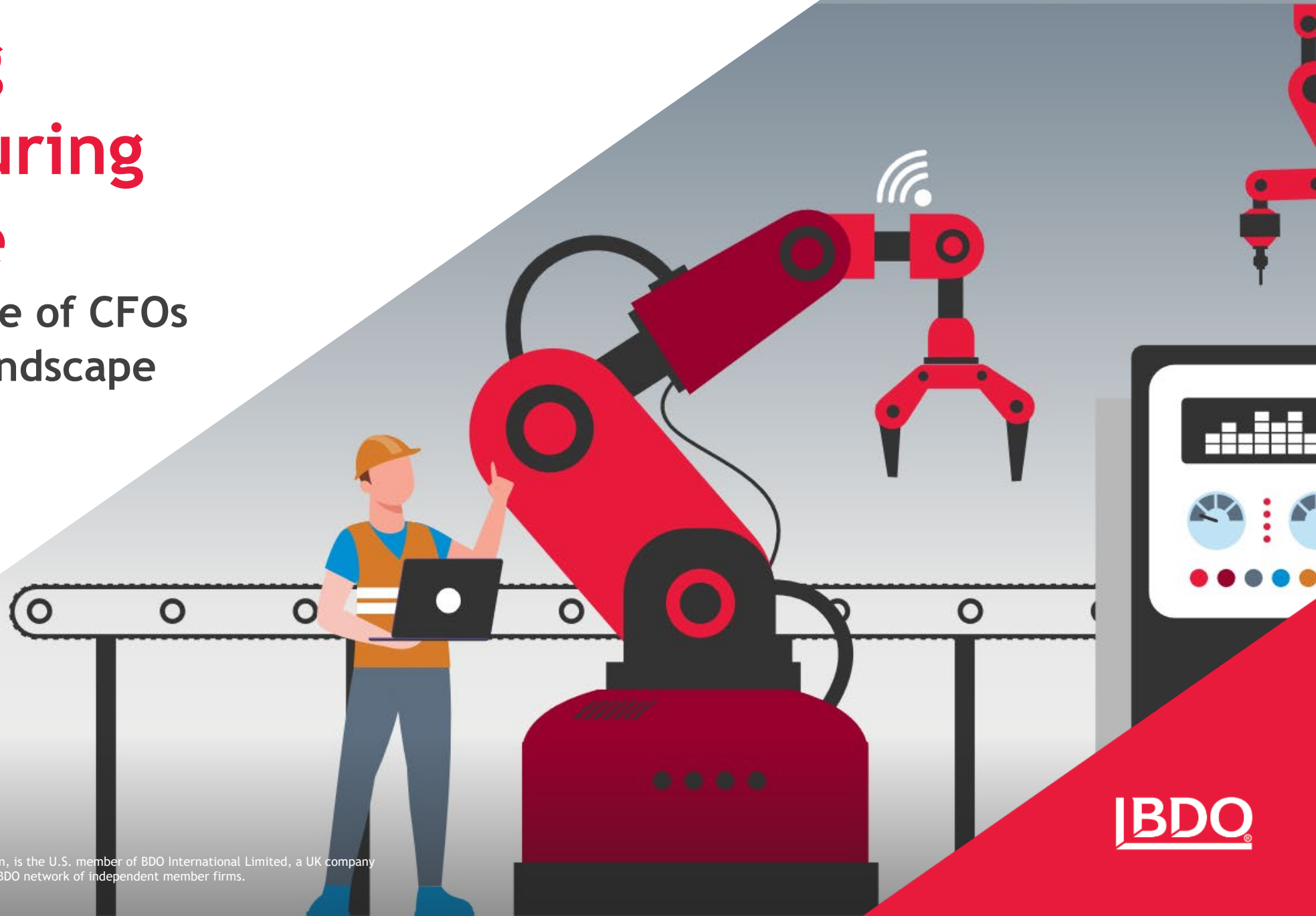


Reshaping Manufacturing Resilience

The Evolving Role of CFOs
in a Changing Landscape

APRIL 9, 2024



BDO

With You Today



BILL PELLINO

National
Manufacturing
Industry Practice
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JOHN KOSKINEN

Chief Economist

Wisconsin
Department
of Revenue



DALE JORDAN

National
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National
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Industry Supply Chain
Advisory Leader
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MAURICE LIDDELL

National
Manufacturing
Industry Digital
Leader
BDO USA

Learning Objectives

This is a CPE qualified session. We will cover the learning objectives shown here throughout this presentation:

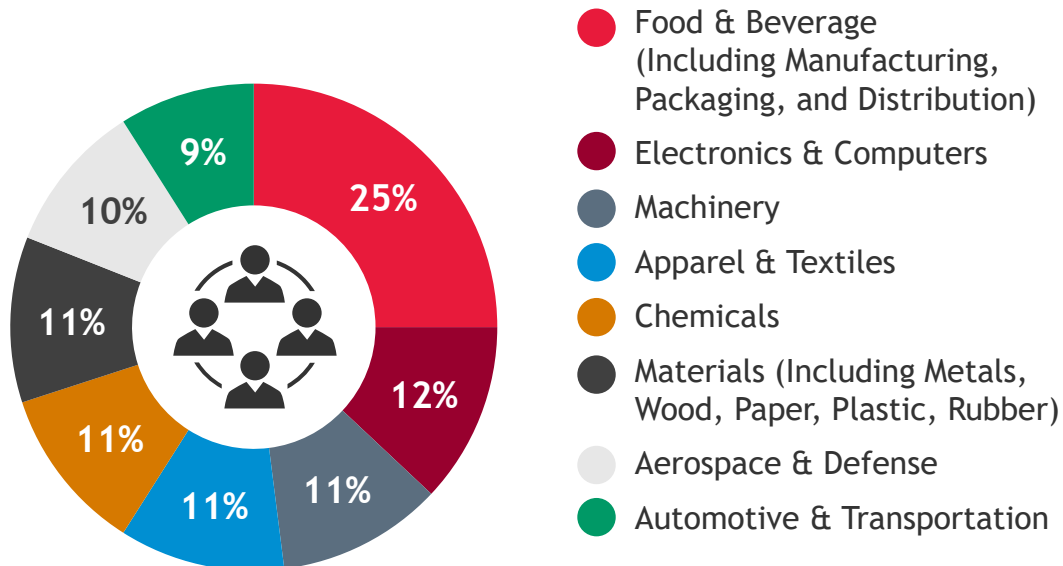
- ▶ Identify the key regulatory changes impacting the manufacturing industry and understand their implications on supply chain resilience.
- ▶ Recognize the potential of artificial intelligence (AI) in enhancing supply chain efficiency and explore ways to leverage AI technologies in your organization.
- ▶ Explore the new tax incentive opportunities and learn how to maximize their benefits for your manufacturing businesses.
- ▶ Rethink your business strategies and adapt to the changing manufacturing landscape to ensure long-term success and resilience.



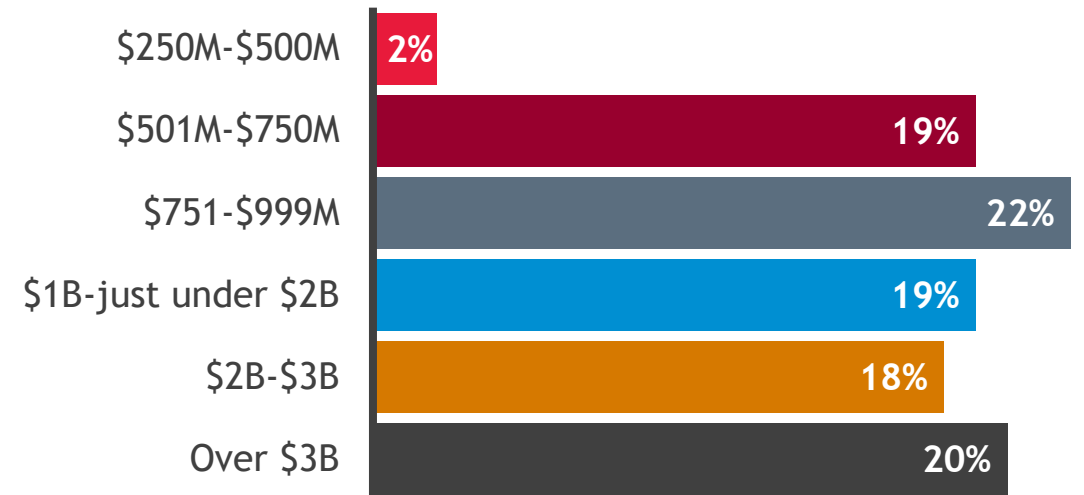
2024 Manufacturing CFO Outlook Survey

- ▶ 5th annual survey of manufacturing industry CFOs
- ▶ Conducted by independent market research firm, Rabin

SUBSEGMENT

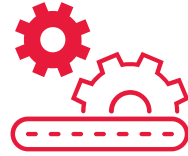


REVENUE



Our Agenda Today

Today's panel discussion covers an economic overview and three major areas of risk and opportunity on manufacturers' radars in 2024.



