Anticipating the Next Electronics Components Cycle

Looking Up to the Future

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December 7, 2023

Electronic Components Industry Association

Review and Outlook

- Value of Distribution - TAMU study update
- 2023 highlights and significant statistical reports published
- Top 50 Authorized Distributors
- A look ahead of what's to come in 2024

Interactive Q&A

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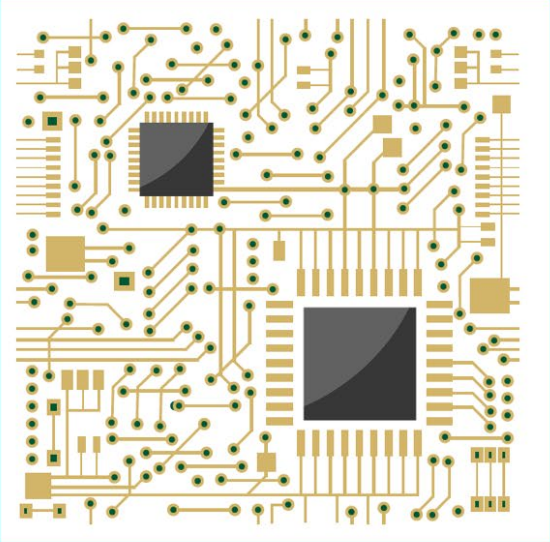
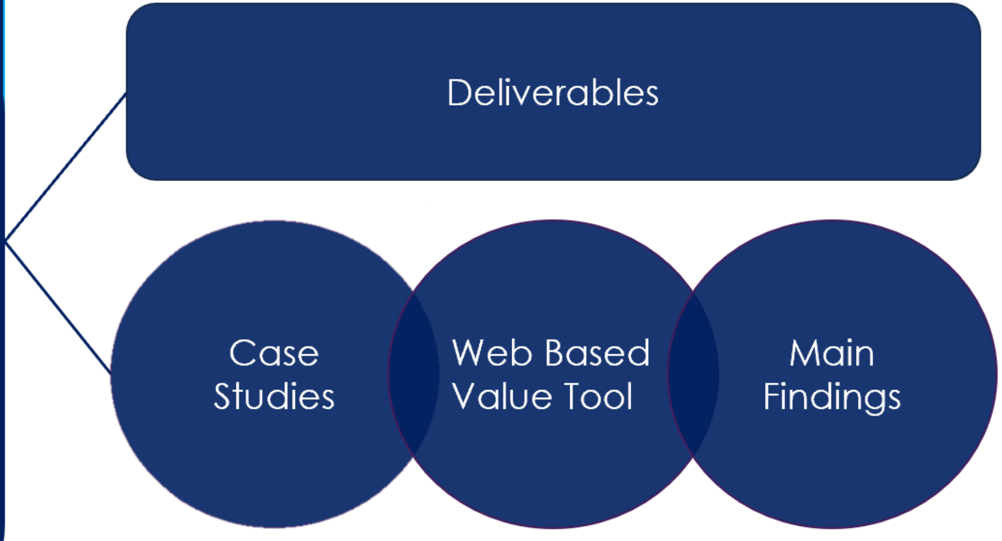


The Value Delivered by Authorized Channel Partners for Electronic Components

DELIVERABLES

Findings

- **Case studies frameworks** will demonstrate the **quantified value of distributors** in their collaboration with manufacturers to create efficiencies and value for customers.
- **Web-based tool will consider multiple factors** that can be selected as they apply to quantify the value delivered from including distributors as channel partners.
- **Main findings** will contain strategies to enable manufacturers to maximize and **measure value obtained by distributors.**



Executive Summary
14 Pages

Full Report
101 Pages

Executive Summary

The purpose of the ECIA study, "The Value Delivered by Authorized Channel Partners for Electronic Components" is to explore modern distributor capabilities, covering advancements like digitization and new value-added services (VAS). In addition to identify, analyze, and document the value of services electronic distributors and their partners (manufacturers and manufacturer reps) provide in the supply chain, this study will identify processes related to new product introductions and activities for market expansion and VAS. The study will also produce an analytical tool to represent the value model developed.

Key benefits of the study include:

- Offering electronics manufacturers tools for evaluating cost structures.
- Devising growth strategies.
- Understanding the evolving value of distribution.
- Identification of gaps between current distributor services and customer expectations.

This study also emphasizes how manufacturers can harness distribution to bolster business growth. Information was gathered through questionnaires with the stakeholders around the following categories -

New Product Introduction

Market Growth Strategies

Value Added Services

Using a thorough interview process across the different segments of the distribution industry, distributors, manufacturers, manufacturer representatives the following findings and differentiation across these sectors were uncovered:

Findings:

Distributor	Manufacturer	Manufacturer Representatives
Role in VAS. Dealing with MOQ. Improving lead times. Collaborative Forecasting.	Improved product quality. Production process efficiency. Traceability in supply chain. Increased responsiveness to market dynamics.	Market Information Access. Enhanced customer relationships. Cost-effective sales support.

Differentiation:

Distributor	Manufacturer	Manufacturer Representatives
Digitalized vs Traditional Tech utilization. Digital marketing focus. Omnichannel approach. Use of third-party logistics.	Unique sales approach in the Electronic Components Industry Association. Reliance on manufacturer representatives working on commission.	Specialized knowledge based on industry or product lines. Building relationships with suppliers for demand creation and new opportunities.

During this project a thorough analysis of several scenarios was evaluated, and case studies were generated for distribution, selling direct and with manufacturer representatives. Cost associated with activities conducted served to quantify the value. Some examples are presented below (including market expansion, NPI, value added services).

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Cost Model Presents Major Scenarios

Power BI will visualize the value proposition of different scenarios based on following rules

Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Broadline Distributors selling product with high volume product order size	**Broadline Distributors selling product with low volume product order size**	**Specialized Distributors selling product with high volume product order size**	**Specialized Distributors selling product with low volume product order size**	**High service Distributors selling product with high volume product order size**	**High service Distributors selling product with low volume product order size**

CASE 1 : MARKET EXPANSION THROUGH NEW CUSTOMER ACQUISITION

Phase

- Demand generation
- New Customer Fulfillment
- Customer Assessment

Processes

- Solution Requirements
- Initial Proposal
- Promotional material
- Needs analysis
- Prospect leads
- Build relationships
- Source
- Stock
- Warehousing
- Sell
- Ship
- Support Services
- Customer feedback
- Improvement opportunities
- Develop solution
- Implement strategies

Activities

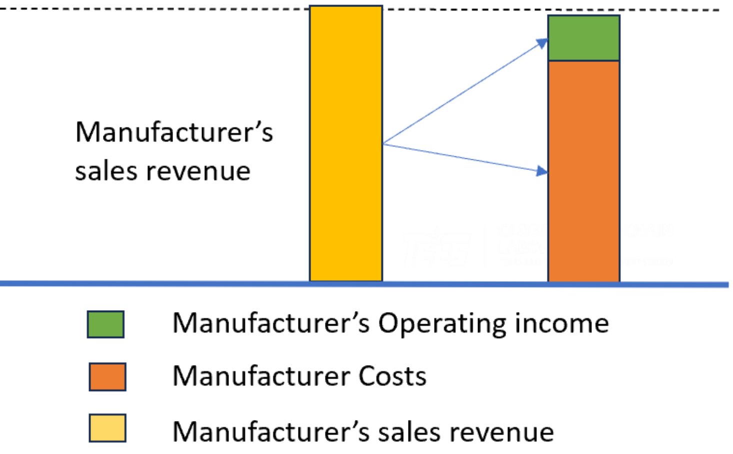
- Market research
- Sales force travel
- Content creation
- Transportation
- Quality assurance
- Warehouse rent and utilities
- Equipment
- Labor
- Insurance
- Maintenance
- Payment receiving
- Marketing
- Payment processing
- Quote processing
- Picking and packing
- Logistics
- Warranty
- Technical support
- Software maintenance
- Installation
- Customer training
- Technology
- Service
- Data acquisition
- Communication and marketing

Metrics

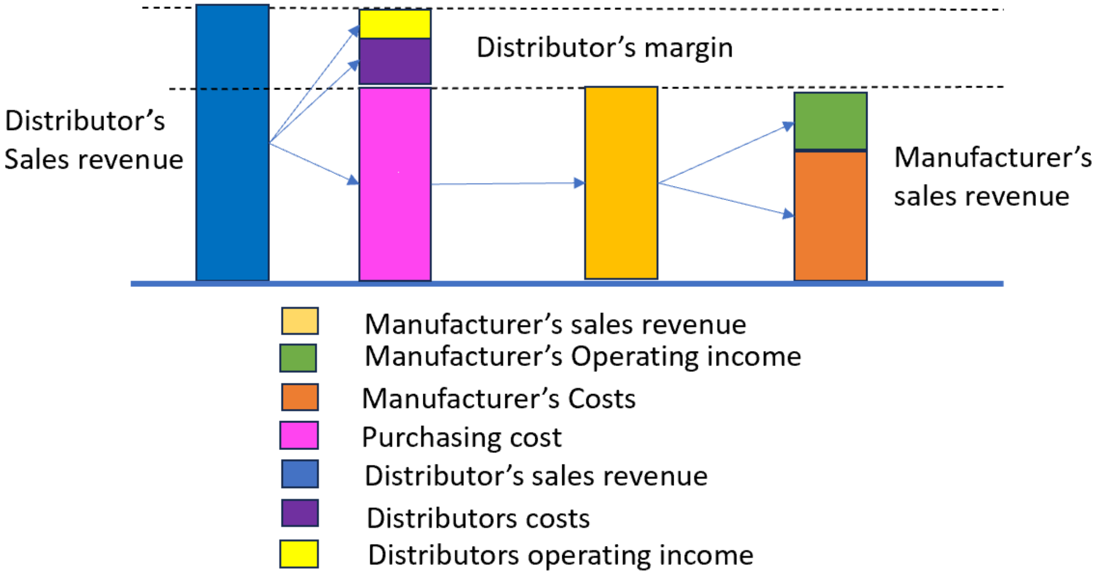
- Customer retention rate
- Lead response times
- Conversion rate
- Average order value
- New customer acquisition rate
- Contribution to sales revenue
- Lead time reduction
- order frequency
- New customer retention rate

