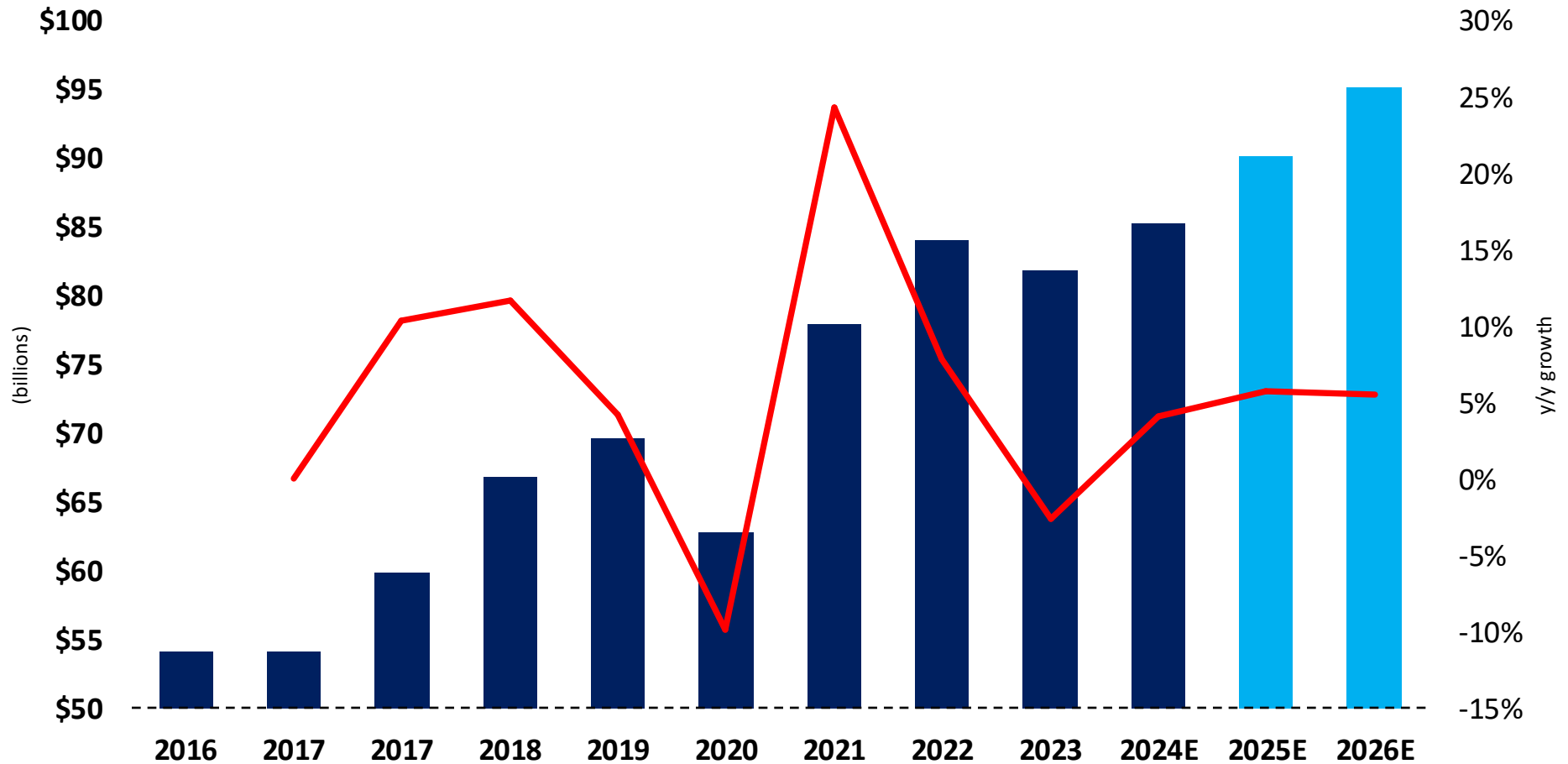
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Edgewater Research Industry Sales Estimates