Economic Overview



Evolving Supply Chains

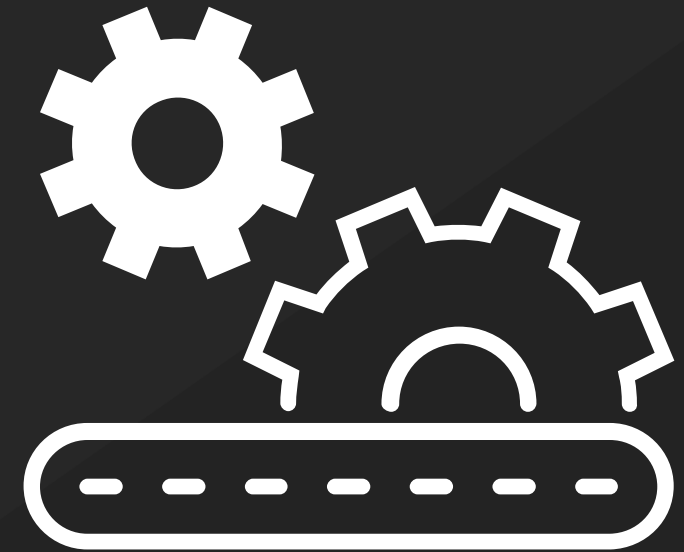


Accelerating Innovation



Revitalizing U.S. Manufacturing

Economic Overview



Manufacturing in 2024's Soft Landing Economy

BDO Manufacturing Outlook
April 9, 2024



There Is No One Size Fits All

- ▶ The U.S. economy gives mixed signals on the strength of the economy
 - Macroeconomic tools are at cross-purposes
 - Result is an economy that is strong and weak at the same time
 - Industries that lagged coming out of COVID leading now
- ▶ Results in manufacturing vary widely by region and industry
- ▶ A soft landing for the U.S. Economy does not necessarily mean a soft landing for manufacturing
 - All depends on the industry and location



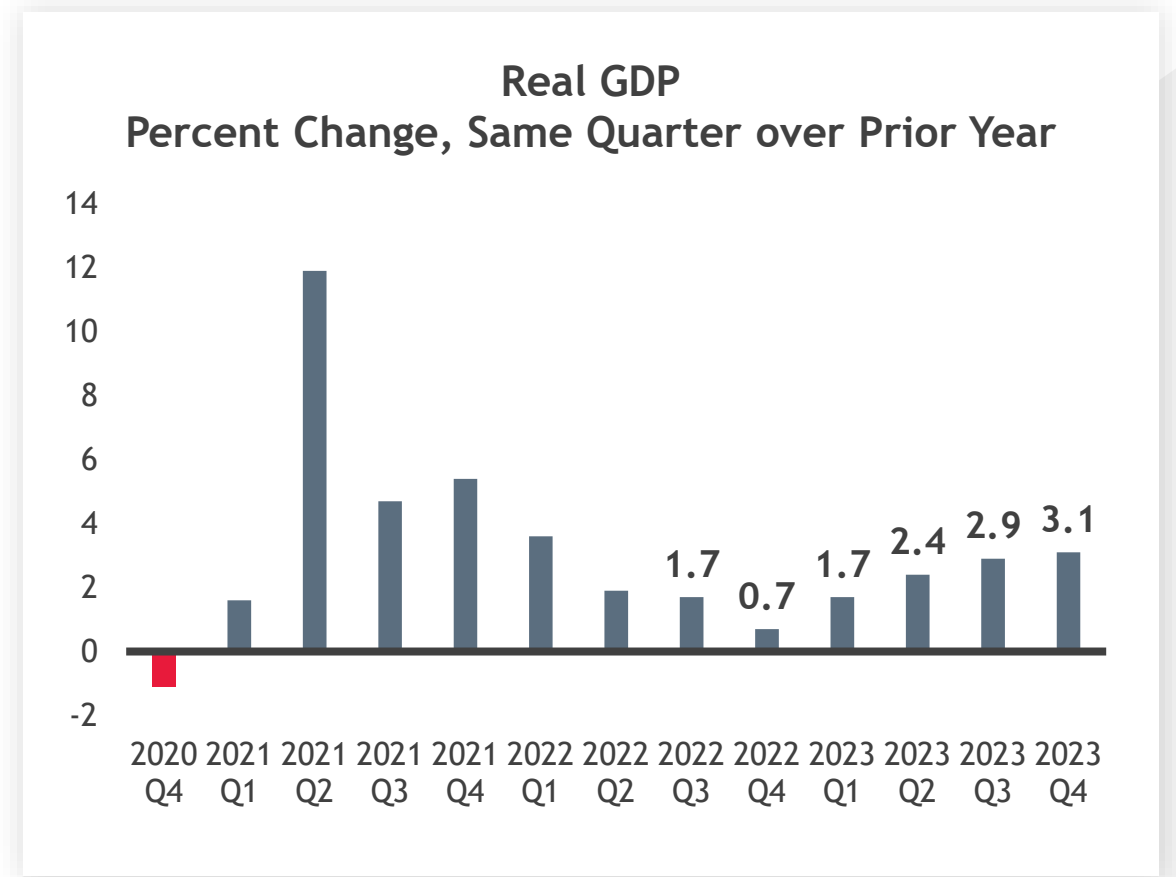
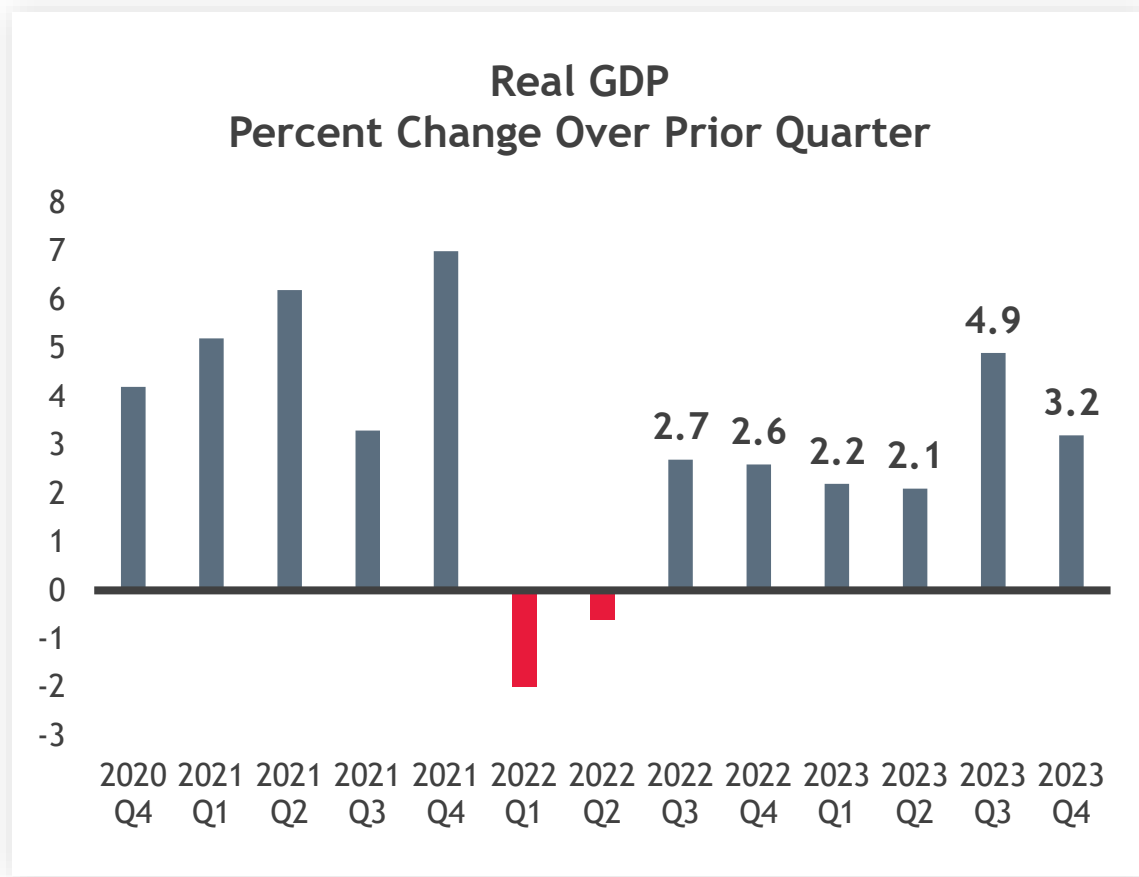
Recession Versus Soft Landing