QUANTIFICATION: DIRECT vs. DISTRIBUTION

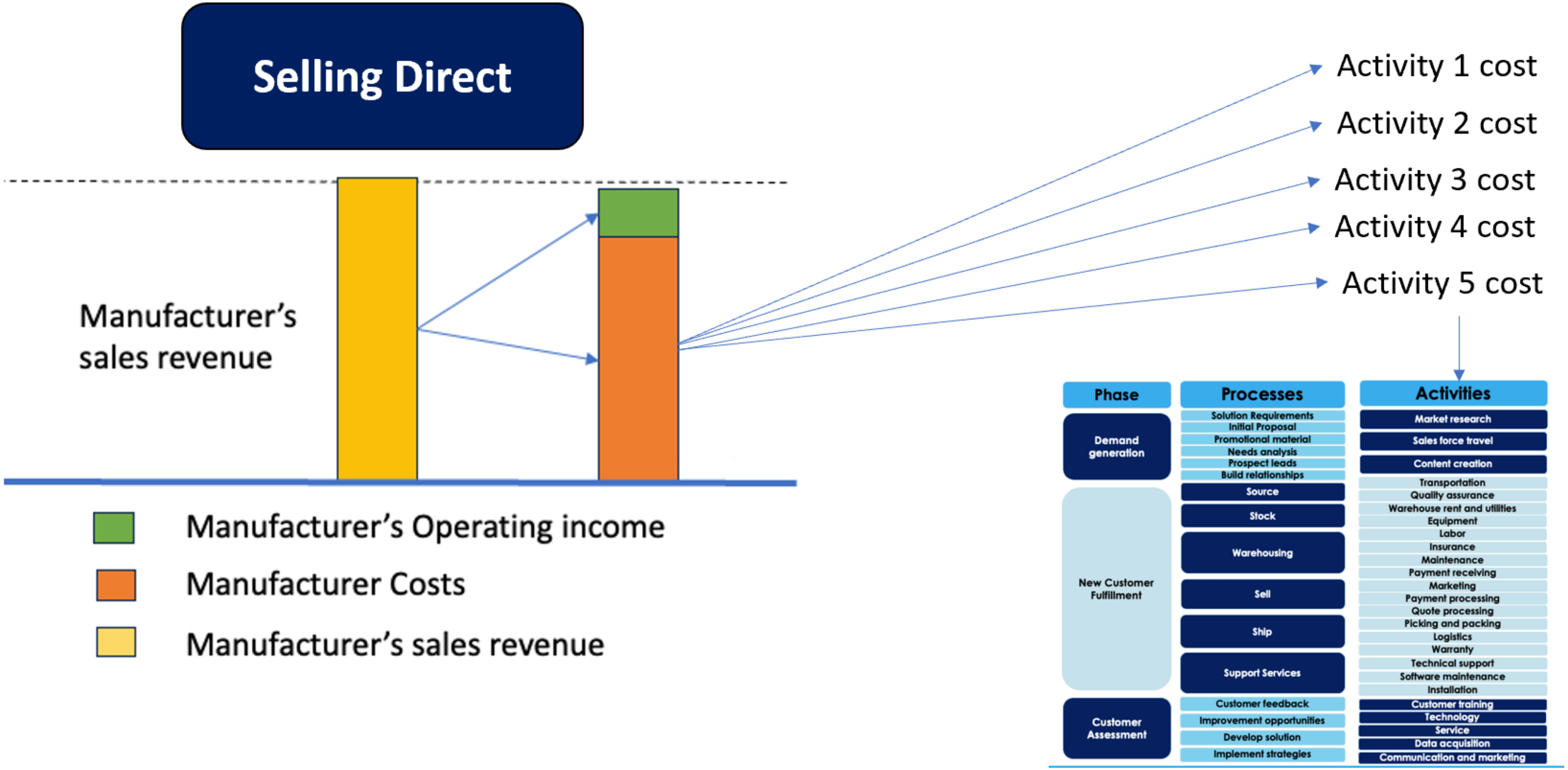
Selling Direct



Selling through Distribution



APPLICATION TO EXAMPLE 1 : SELLING DIRECT



APPLICATION TO EXAMPLE 1 : SELLING DIRECT

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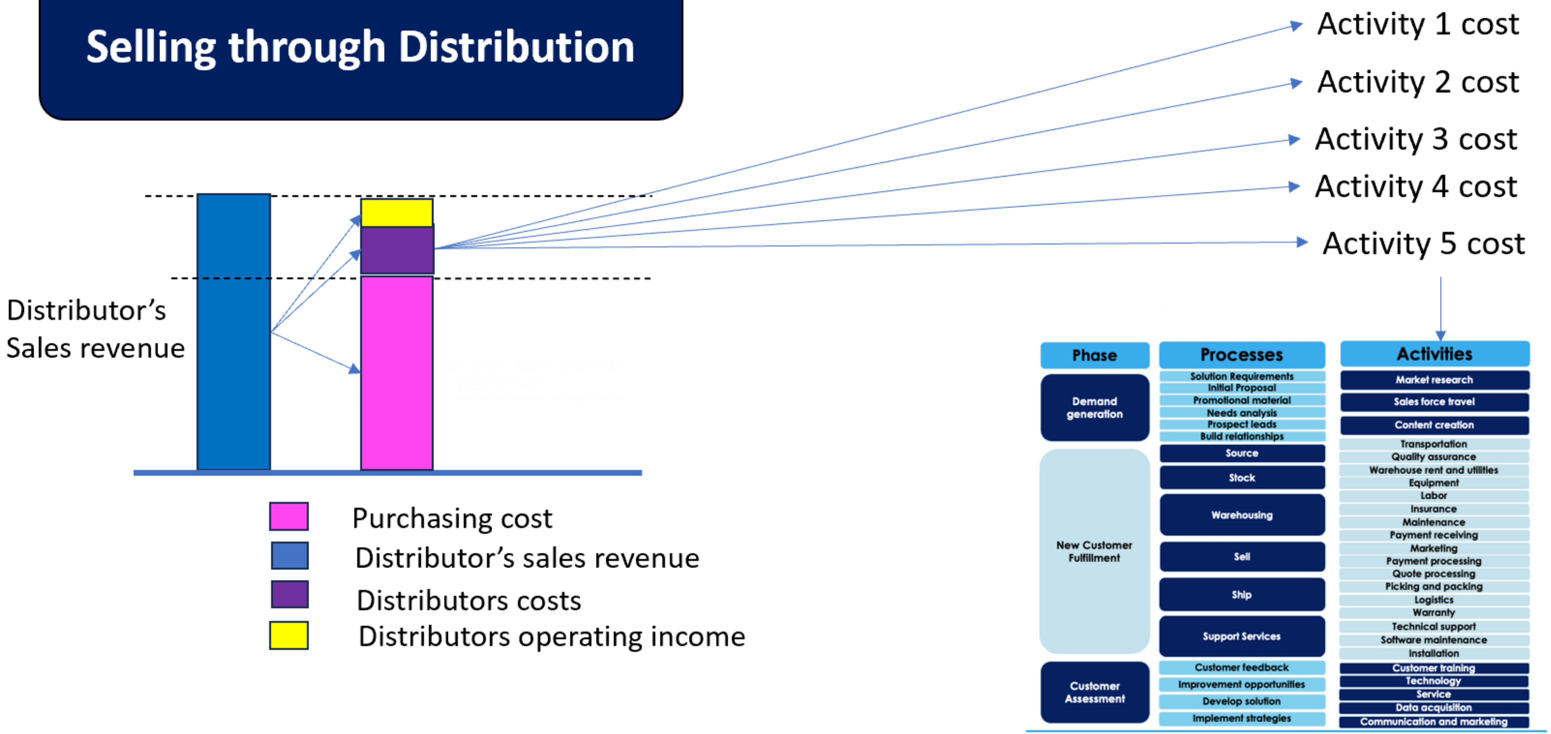

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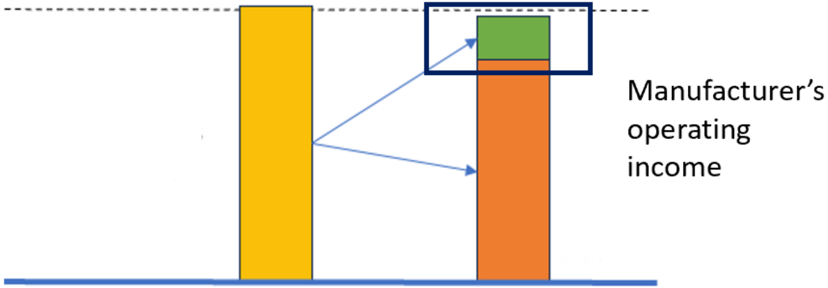
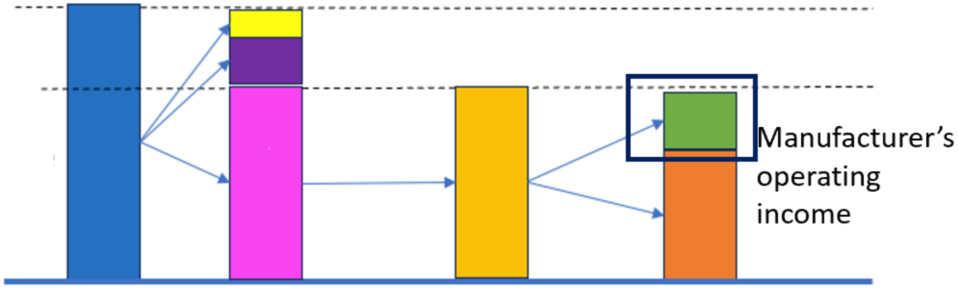
INCREASE IN OPERATING INCOME FOR MANUFACTURER

Selling Direct



Selling through Distribution

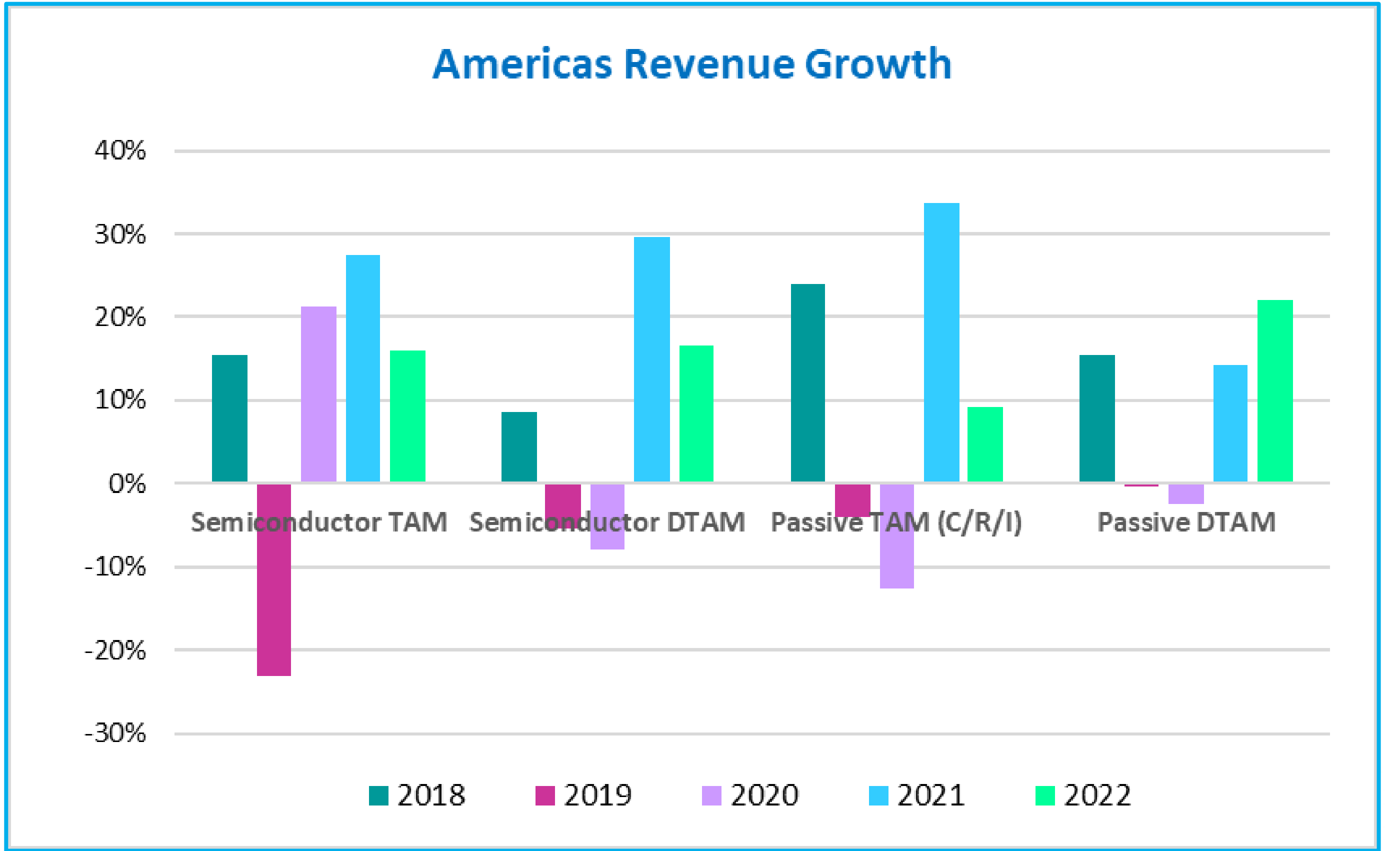


The value proposition to the manufacturer can be quantified by the gain in operating income for the manufacturer by selling through distribution.