2025 interconnect sales forecast unchanged at +6% Y/Y

Interconnect Industry Sales & Outlook



Source: Bishop Report, Edgewater Research estimates



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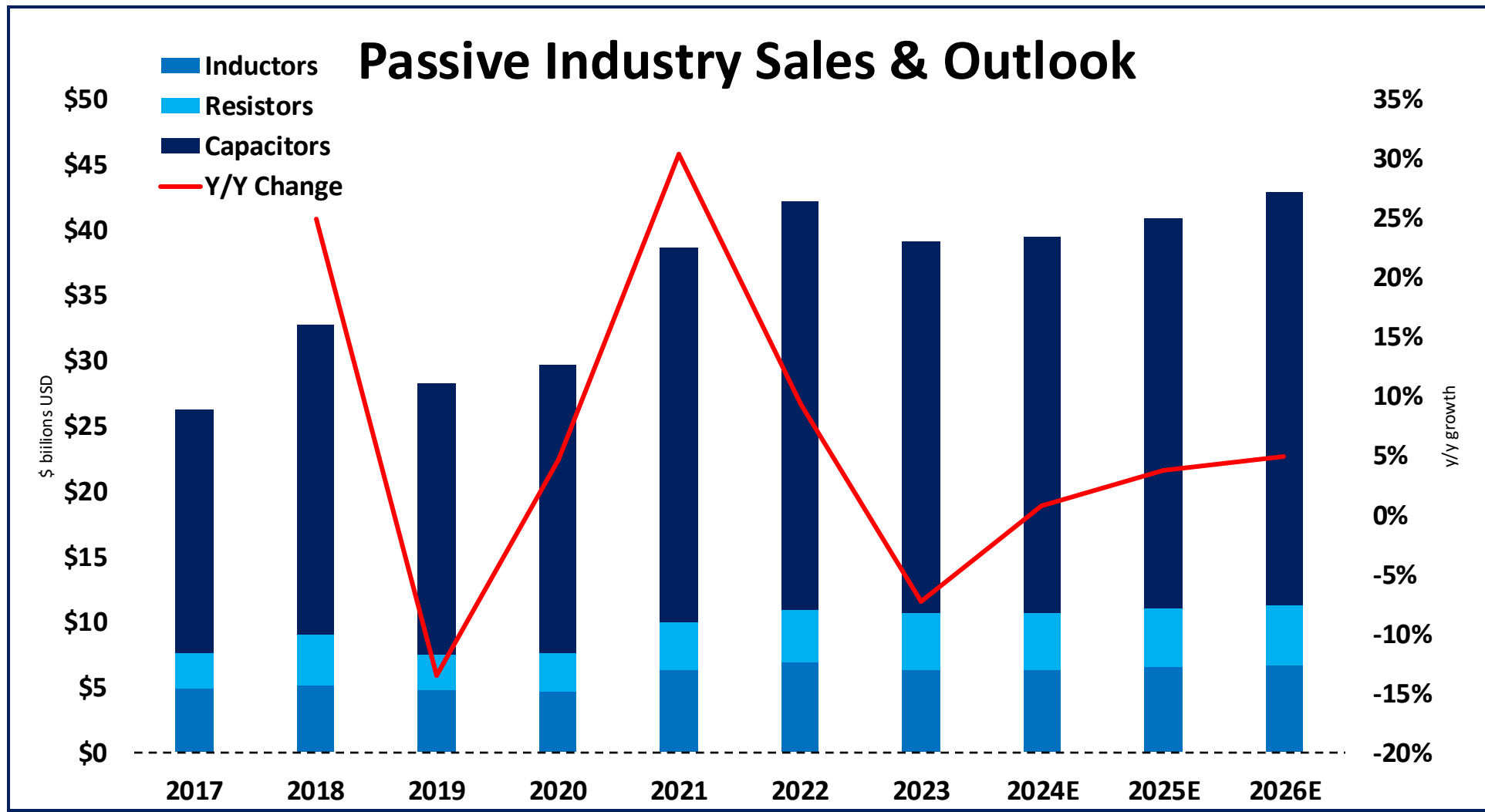


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Edgewater Research Industry Sales Estimates

2025 passive sales expected to grow 4-5% unchanged from previous forecast



Source: WSTS, Edgewater Research estimates



What Can You Do as ERA Members to Help?

- **Please Participate!**

- The broader the participation, the more impactful and helpful this will be for the membership
- ERA has 600+ organizations or “boots on the ground,” the membership can unlock tremendous value overtime to identify inflection points in the industry and better position your business
- Creates and opportunity for benchmarking – can look at your company’s results vs. your peer group monthly

- **Regional Differentiation**

- The survey’s demographic questions (only completed on 1st survey) allows the results to be segmented by region and tied to the ERA regions
- This differentiation, with proper participation at the regional levels allows Edgewater and ERA to provide insights at the regional level and conduct various regional events/webinars with real local data



Questions?

What Questions do you have?



APPENDIX

I, Dennis Reed, hereby certify that the views expressed in this research report accurately reflect our personal views about any or all of the subject securities referred to in this research report. We certify that no part of our compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report. The analyst(s) responsible for the preparation of this report have no ownership stake in this company. Edgewater Research Company provides no investment banking services on this or any company.

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