Illustrating Mixed Signals in U.S. Economy



REAL GDP UPDATE

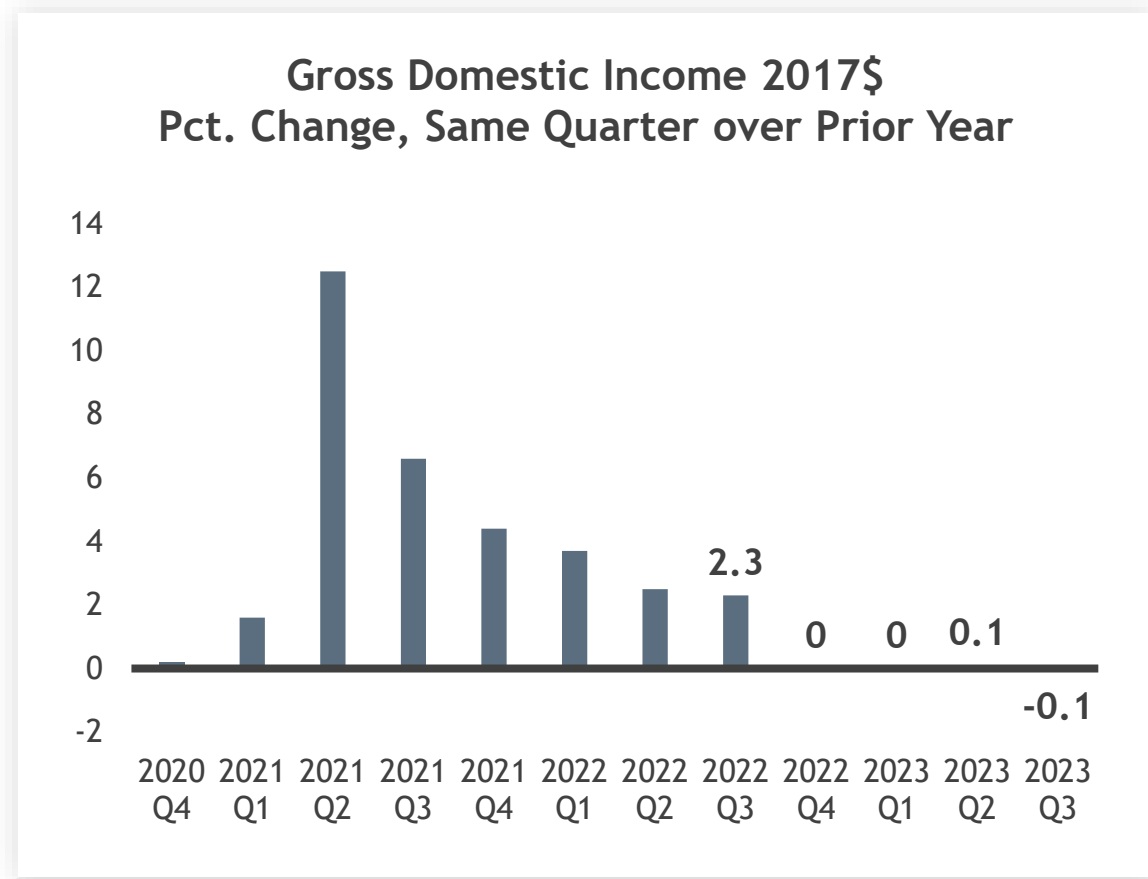
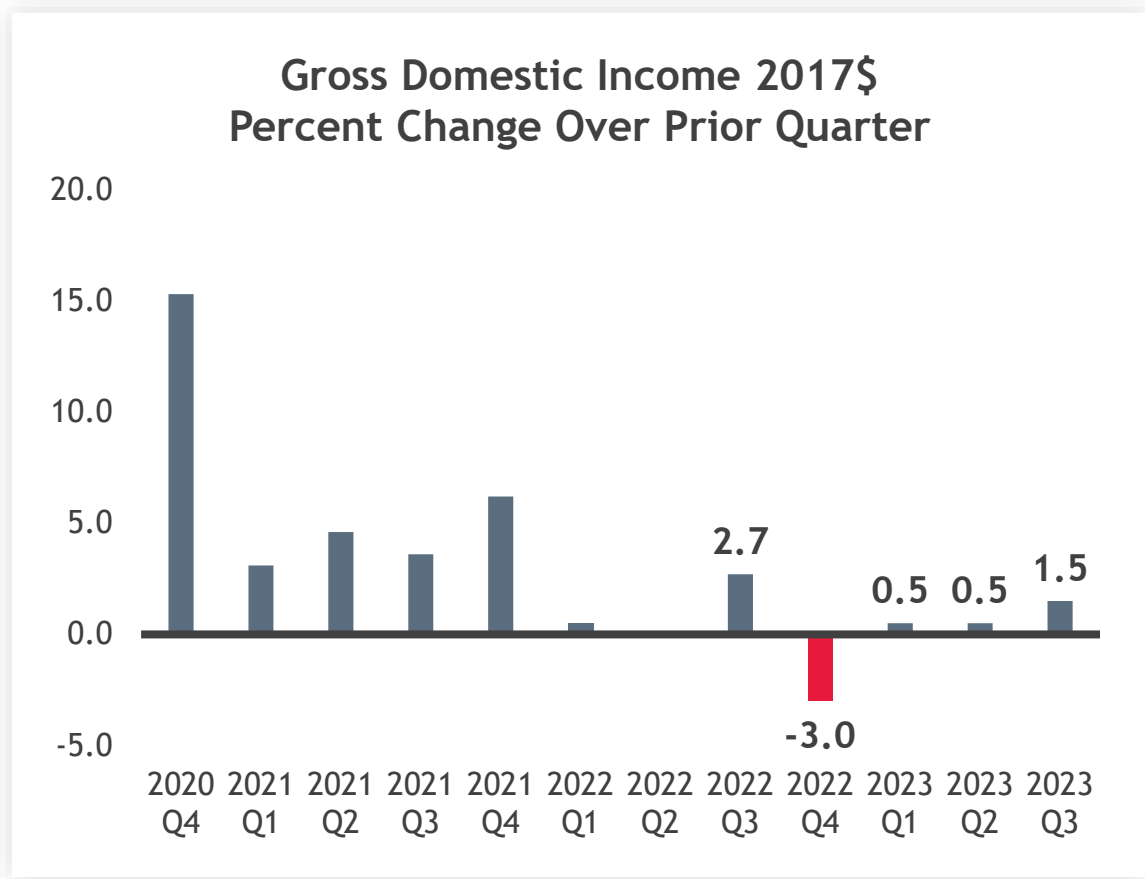
4th Quarter 2023 Up 3.2% over 3rd Quarter 2023
Up 3.1% 2023 Q4 over 2022 Q4



Source: U.S. Bureau of Economic Analysis, Release Date: December 21, 2023

REAL DOMESTIC INCOME MEASURES NOT AS STRONG

3rd Quarter 2023 Up 1.5% over 2nd Quarter 2023



Source: U.S. Bureau of Economic Analysis, Release Date: December 21, 2023

NBER Recession Definition

A Recession is Whatever the NBER Business Cycle Committee Says It Is

A RECESSION REQUIRES

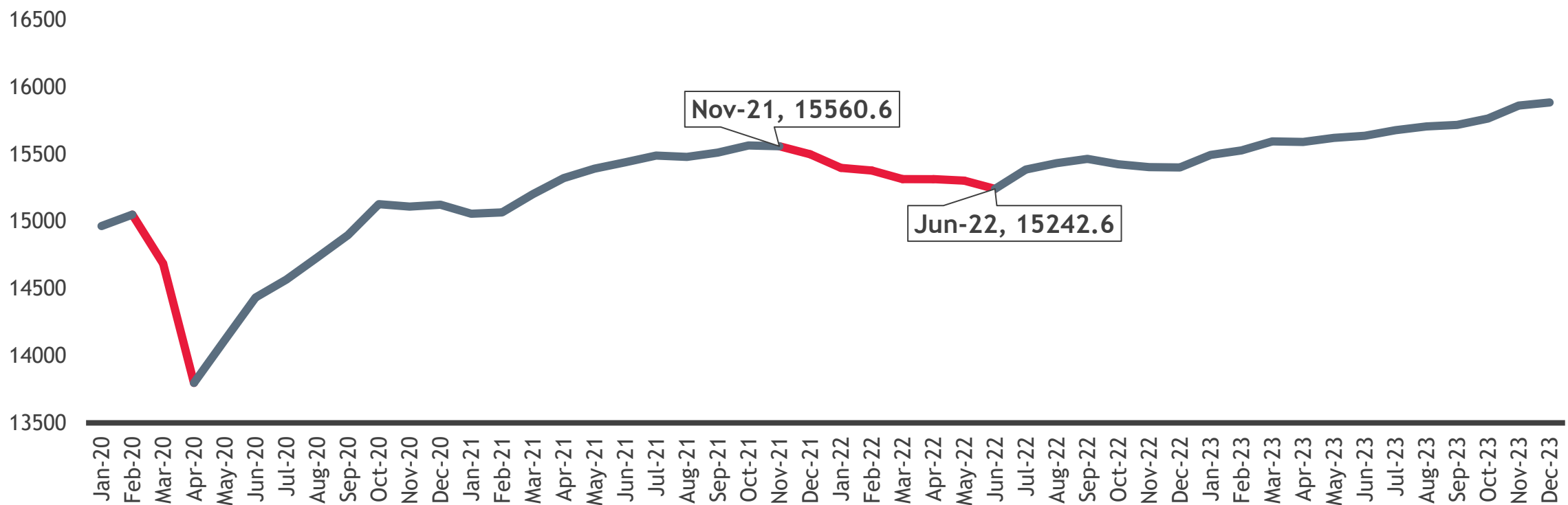
- ▶ **Depth**—Significant decline in economic activity
- ▶ **Diffusion**—Affecting multiple sectors
- ▶ **Duration**—Lasting more than a few months