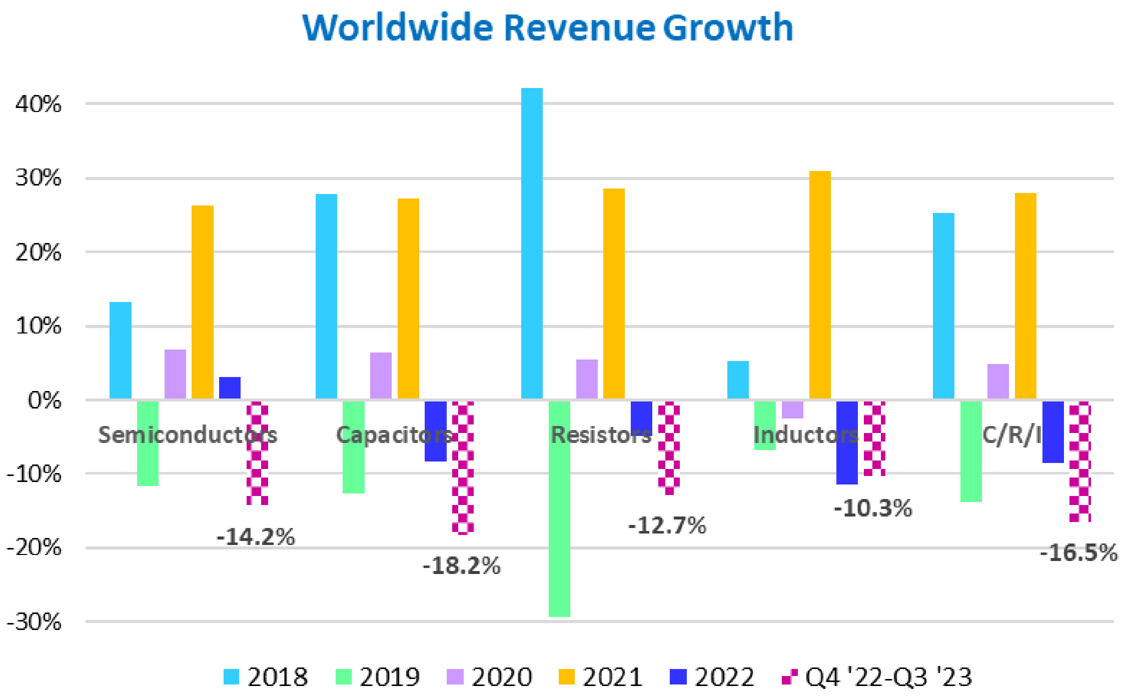
2023 Highlights

~ December 2023 ~

Americas TAM / DTAM Revenue Growth Comparison

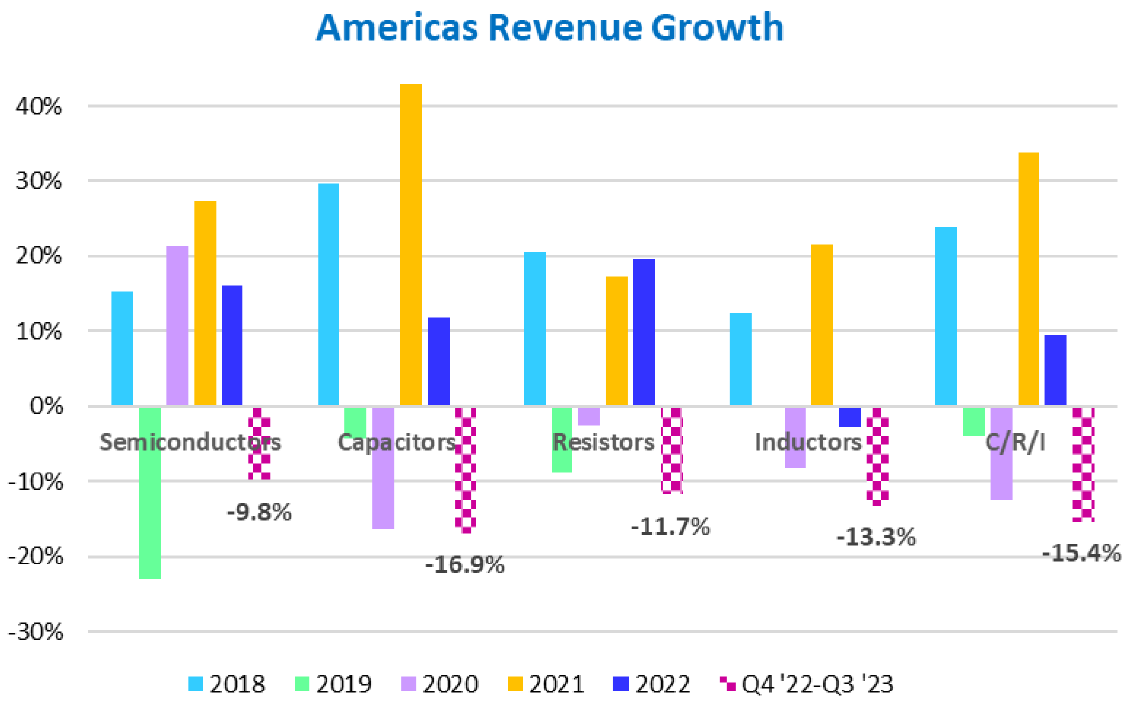


Electronic Component Revenue Growth - Worldwide



Source: World Semiconductor Trade Statistics (WSTS),
World Passive Trade Statistics (WPTS)

Electronic Component Revenue Growth - Americas



Source: World Semiconductor Trade Statistics (WSTS), World Passive Trade Statistics (WPTS)

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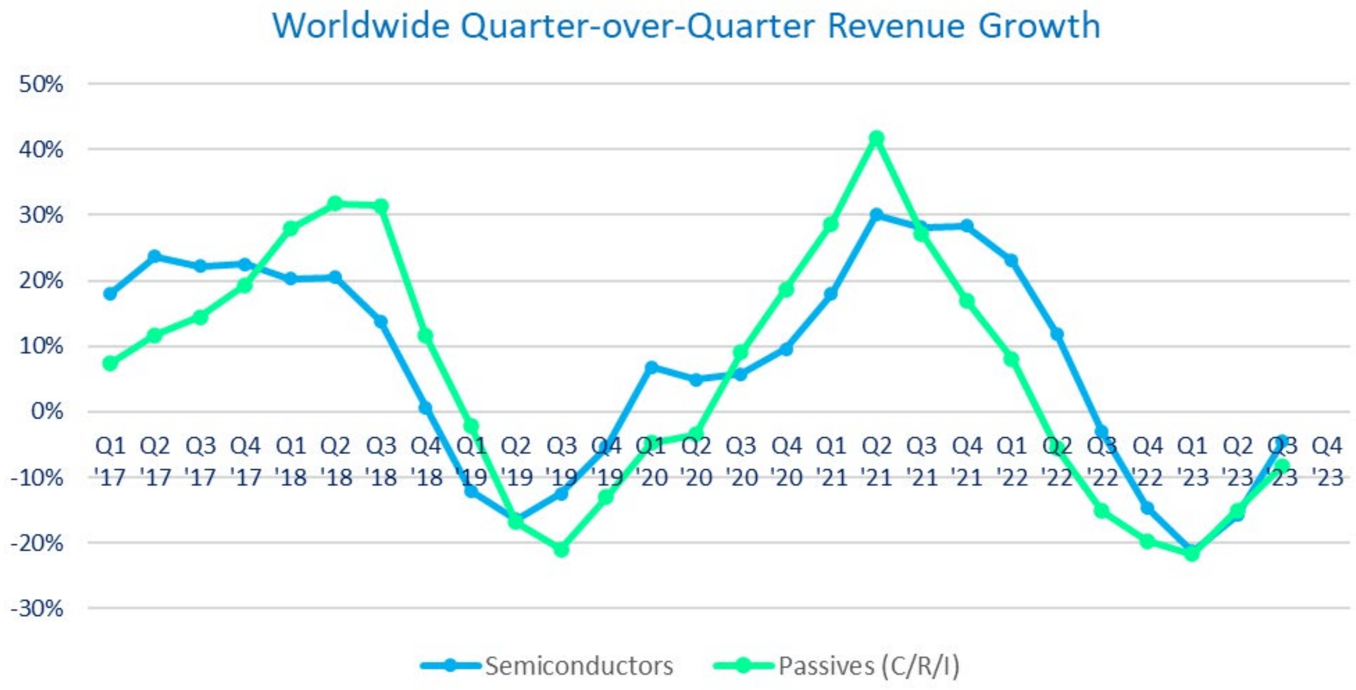
Electronic Component Revenue Growth - Worldwide



Source: World Semiconductor Trade Statistics (WSTS), World Passive Trade Statistics (WPTS)

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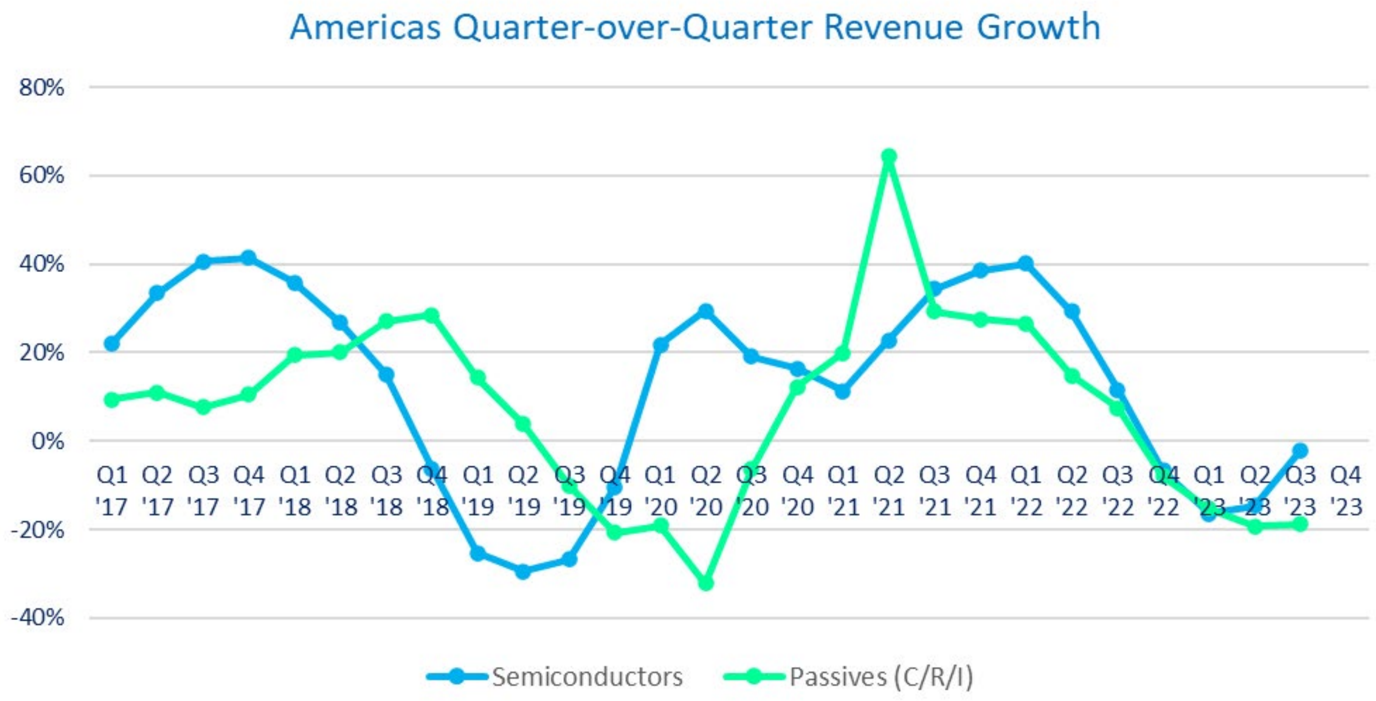
Electronic Component Revenue Growth - Americas



Source: World Semiconductor Trade Statistics (WSTS), World Passive Trade Statistics (WPTS)

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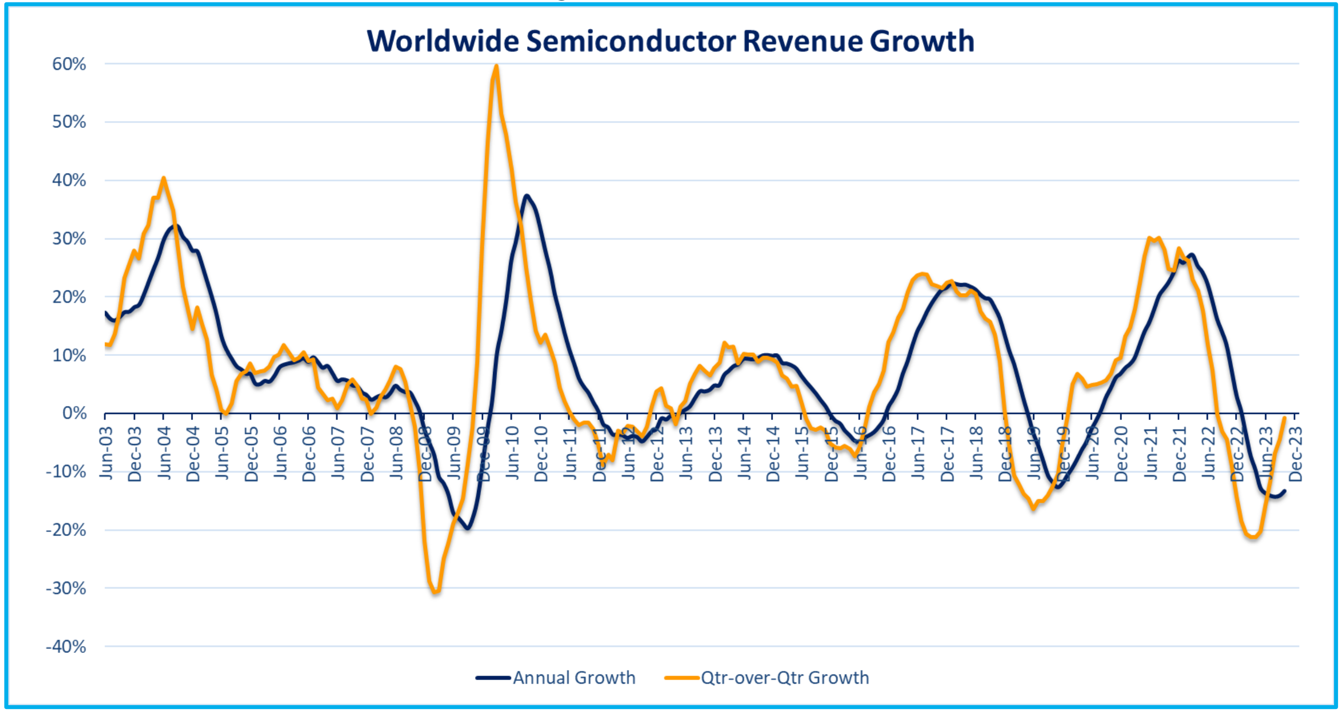
Semiconductor Revenue Growth Cycle

- Quarter-over-Quarter growth should break positive by end of 2023!
- Annual revenue cycle follows quarterly growth
- Annual trend for high single digit 2023 decline
- Rising ASPs boost revenue growth
- August 2023 marks beginning of new cycle
- Strong demand and technology drivers
- Inflation and interest rates undermine consumer spending? (70% of US GDP)



Source – WSTS

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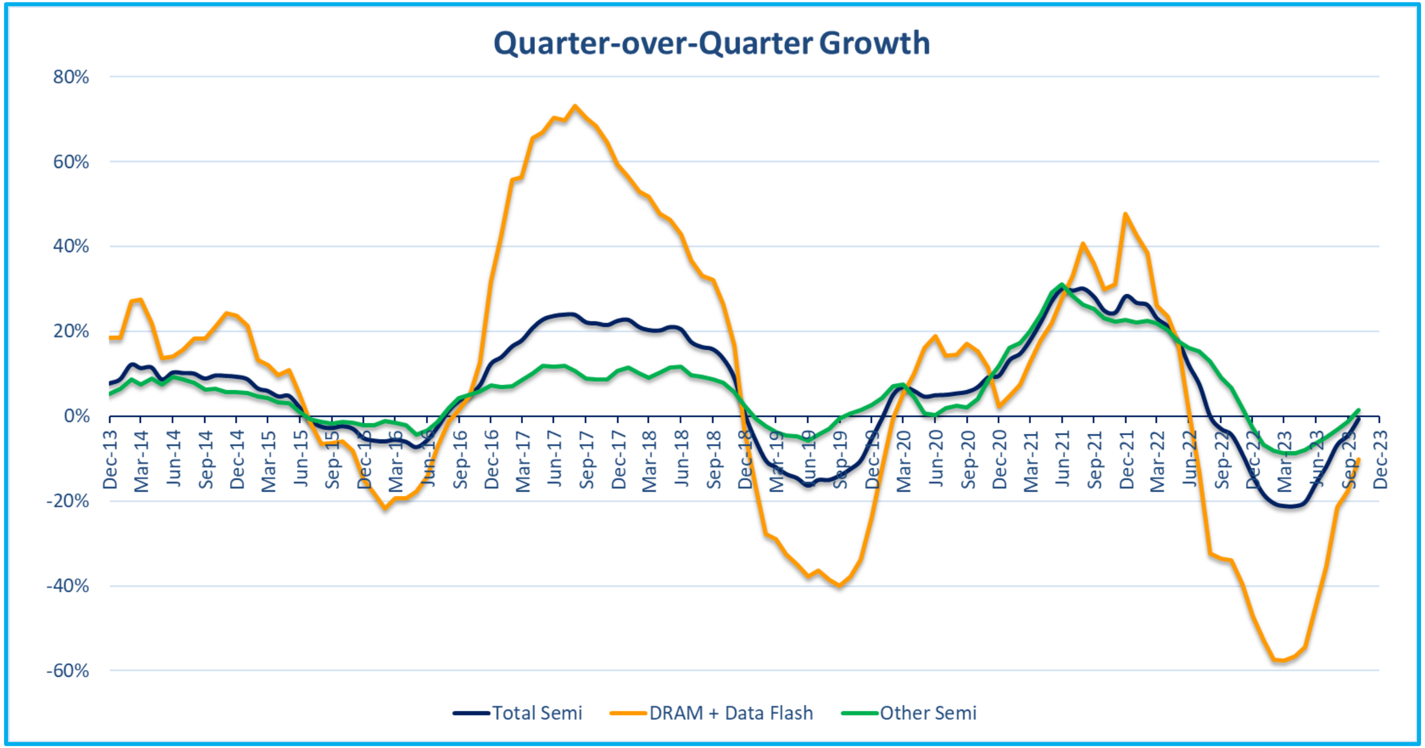
Semiconductor Growth Trends



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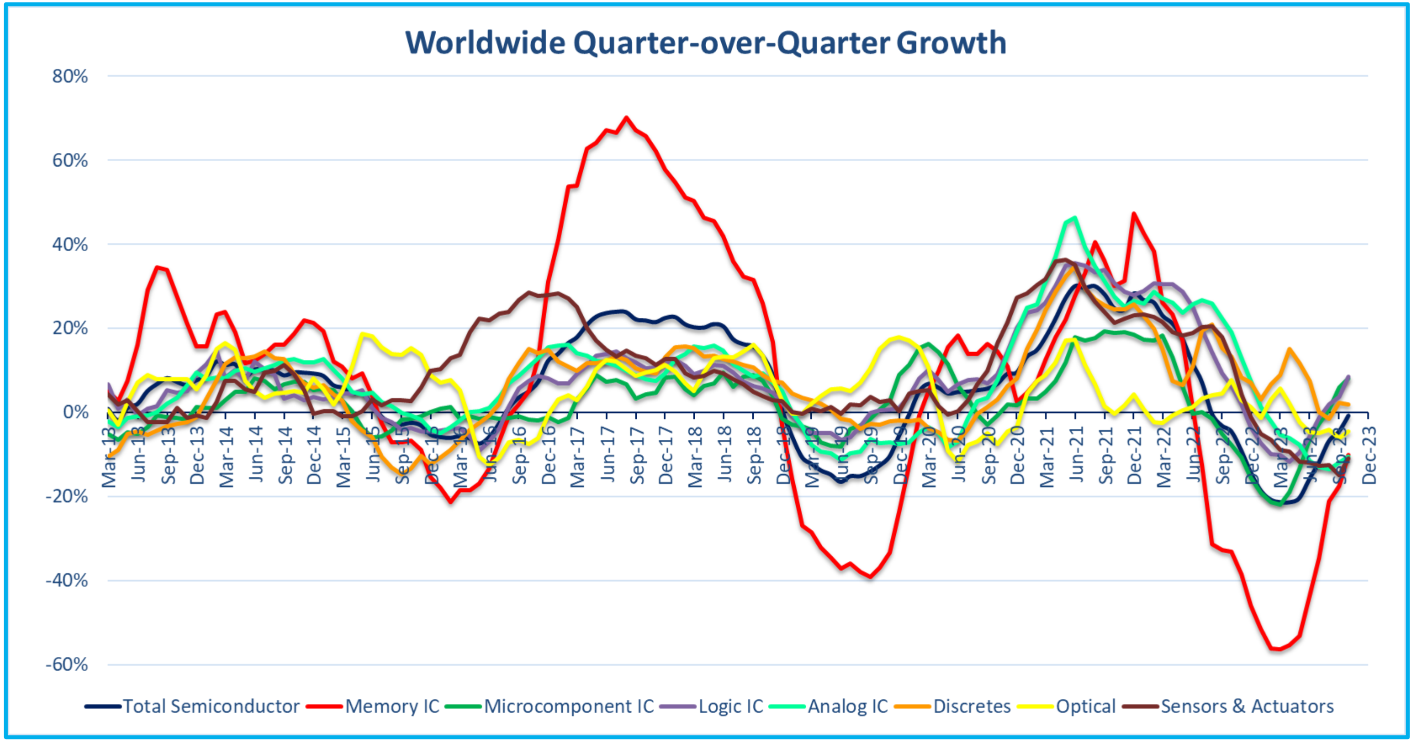
Source – WSTS

No Clear Unified Trend Across Markets

- Memory ICs Amplifying / Distorting the Cycle
- All other components started downturn in mid-2021
- Most categories bending up in last 3 months



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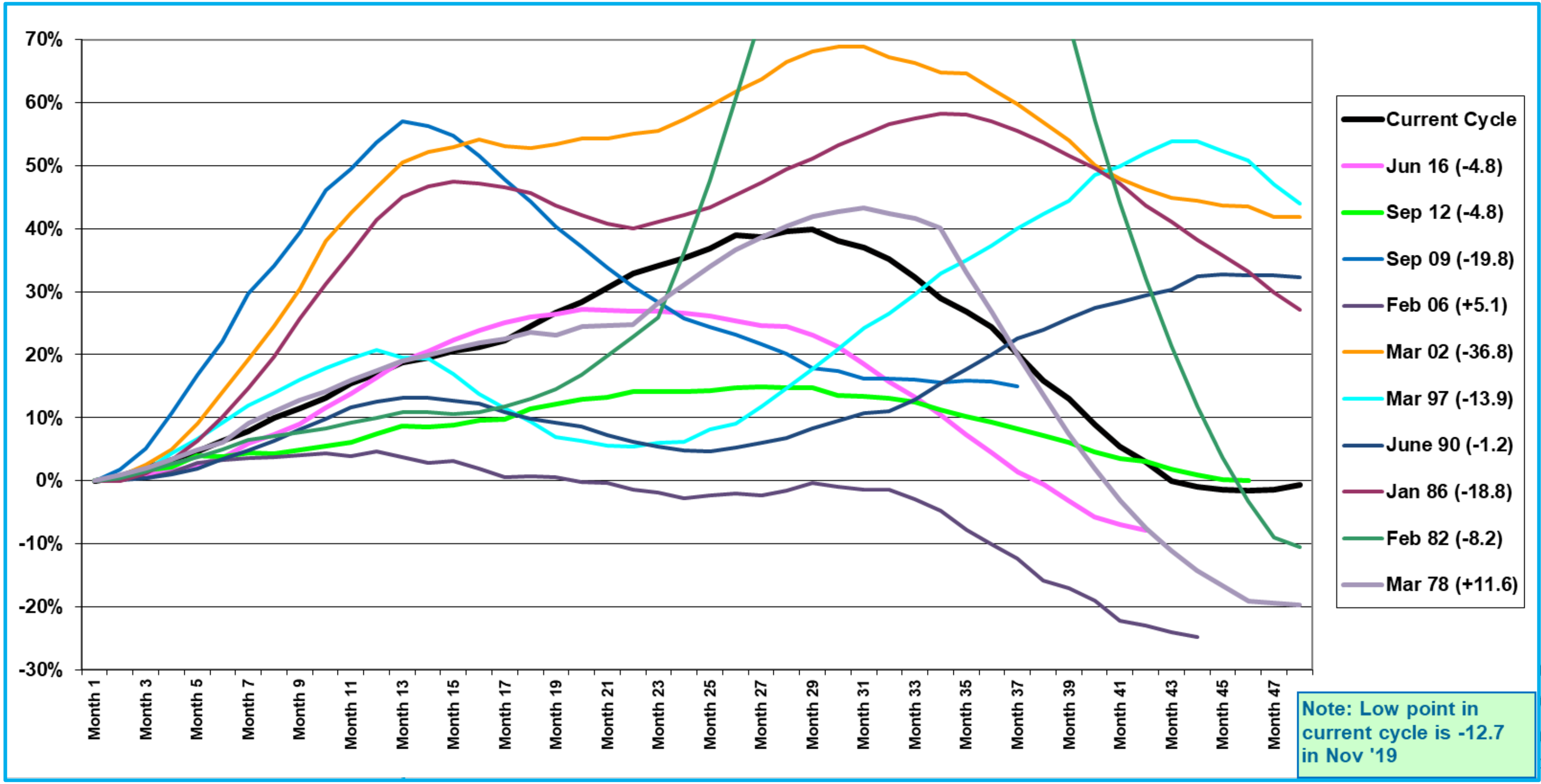
Source – WSTS