PRINCIPAL INDICATORS

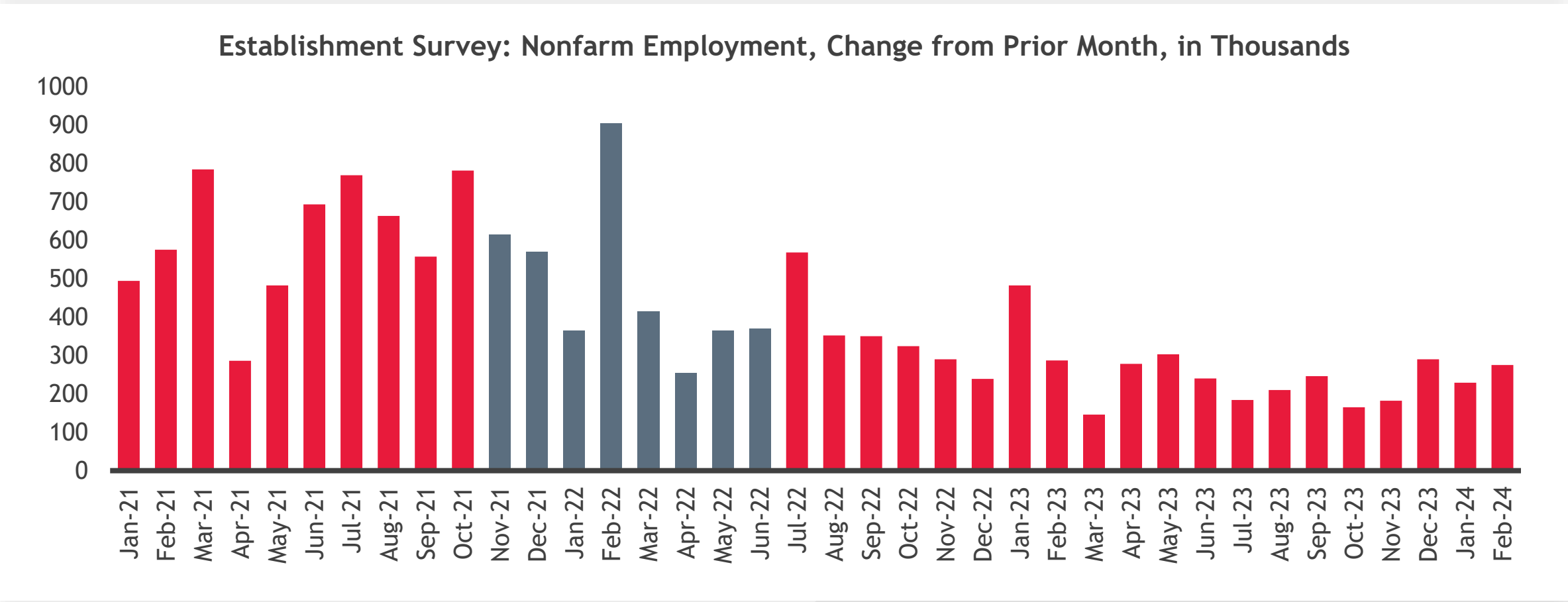
- ▶ Real personal income less transfers
- ▶ Nonfarm payroll employment
- ▶ Employment as measured by the household survey
- ▶ Real personal consumption expenditures
- ▶ Wholesale-retail sales adjusted for price changes
- ▶ Industrial production

Real Incomes Declined From Nov. 2021 to June 2022 Fully Recovered by April 2023

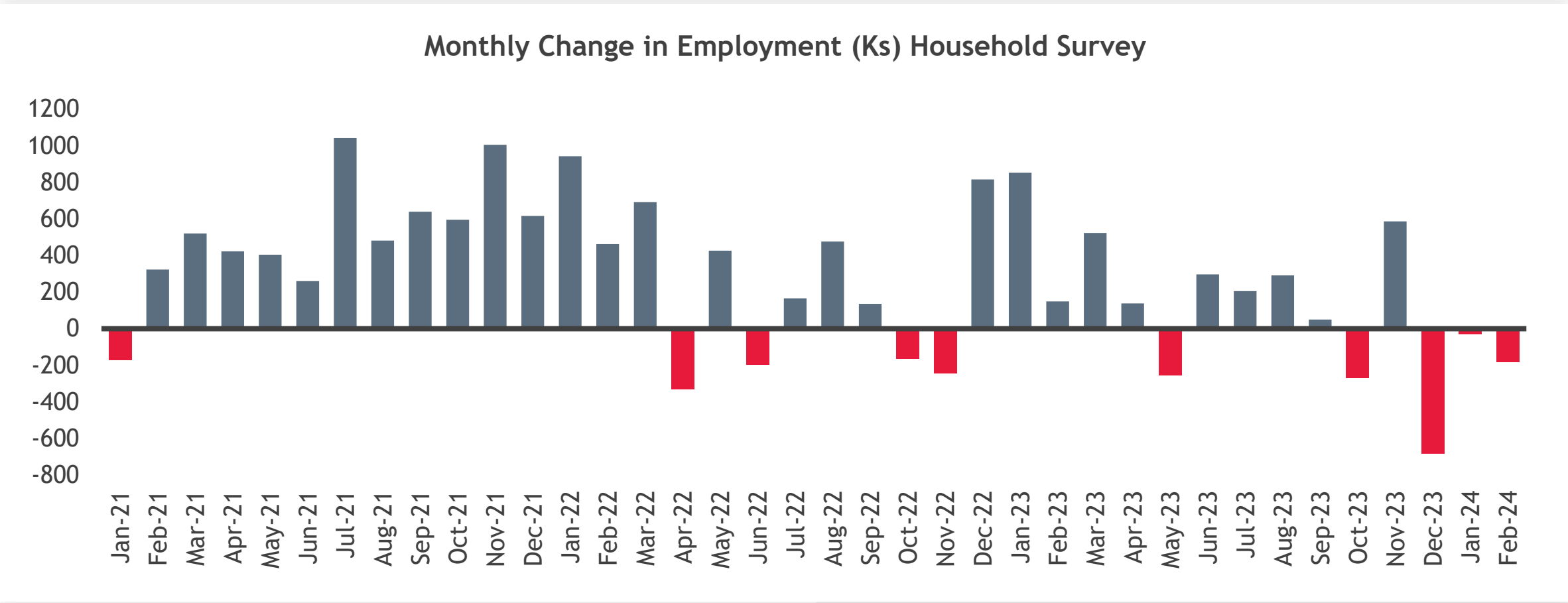
U.S. Real Personal Income Less Transfers



Nonfarm Payrolls Slowing Down but Not Declining



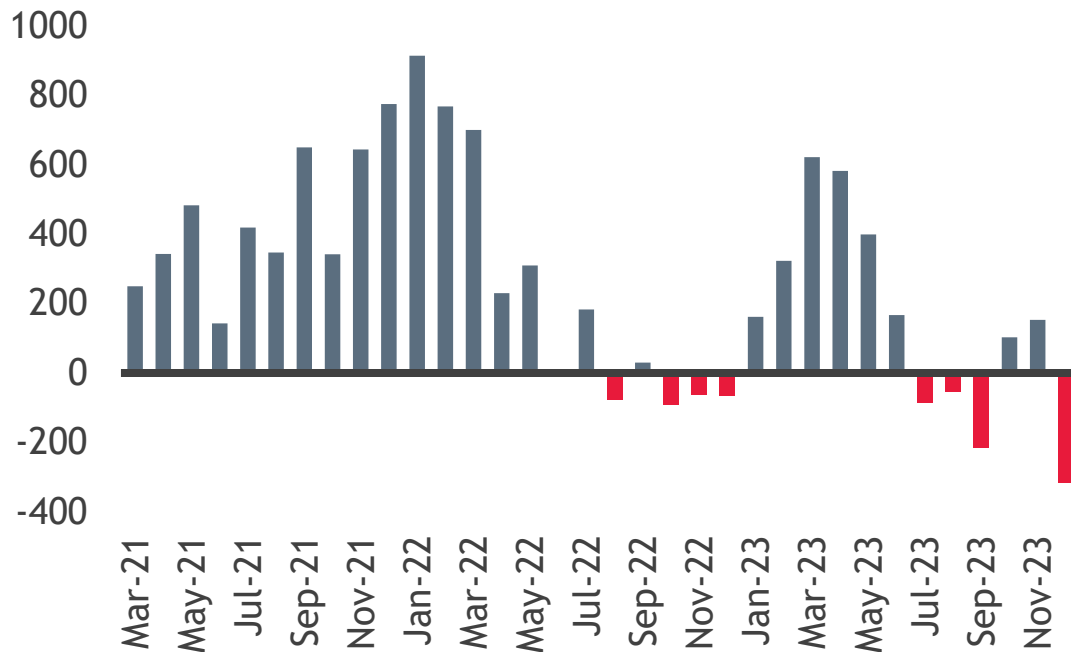
Household Survey of Employment Not as Robust