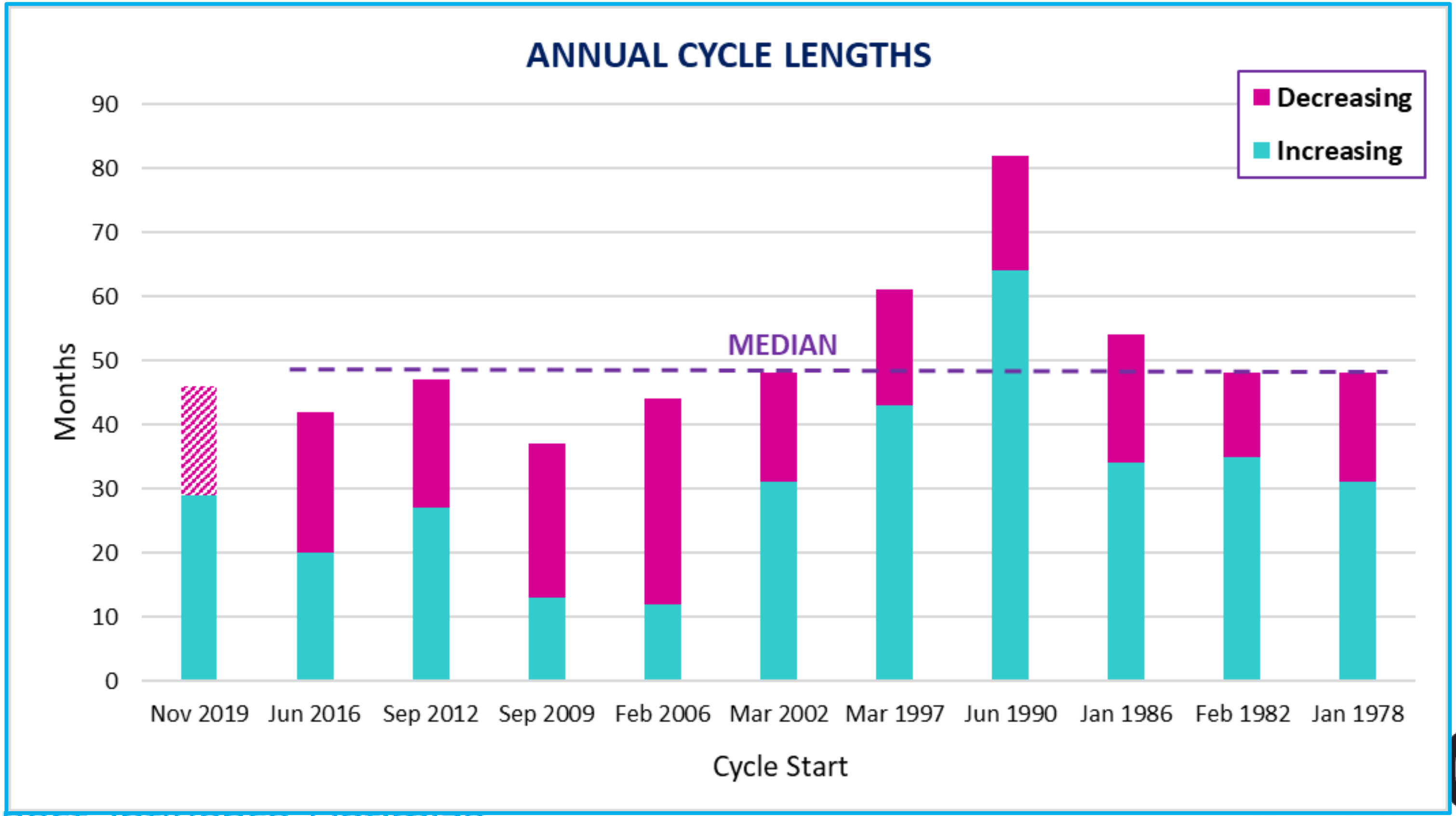
Cycle: Reached the End – Looking Up Now



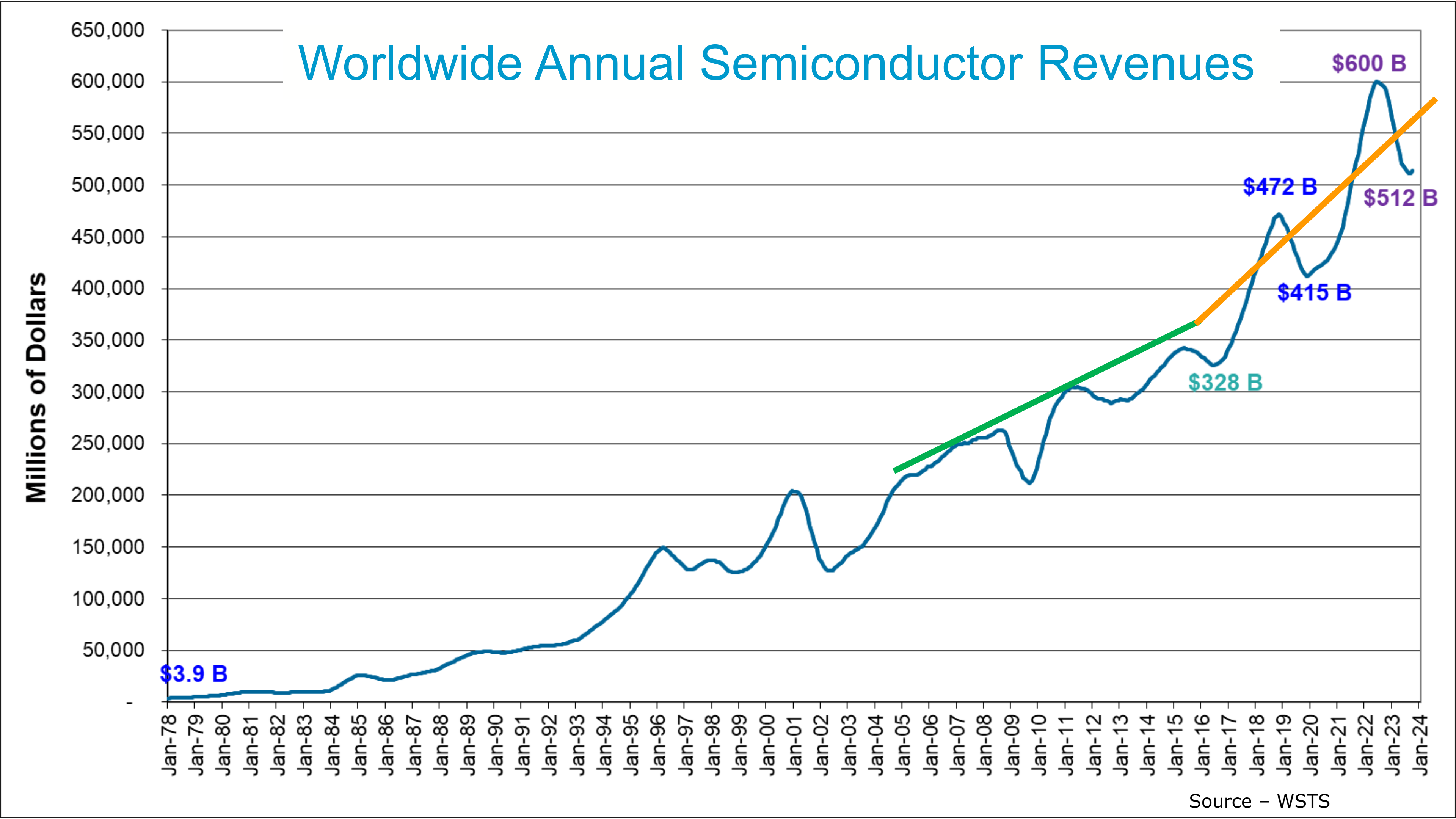
Note: Low point in current cycle is -12.7 in Nov '19

Source – WSTS

Cycle Near Standard Length



Source – WSTS



Worldwide Annual Semiconductor Revenues
Millions of Dollars
650,000
600,000
550,000
500,000
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
-
$3.9 B
$328 B
$472 B
$415 B
$600 B
$512 B
Jan-78
Jan-79
Jan-80
Jan-81
Jan-82
Jan-83
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Jan-85
Jan-86
Jan-87
Jan-88
Jan-89
Jan-90
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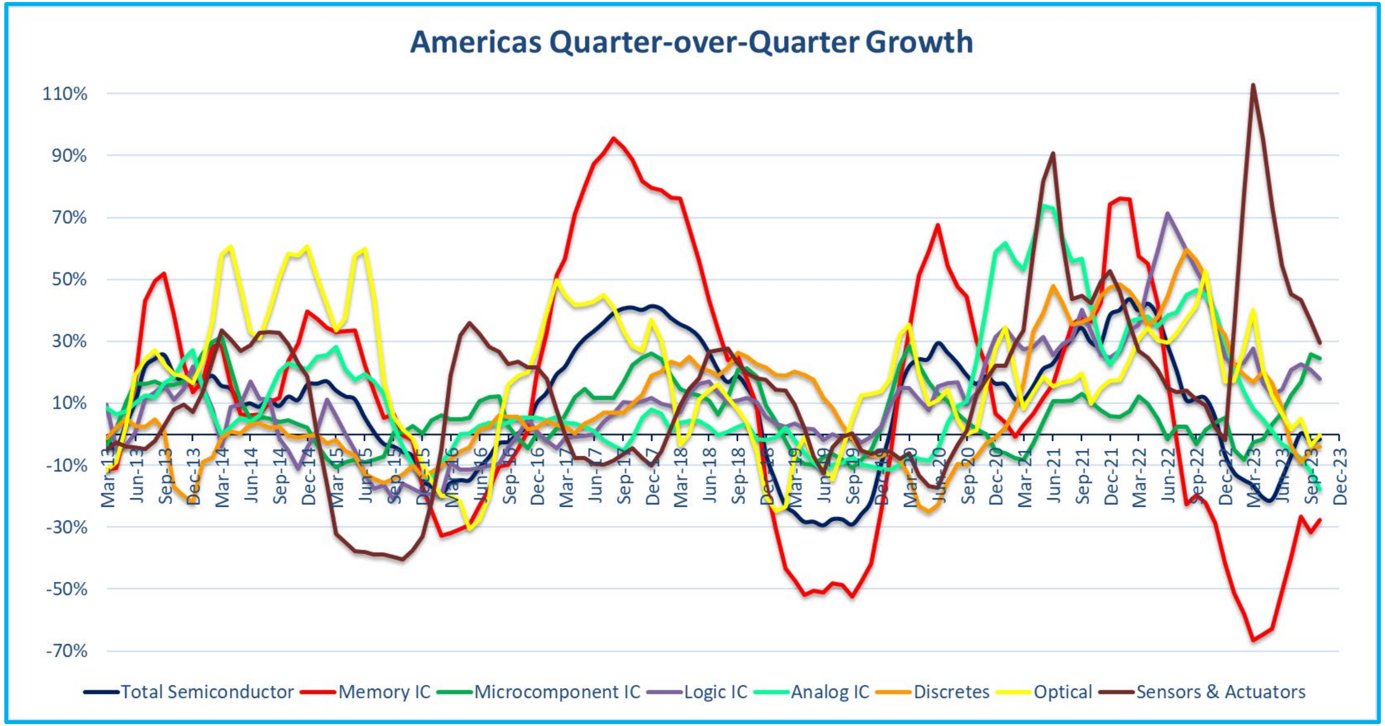
Jan-21
Jan-22
Jan-23
Jan-24
Source – WSTS

But What About the Americas?

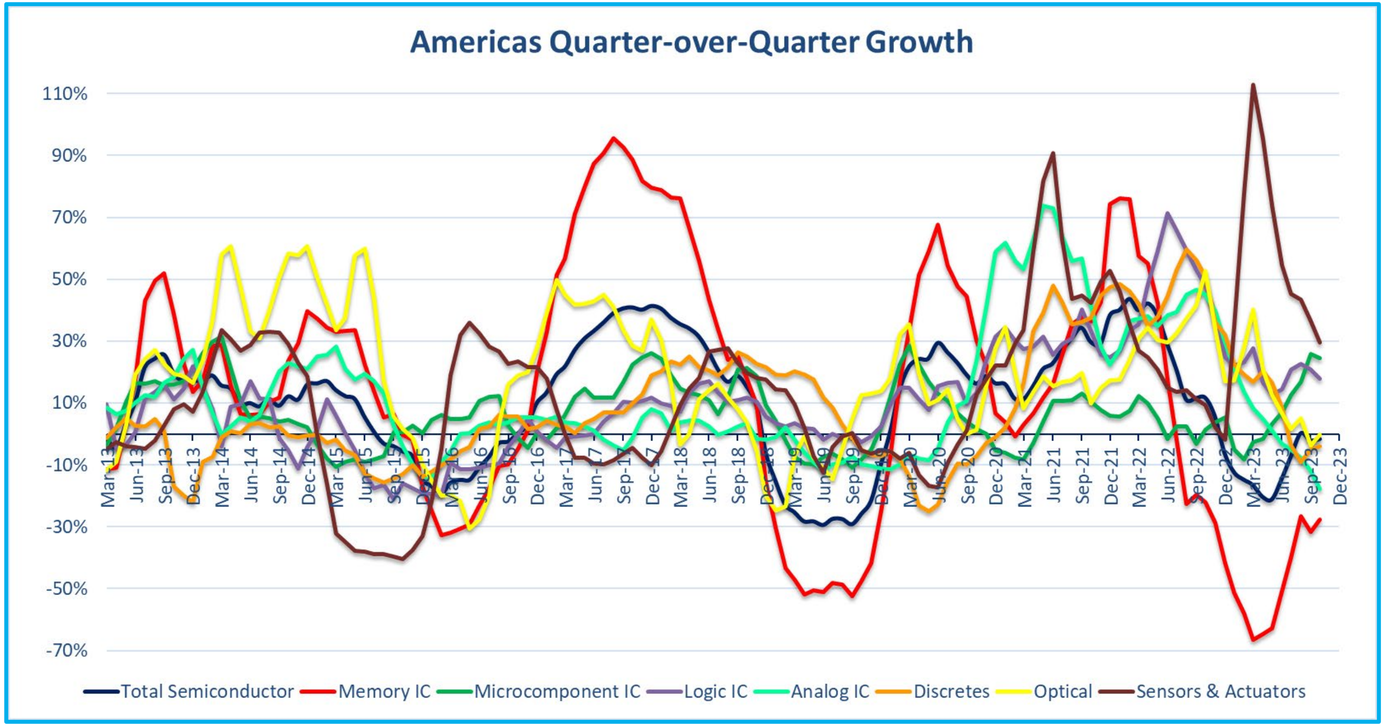
- Counter-cyclical trend starting in summer 2020 but aligning in mid-2022
- High memory mix in Americas contributes to volatility
- Healthy upward trend in Americas – Could break above zero by end of 2023
- Will inflation impede long term growth?



Source – WSTS

But What About the Americas?

- Logic, Micros, and Memory turning up
- Optical & Discretes only slightly negative
- Analog moving strongly down in counter trend
- Most categories sustained growth through most of the Worldwide downturn
- Americas capturing a notably larger share of the worldwide semiconductor market