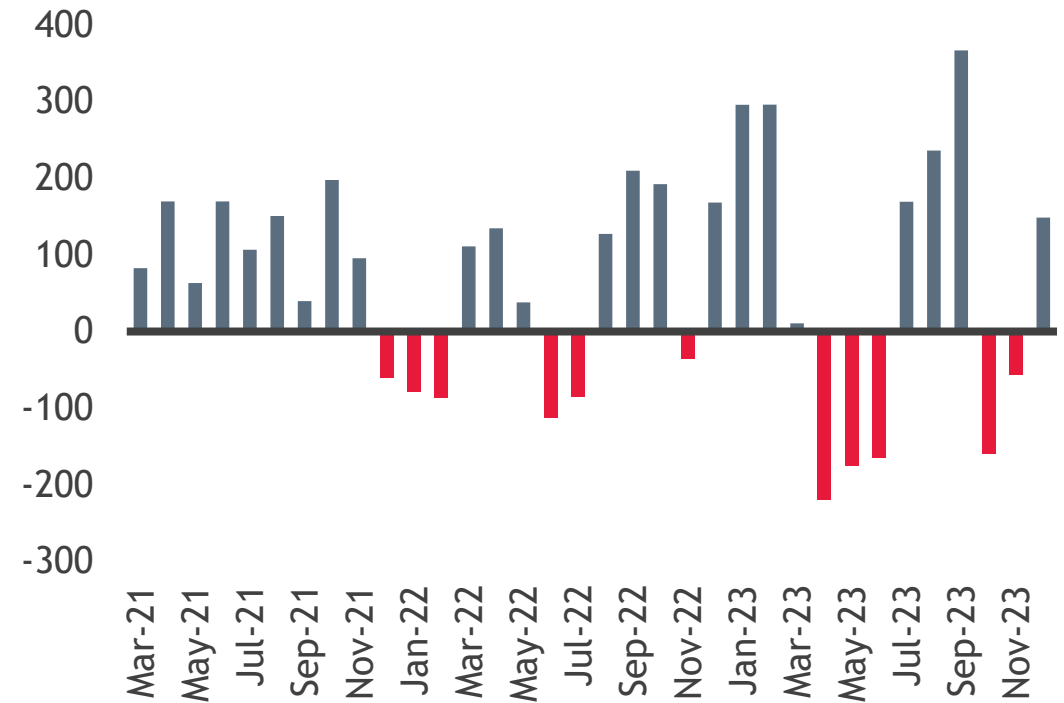
BREAKING DOWN THE HOUSEHOLD SURVEY

Full-Time Employment Down Past Six Months

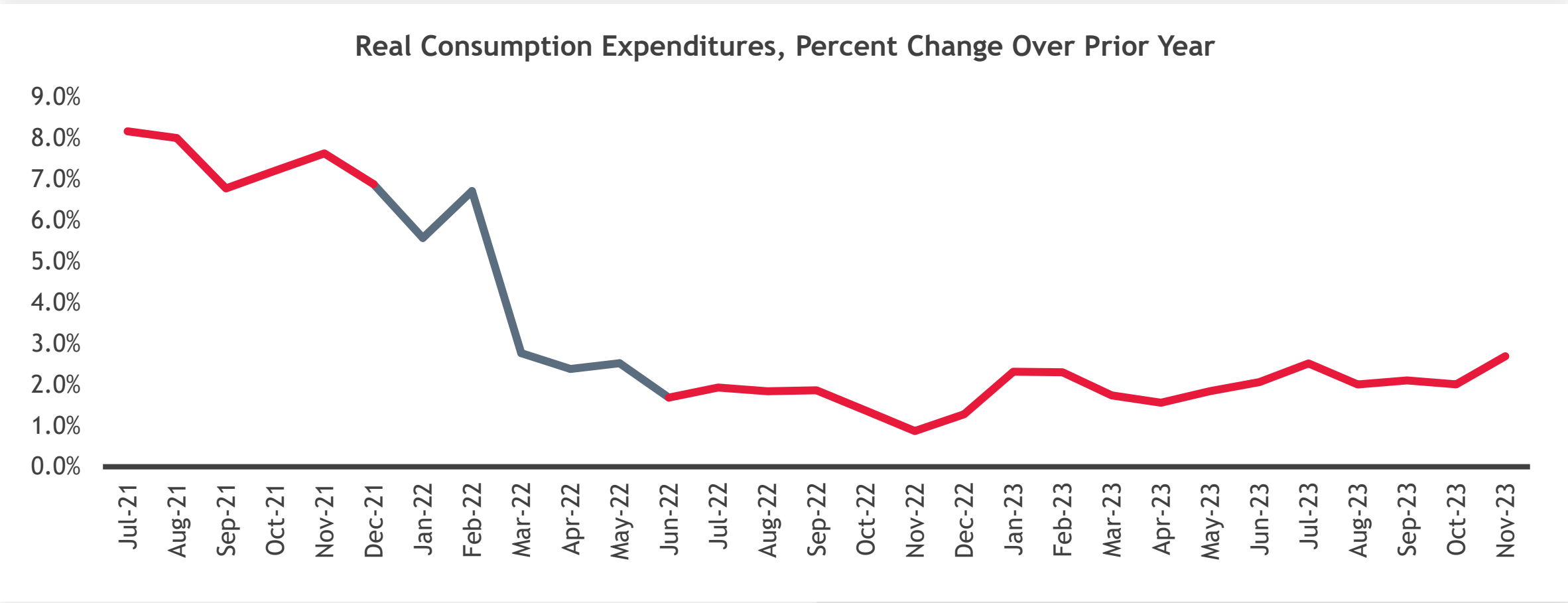
Monthly Change, Household Survey, 3 Month MA, Full-Time Employment



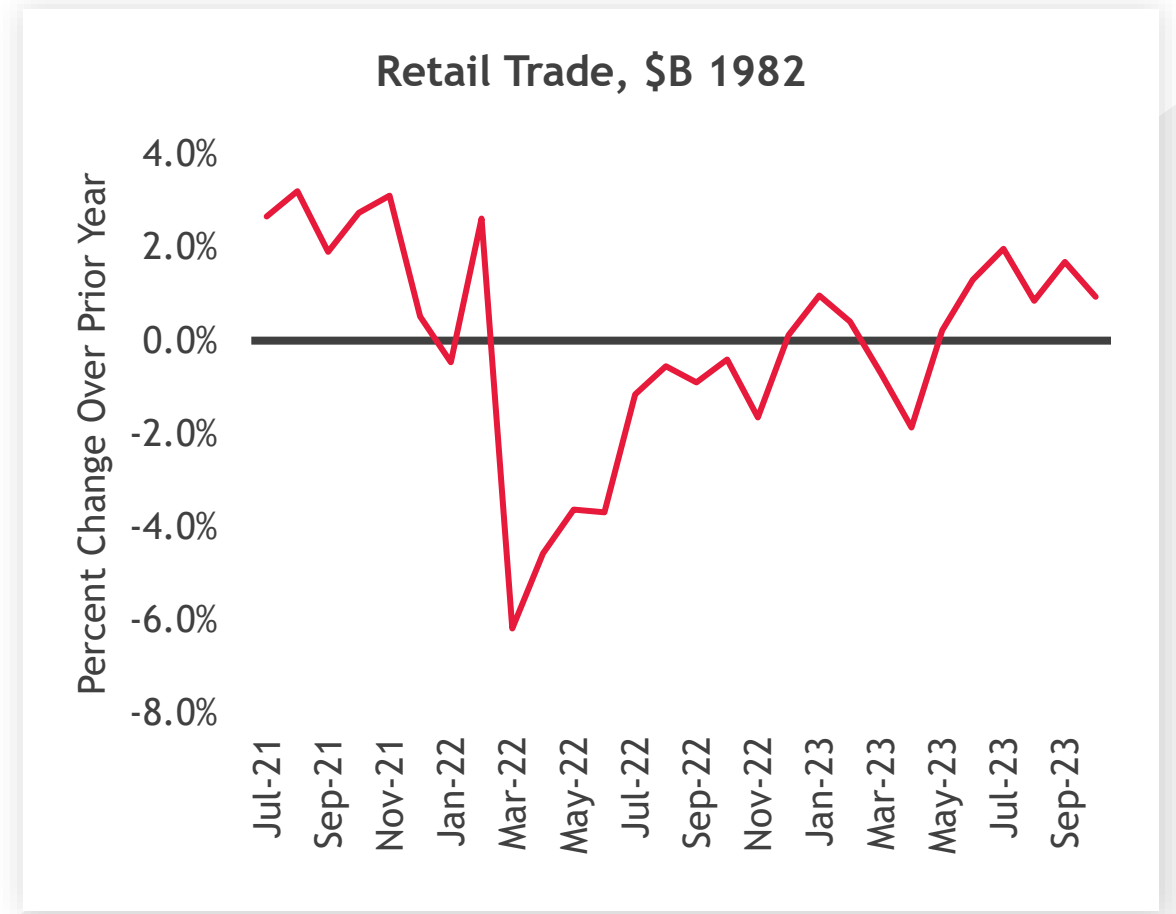
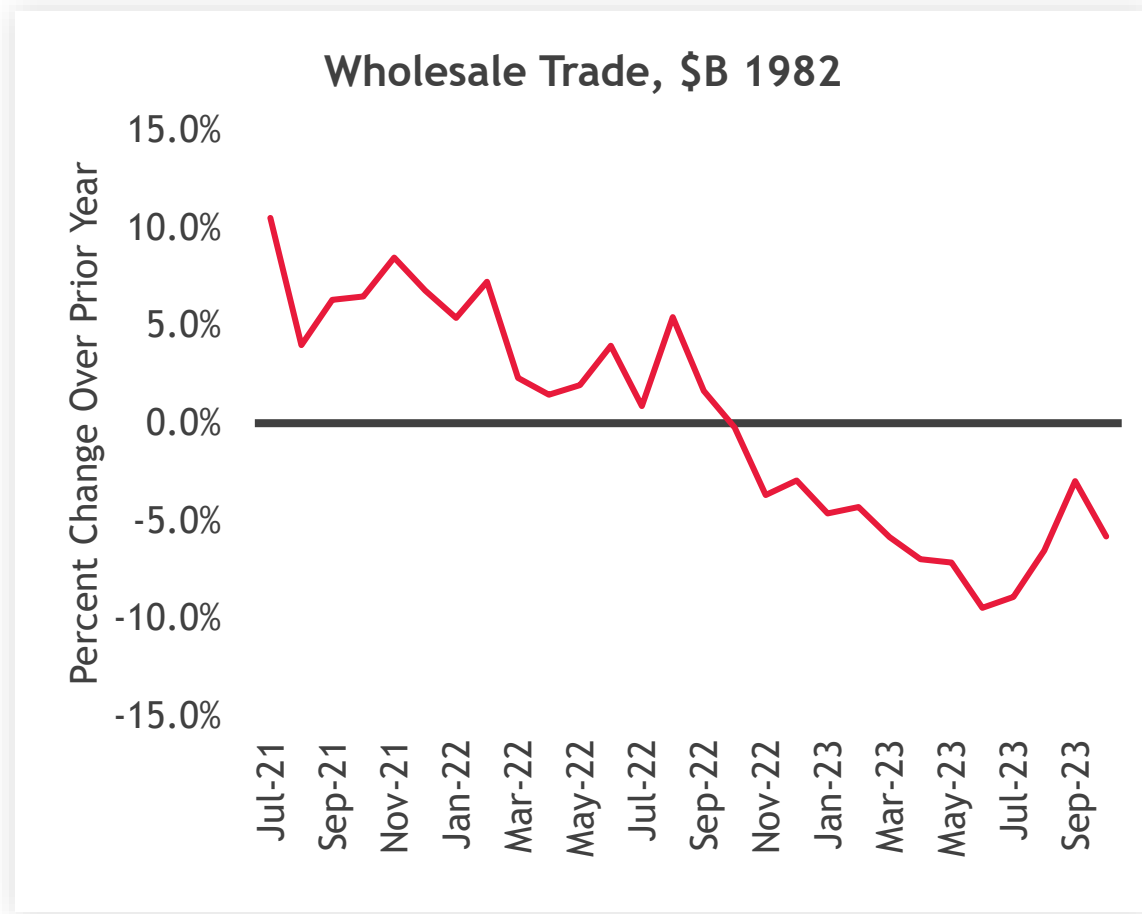
Monthly Change, Household Survey, 3 Month MA, Part-Time Employment



Real Consumption Expenditures

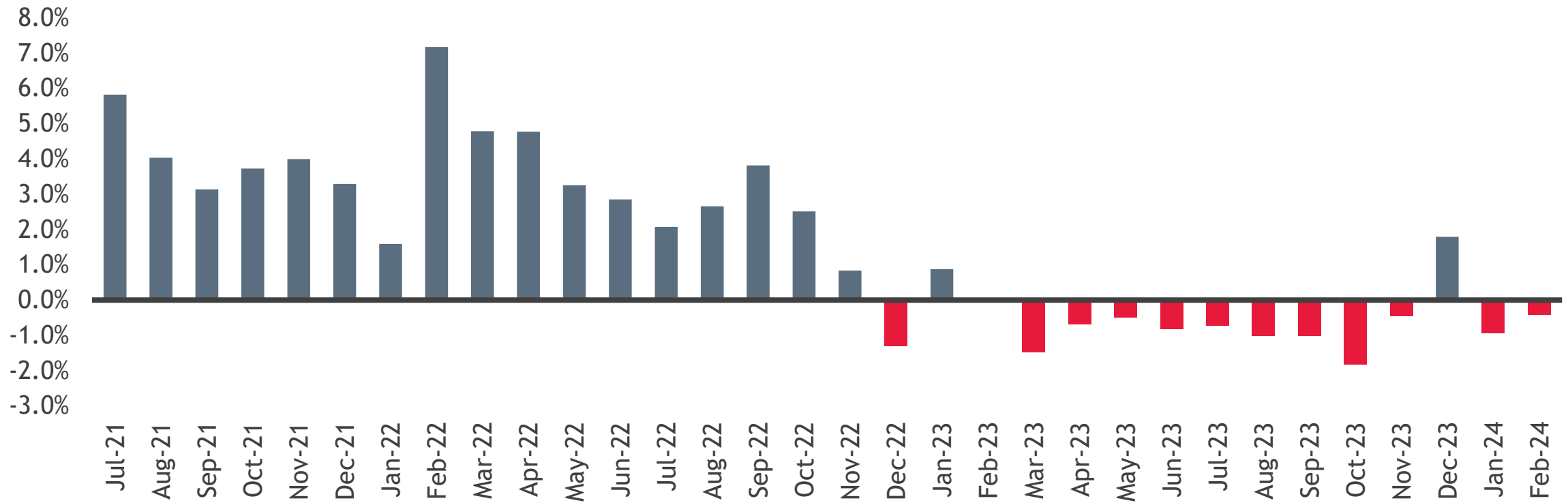


Wholesale and Retail Trade Adjusted for Inflation

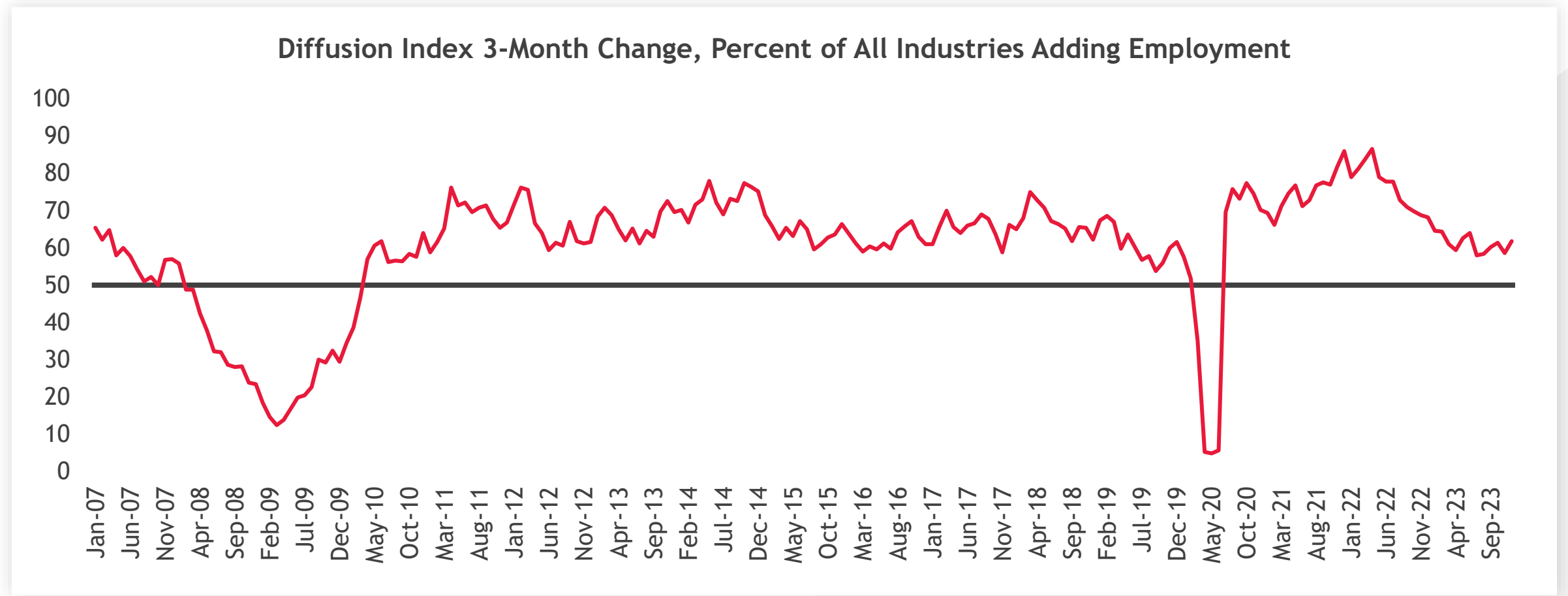


Manufacturing Industrial Production Below 2022 Levels

Manufacturing Industrial Production, Percent Change Over Prior Year



Measuring the Dispersion of Economic Activity Using BLS Diffusion Index



A Soft-Landing vs. Recession Scorecard

Indicator	Measure	Recession	Soft Landing	Expansion
Real Gross Domestic Product	Pct. Change Over Prior Quarter	LT 0%	GT 0% LT 1.5%	GT 1.5%
Real Domestic Income	Pct. Change Over Prior Quarter	LT 0%	GT 0% LT 1.5%	GT 1.5%
Payroll Employment	Monthly Change	LT 0	GT 0 LT 200K	GT 200K
Employment Household Survey	Monthly Change	LT 0	GT 0 LT 200K	GT 200K
Unemployment Rate	Percent of Labor Force	Over 4.5%	3.7% to 4.5%	LT 3.7%
Real Retail Sales	Pct. Change Over Prior Quarter	LT 0%	0 to 2%	GT 2%
Real Personal Consumption	Pct. Change Over Prior Quarter	LT 0%	0 to 2%	GT 2%
Industrial Production	Pct. Change 3-Month MA	LT 0%	0 to 1%	Over 1%
Diffusion Index	Pct. of Industries with Net Hires	LT 50%	GT 50% LT 60%	GT 60%