Source – WSTS

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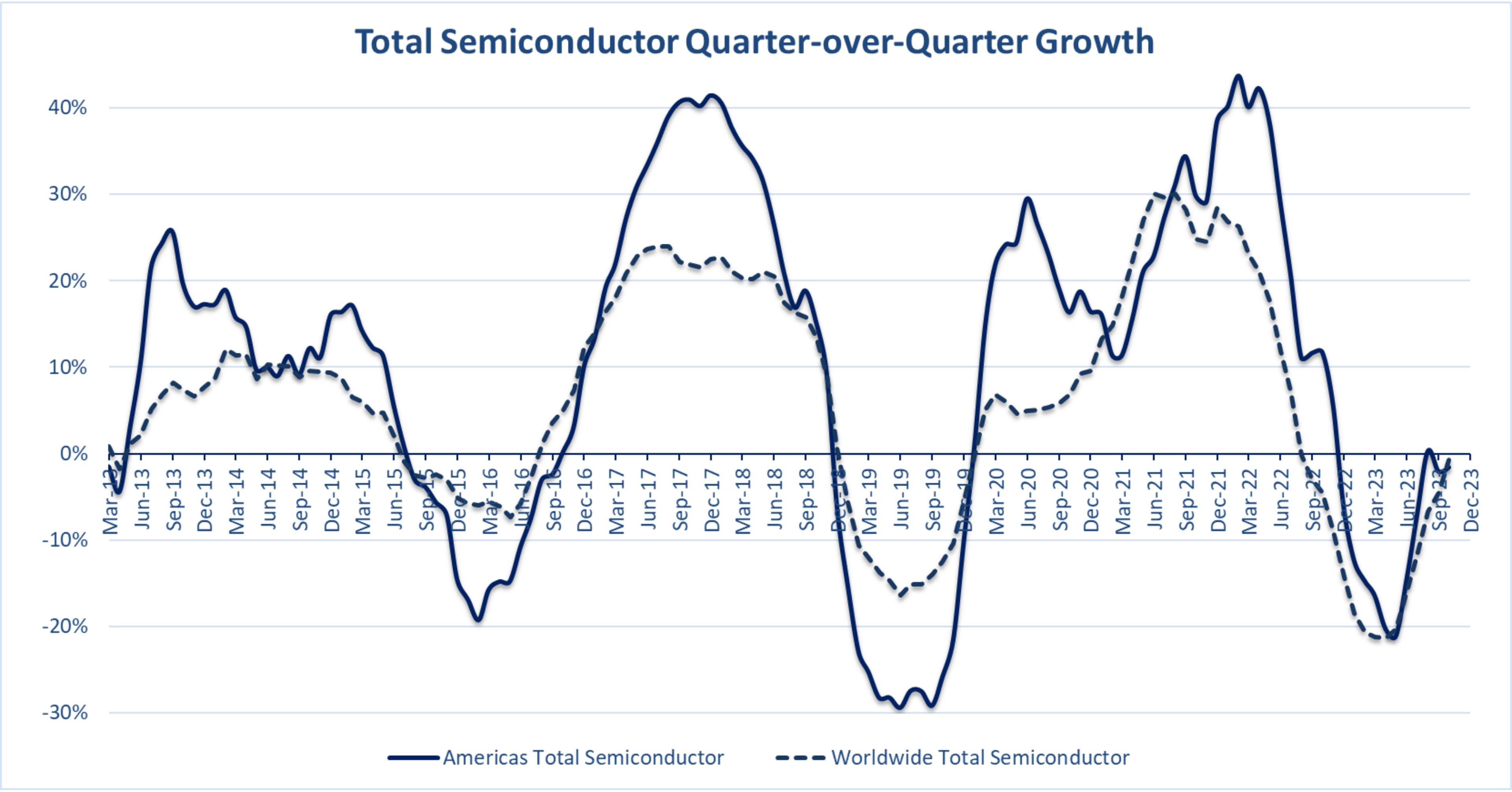
Total Semiconductor Quarter-over-Quarter Growth
40%
30%
20%
10%
0%
-10%
-20%
-30%
Mar-13
Jun-13
Sep-13
Dec-13
Mar-14
Jun-14
Sep-14
Dec-14
Mar-15
Jun-15
Sep-15
Dec-15
Mar-16
Jun-16
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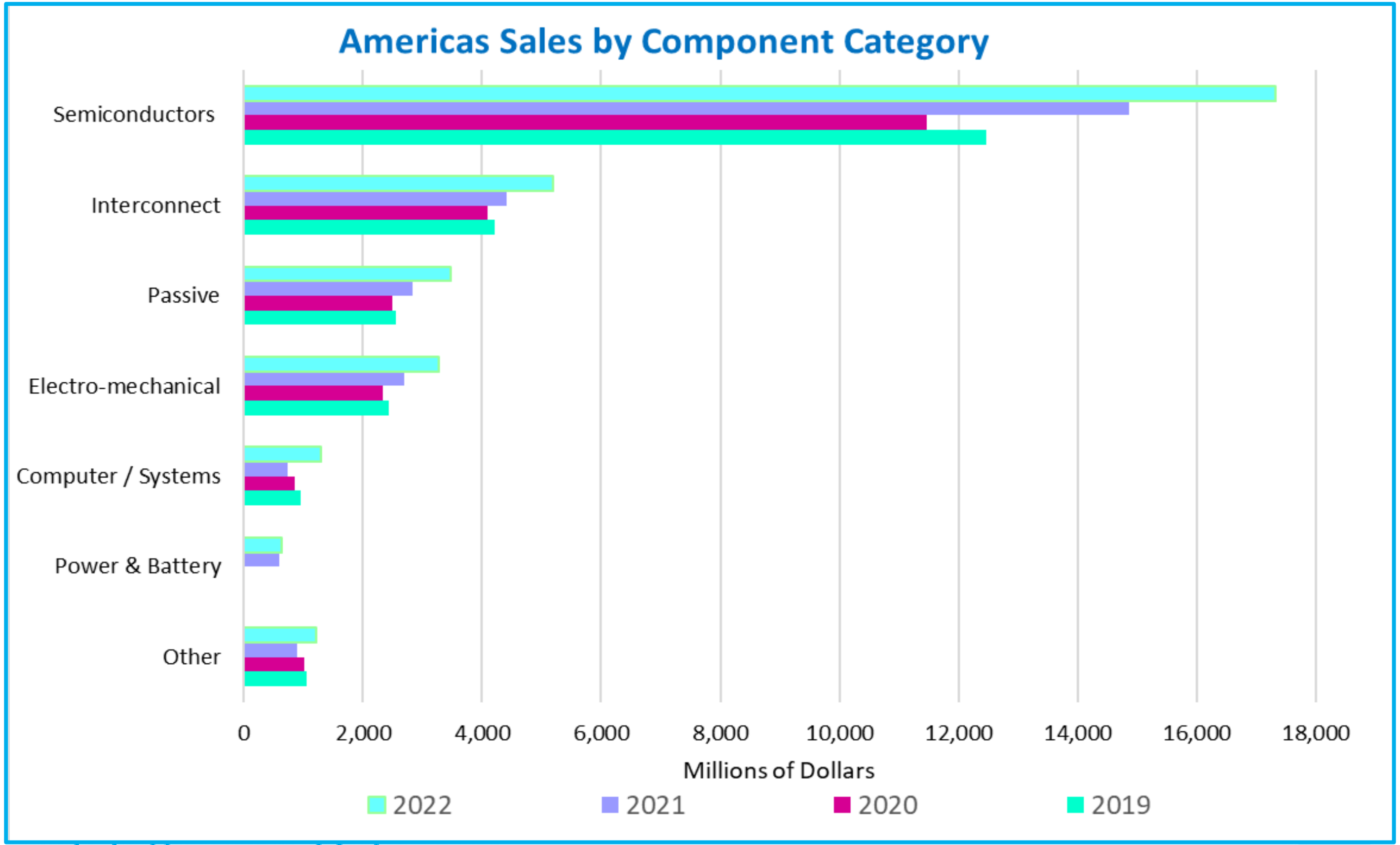
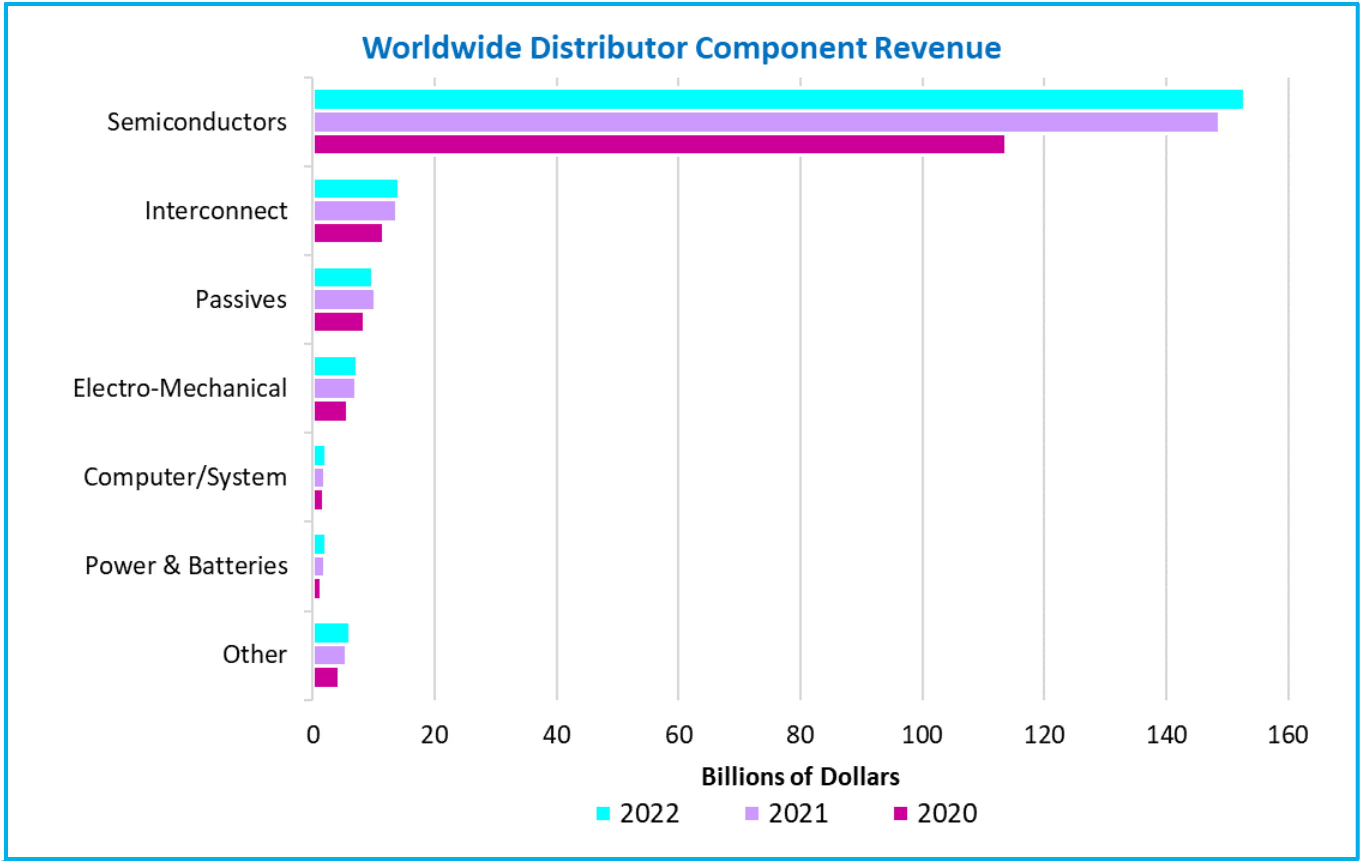
Mar-22
Jun-22
Sep-22
Dec-22
Mar-23
Jun-23
Sep-23
Dec-23
Americas Total Semiconductor
Worldwide Total Semiconductor

Top 50 Authorized Distributors

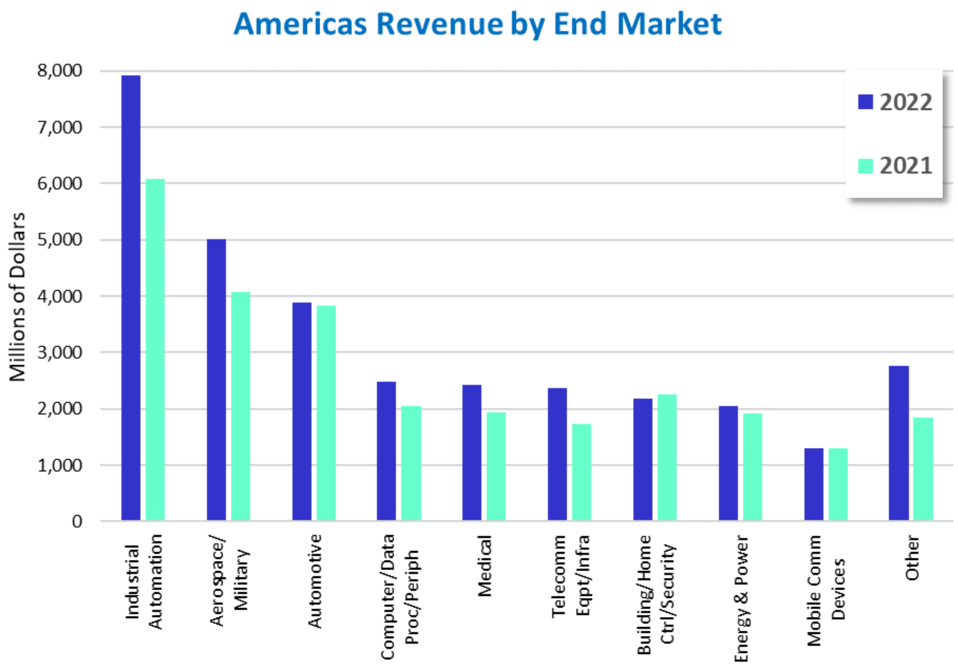
Americas Revenue for Top 50 Authorized Distributors