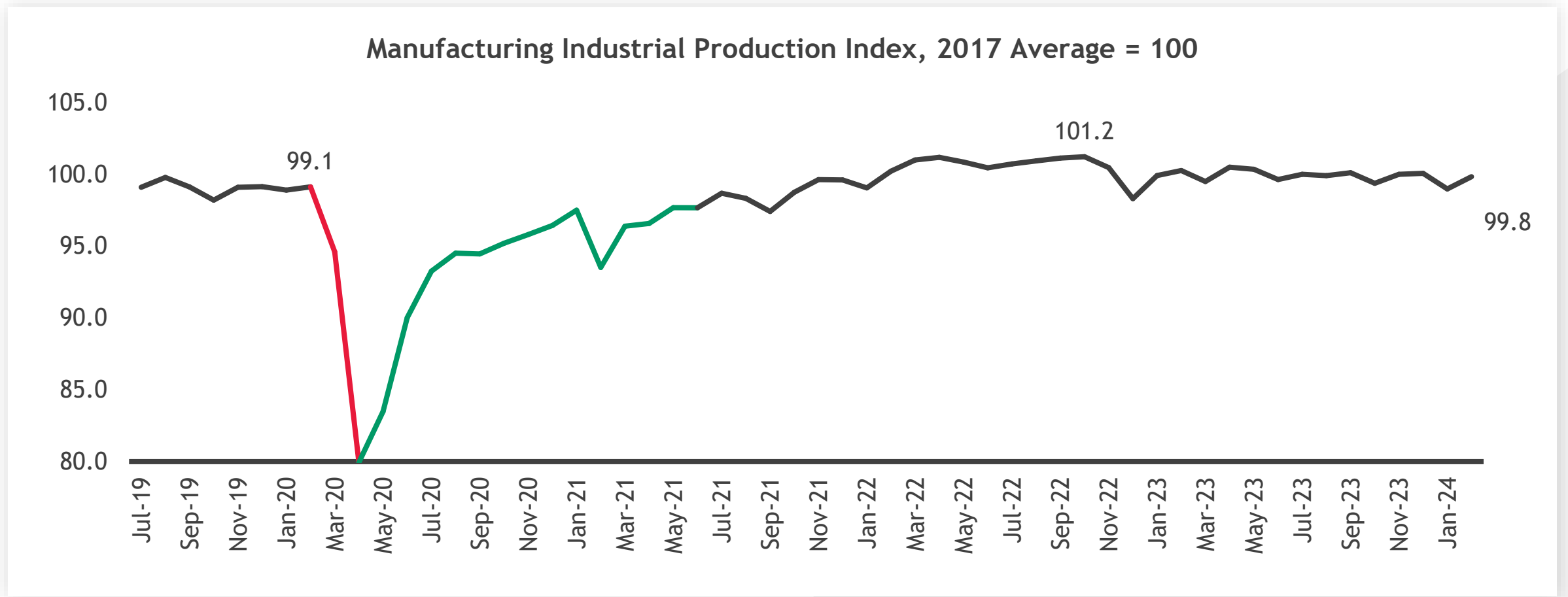
U.S. Manufacturing

Poster Child for Mixed Signals



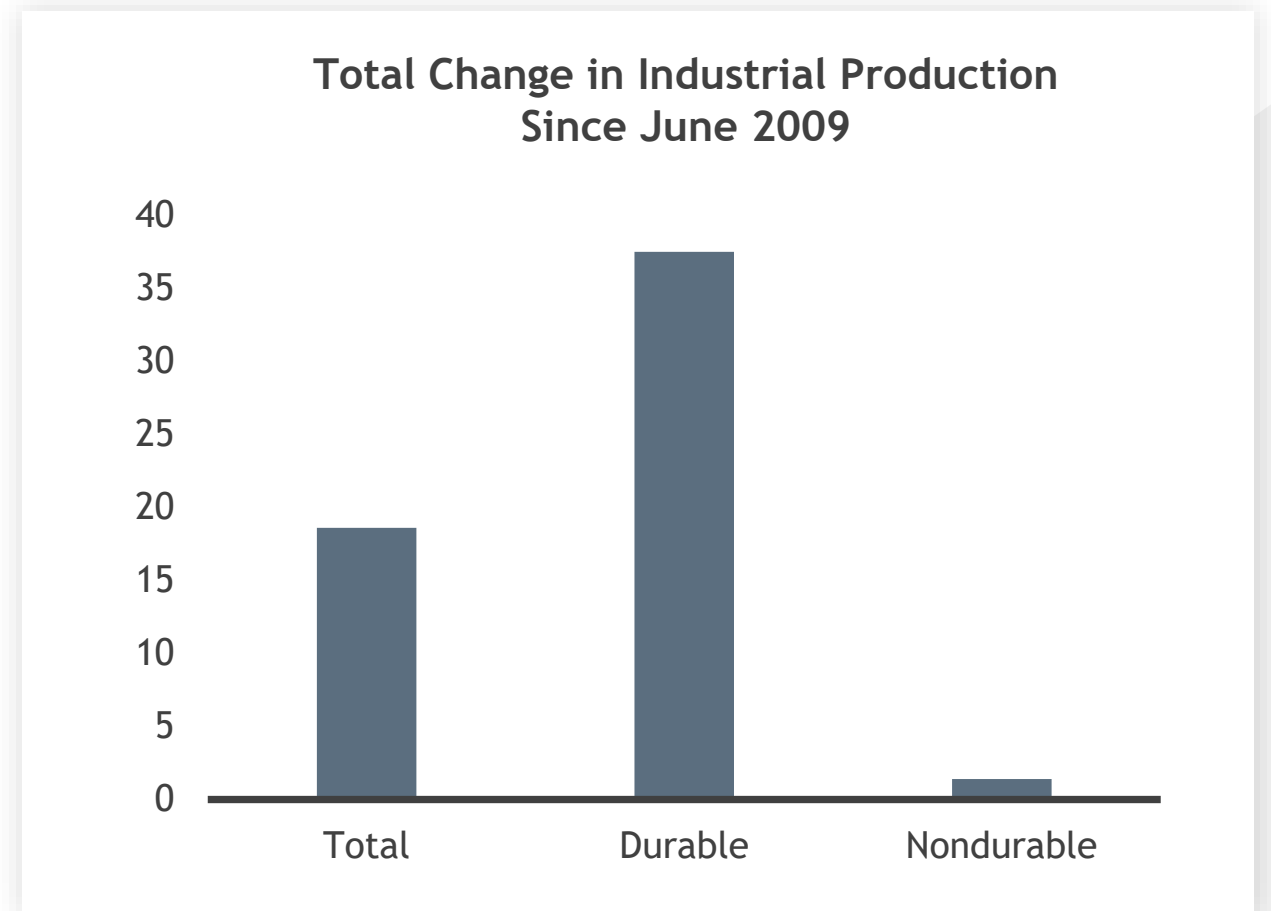
INDUSTRIAL PRODUCTION

Manufacturing Production Down -0.4%, February 2024/February 2023



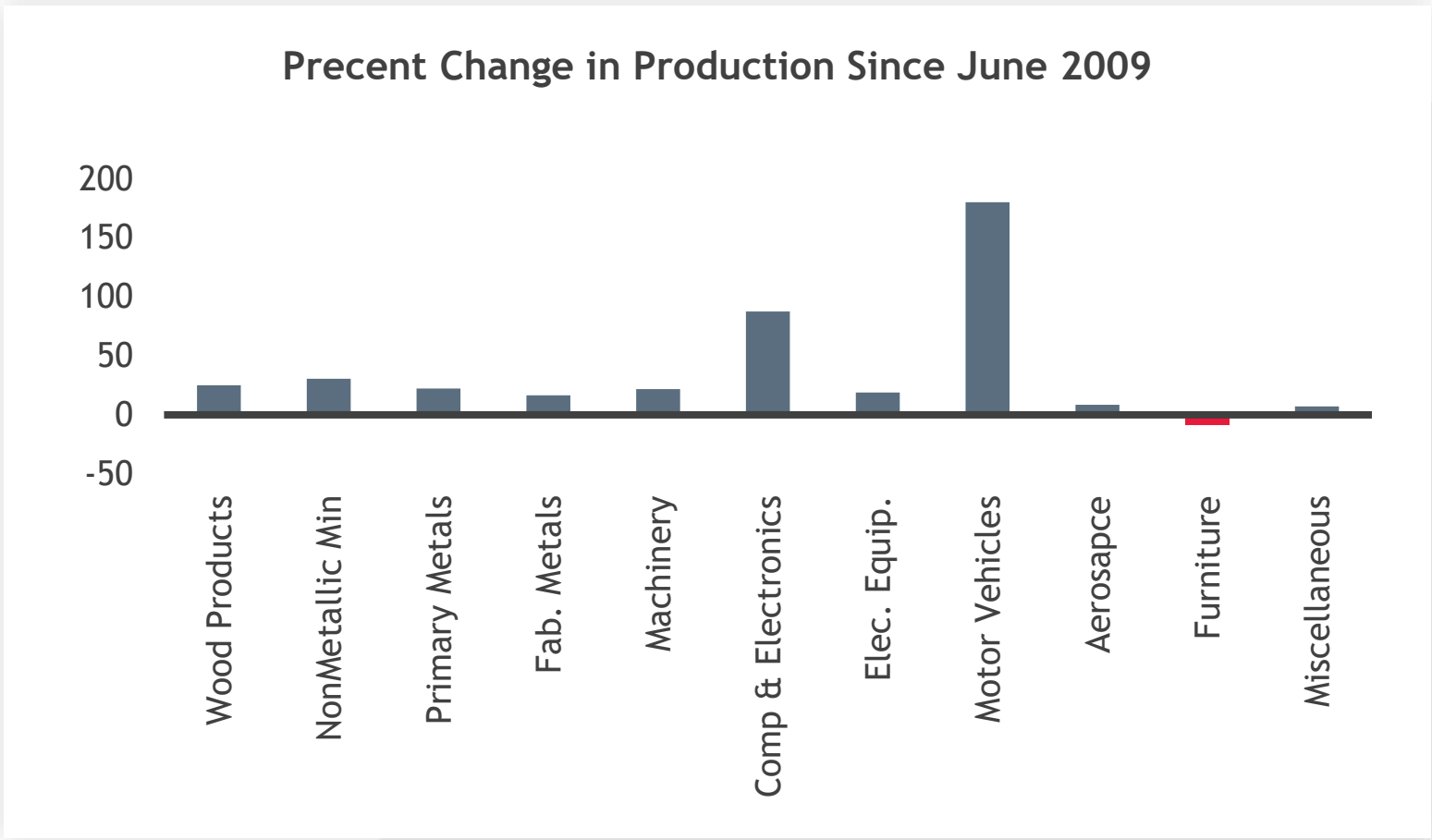
Manufacturing Recovery Since the End of the Great Recession

- ▶ There are secular forces at work
- ▶ Since the end of the Great Recession, Manufacturing expansion centers on durable goods industries



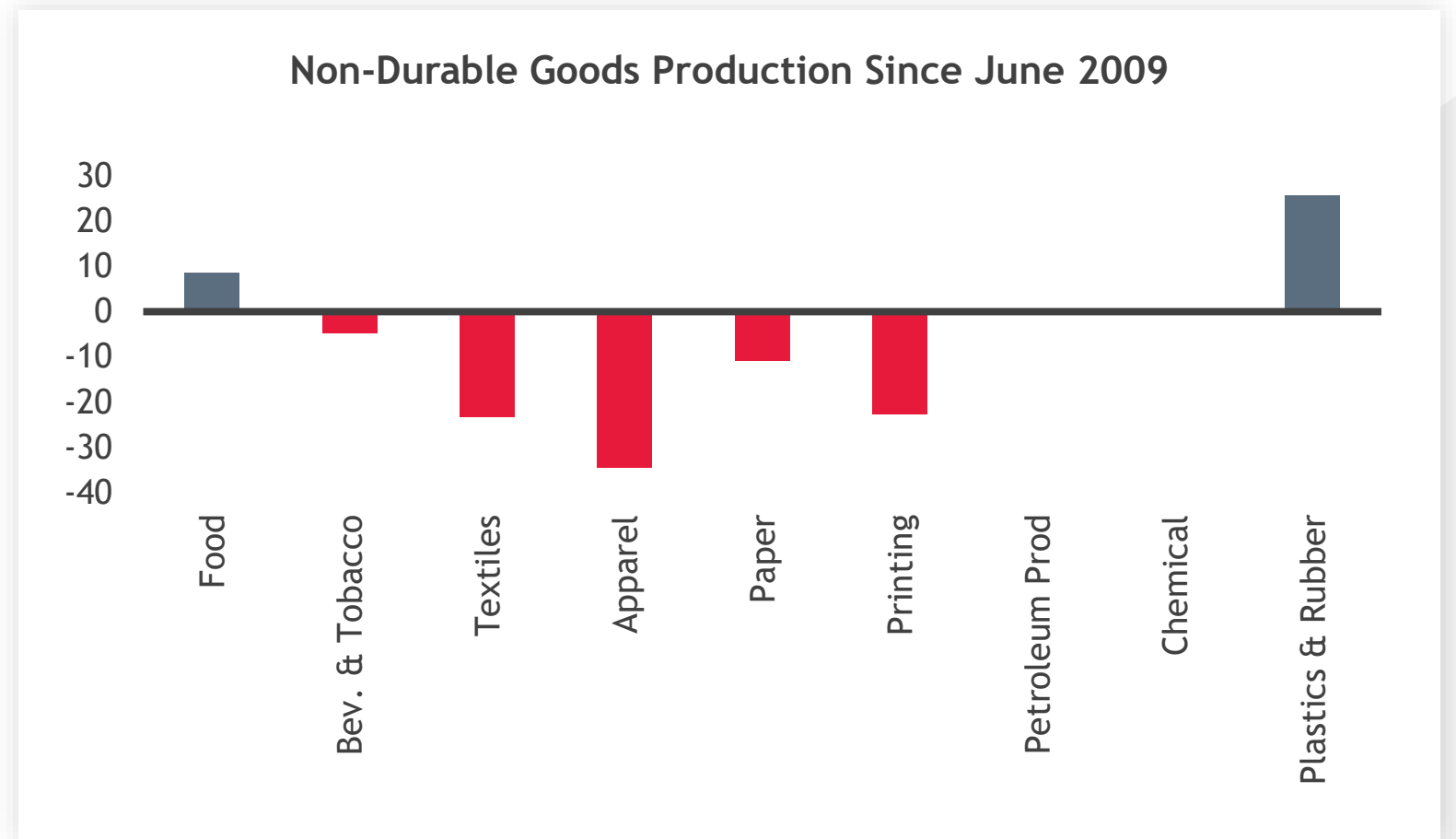
Durable Goods Industries Expanding Since the Great Recession