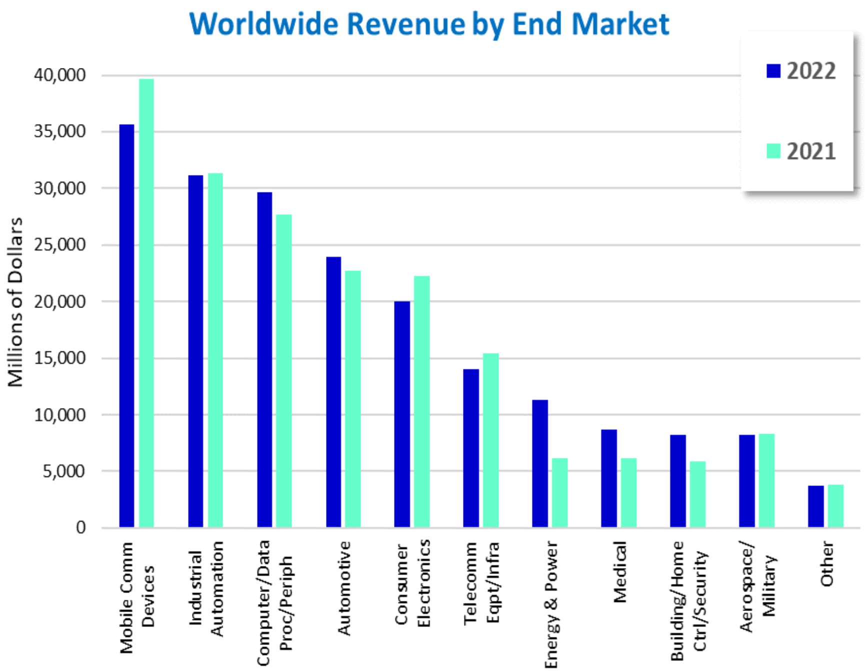


Worldwide Revenue for Top 50 Authorized Distributors



Distribution TAM by End Market





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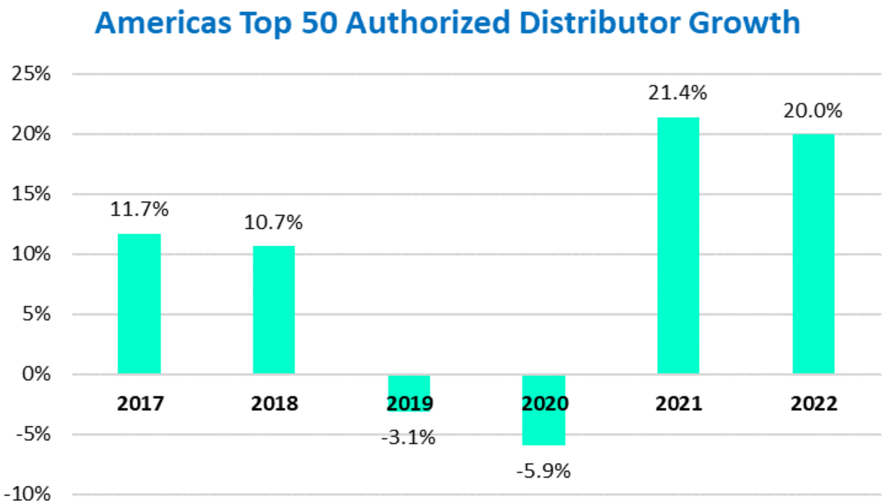
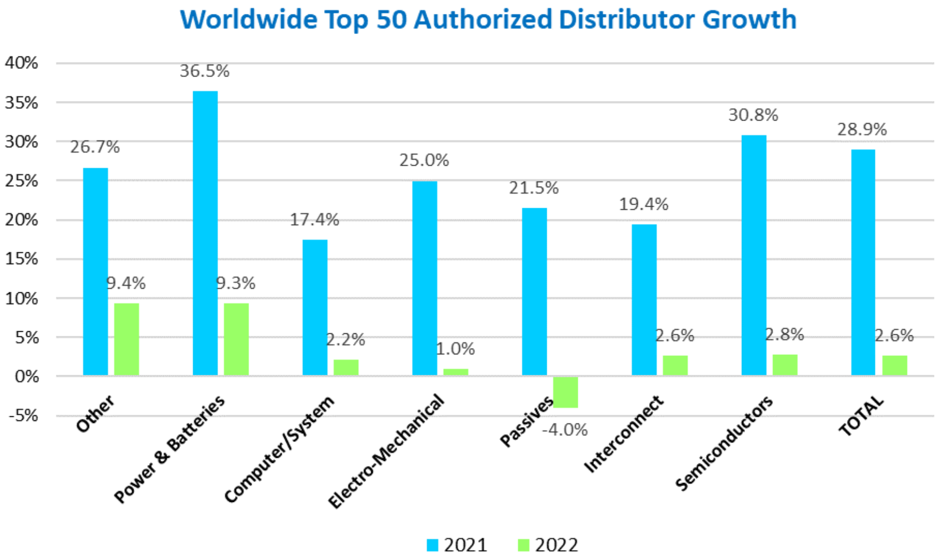
Top 50 Authorized Distributor Growth





Top 2 Growth Q1-Q3 2023 = -8.2%

- 2022 Combined Share = 58.4%

Top 3 Growth Q1-Q3 2023 = -5.8%

- 2022 Combined Share = 40.2%

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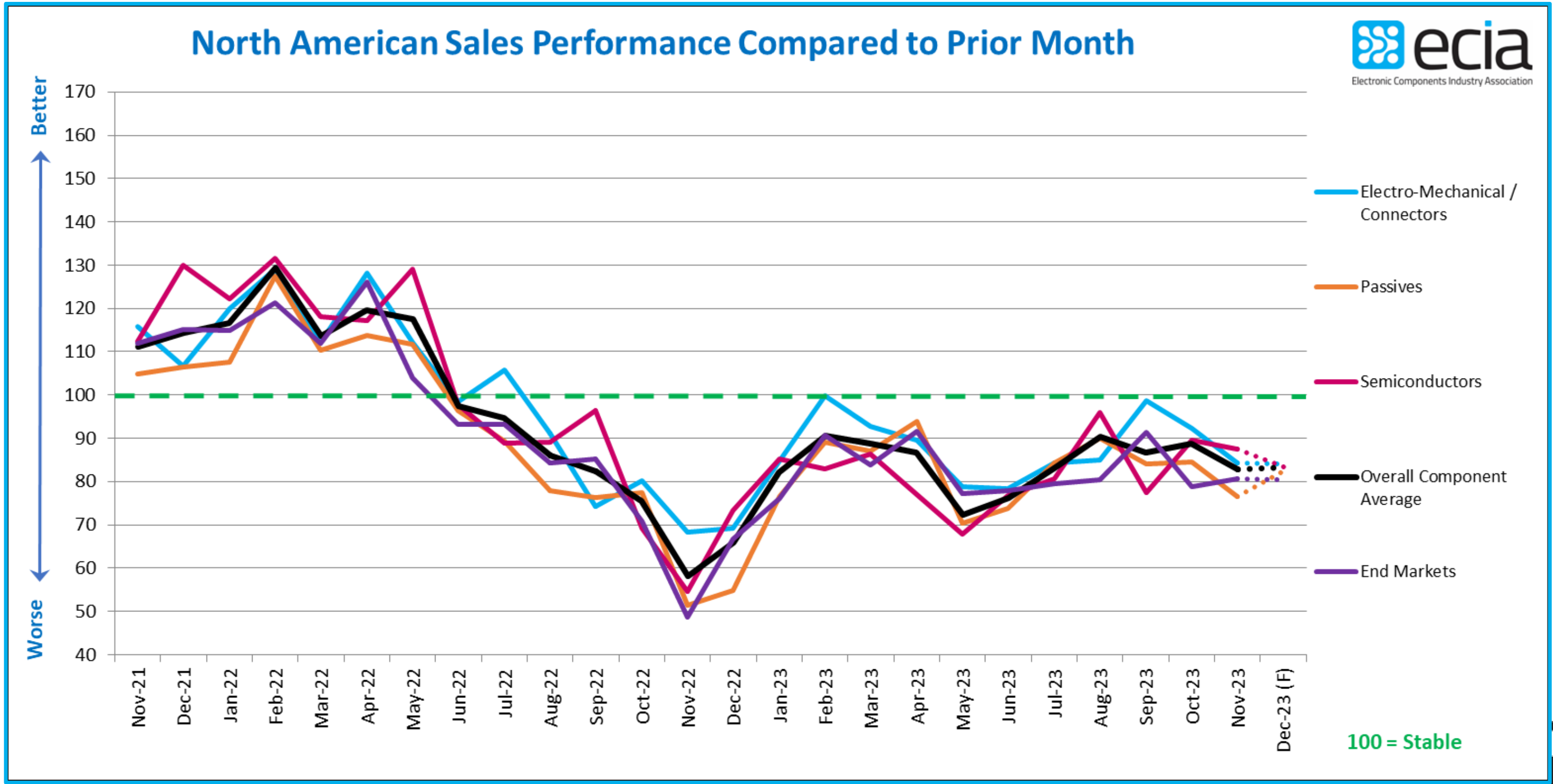
Looking Forward

~ 2024 + ~

North America Monthly Sentiment Survey Trends



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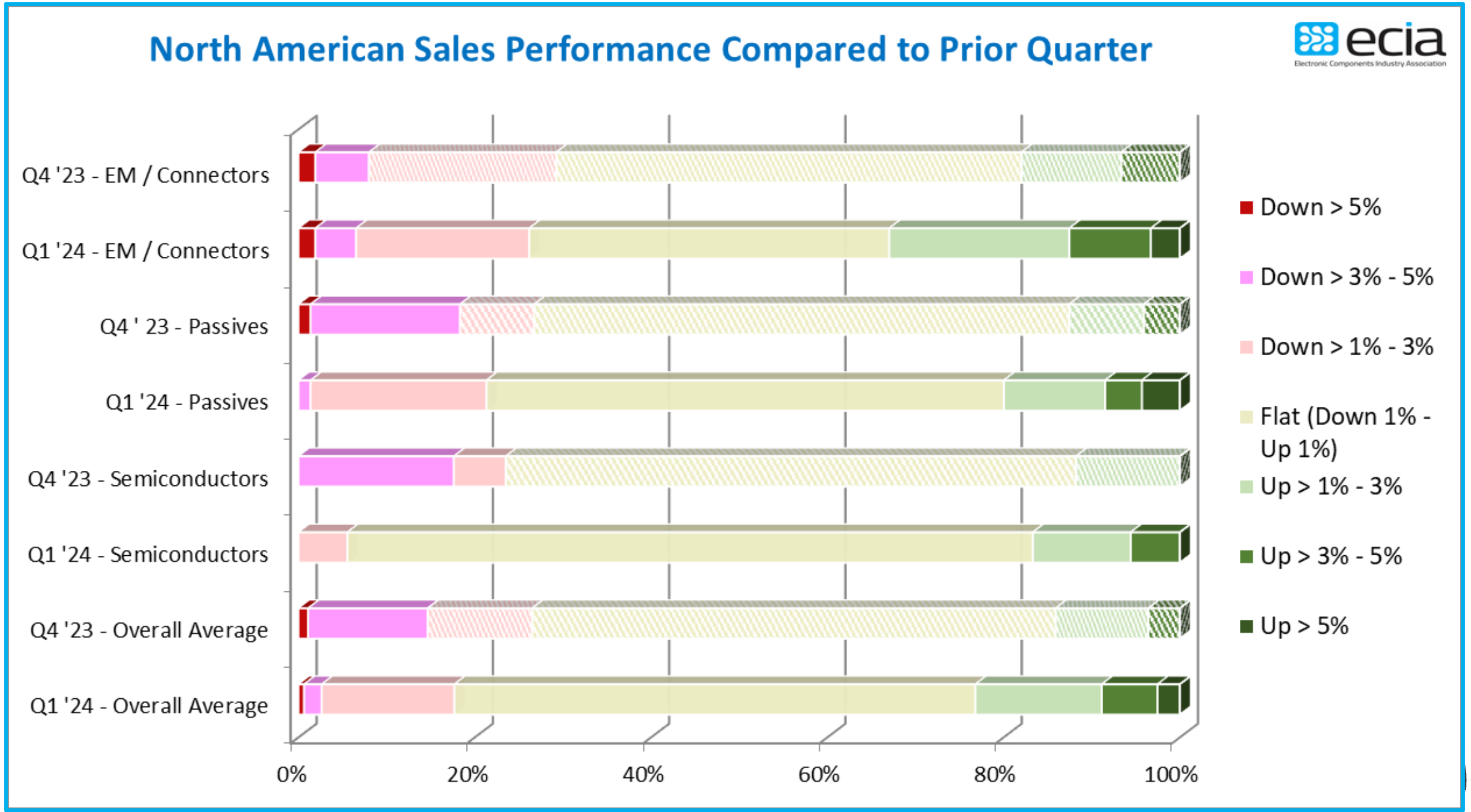
Source: ECIA Electronic Component Sales Trends Survey

North America Quarterly Sentiment Survey Trends



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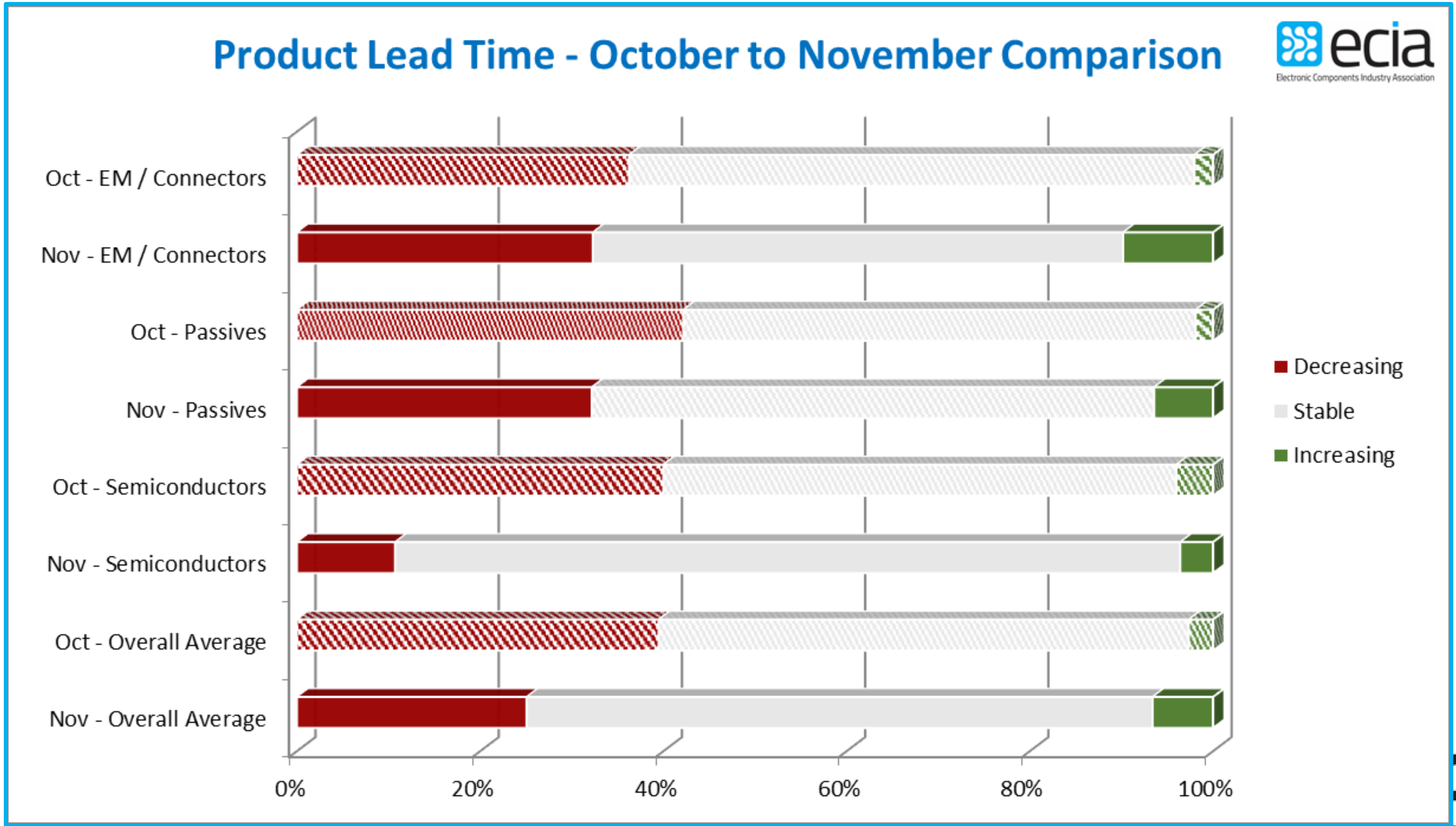
Source: ECIA Electronic Component Sales Trends Survey

Increasing Lead Times Reappear



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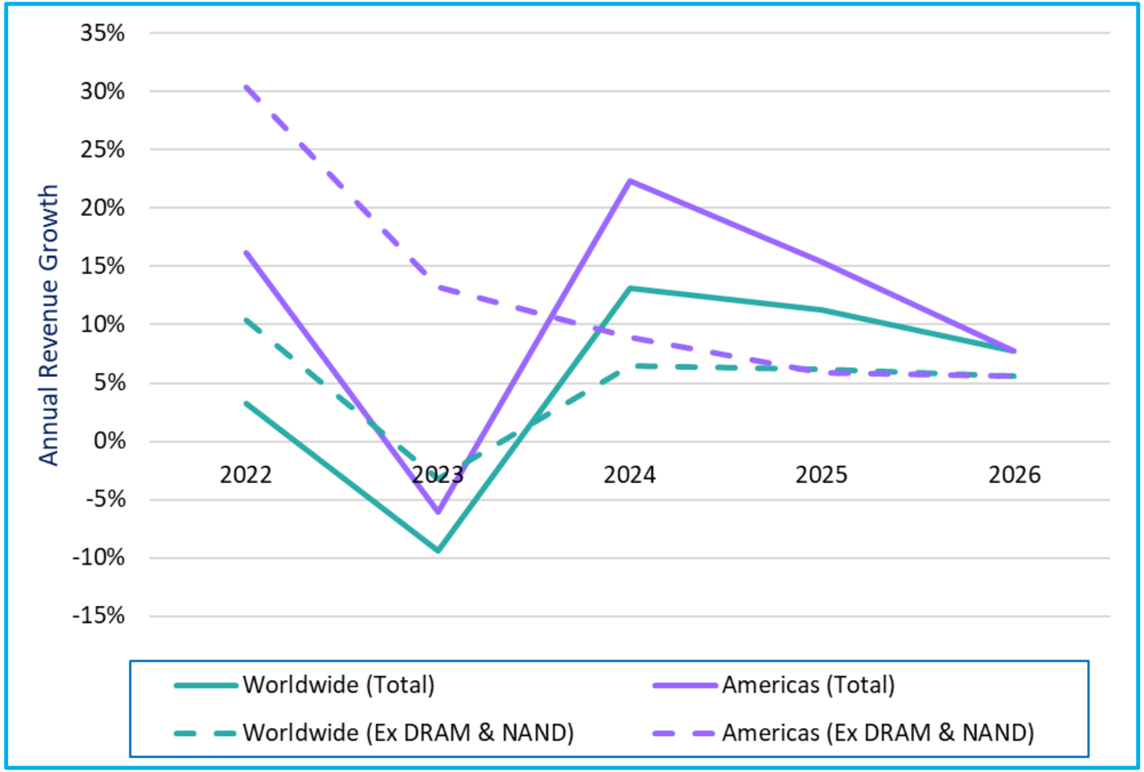
Source: ECIA Electronic Component Sales Trends Survey

WSTS Semiconductor Forecasts

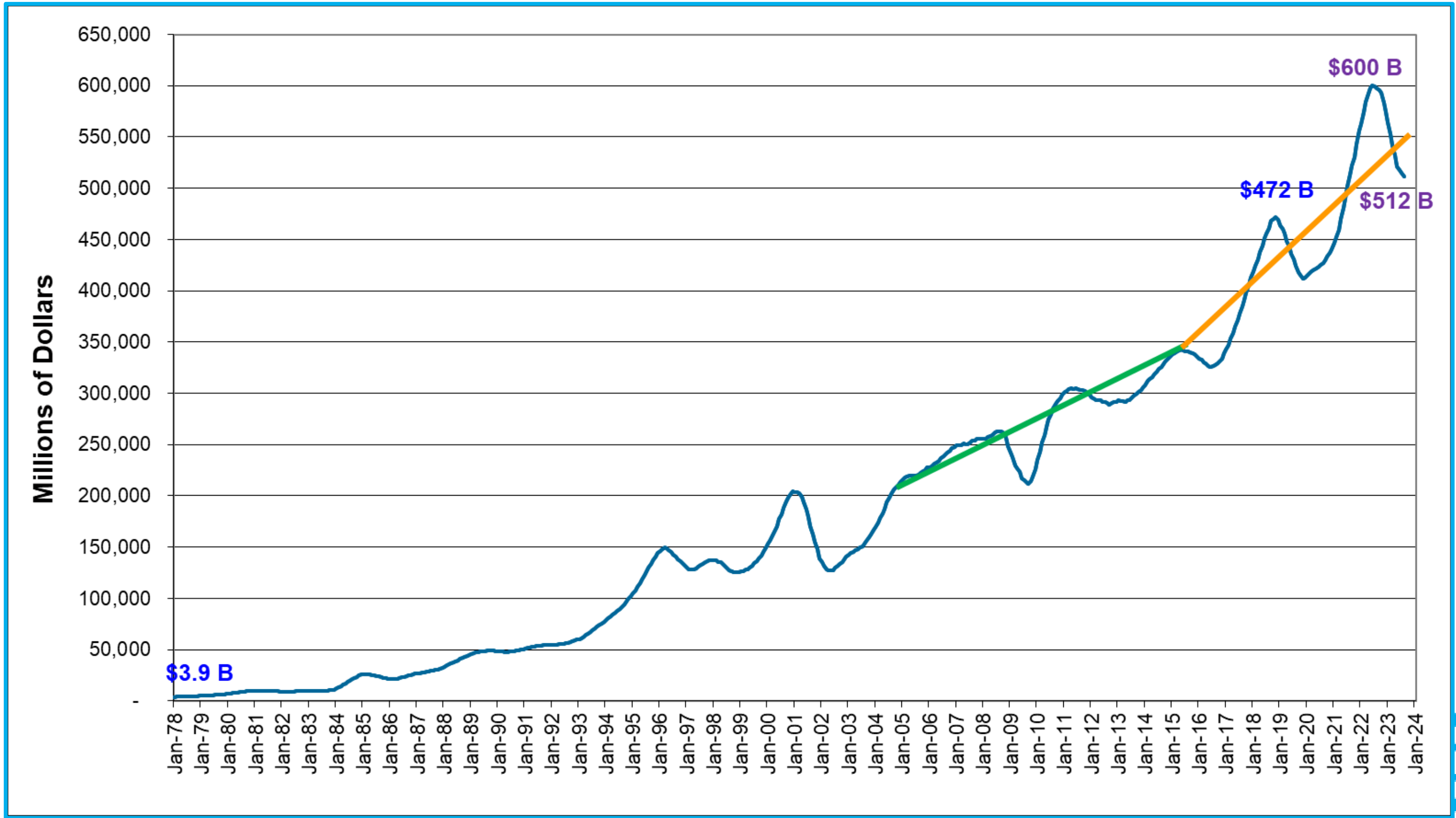


Source: WSTS

Observations:

- Forecast built up category-by-category with experienced analysts from all regions
- WSTS Expectation of Strong 2024 rebound
  - Worldwide = +13.1%
  - Americas = +22.3%
- Gartner 2024 WW Forecast = 16.8%
- Memory IC drives Americas dramatic swing
- Expectation of solid growth through forecast period

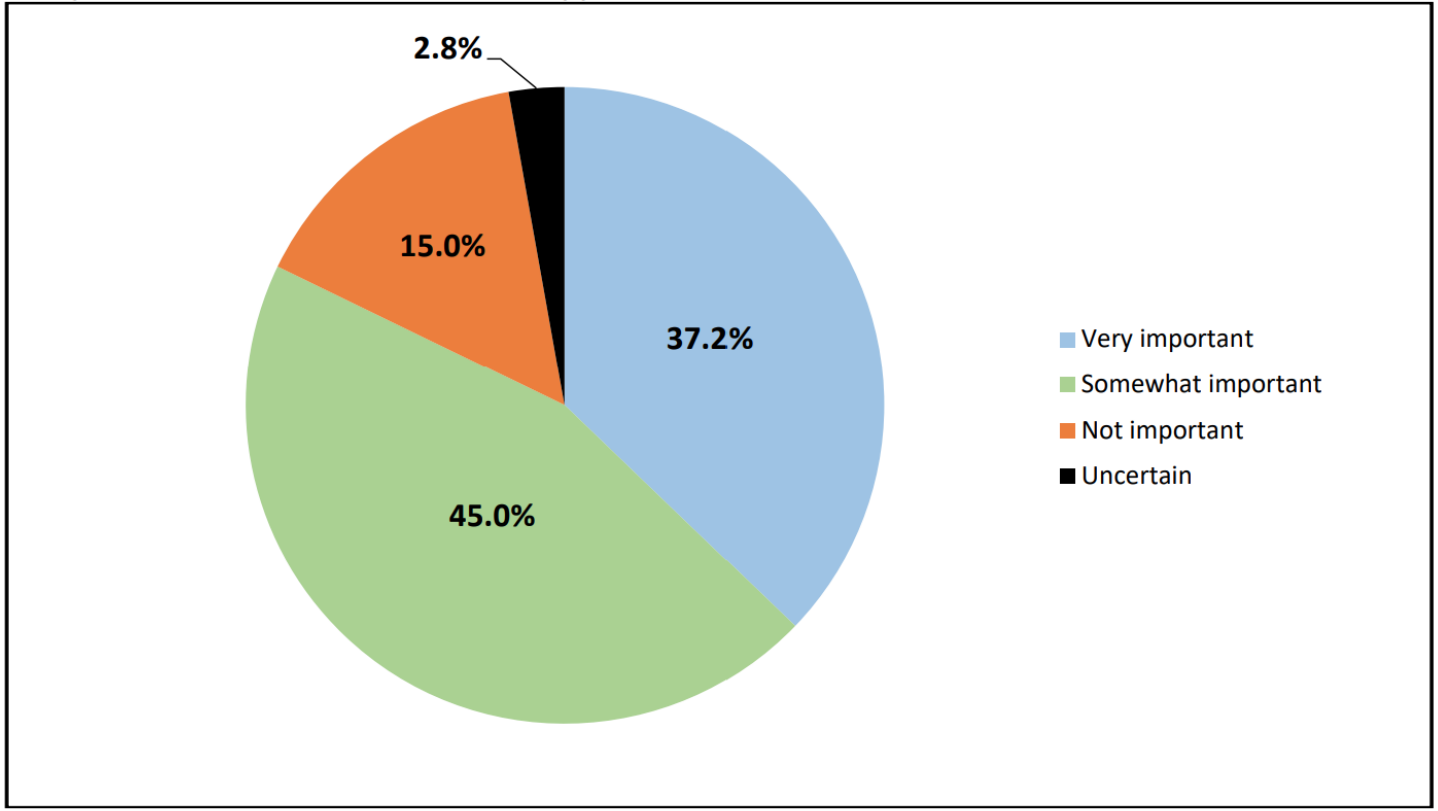
Long-term Semiconductor Growth Trends



- Average annual growth
  - 2005-2015 = 5.5%
  - 2015-2023 = 5.3%
- $512 B in 2023?
- $1.0 T by 2033?
- $1.5 T by 2041?
- HOW?

Source – WSTS

Figure 9: "How Important Is Trade Between the U.S., Mexico and/or Canada for the Growth and Competitiveness of Your Business or Suppliers?"



Source – National Association of Manufacturers (NAM)

Thank you!

Dale Ford – Chief Analyst
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