- ▶ The production gains in durable industries lead U.S. Industrial Recovery
- ▶ Principal gains in the continuing expansion of computers and electronics and revival of the auto industry



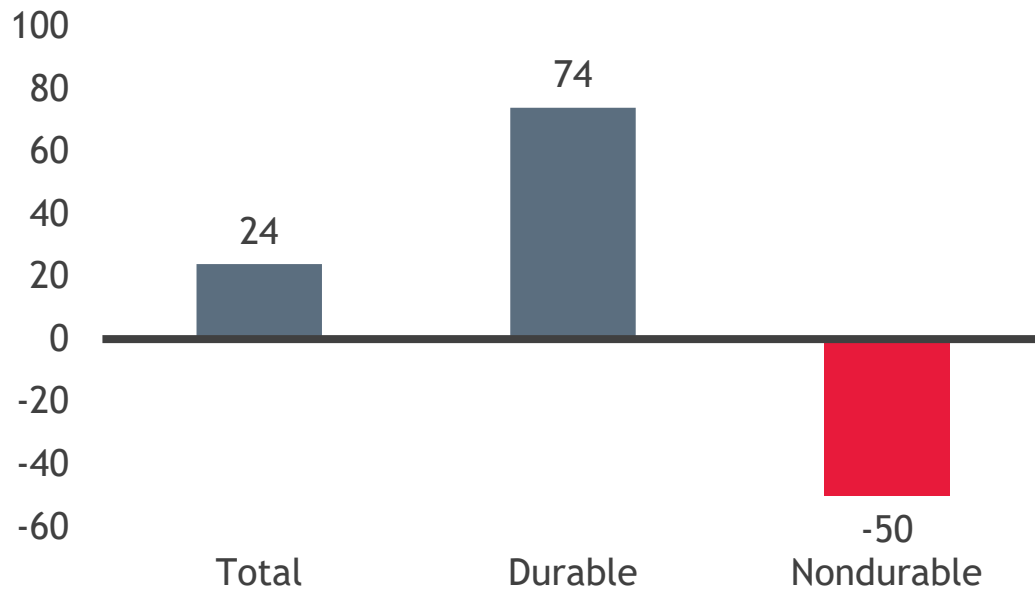
Non-Durable Goods Industries Most Exposed to Open Trade and Secular IT Changes

- ▶ Two trends adversely affect non-durable industries
 - ▶ Move to lower cost production countries
 - Textiles and Apparel
 - ▶ Secular technological changes in consumption of information
 - Paper and Printing

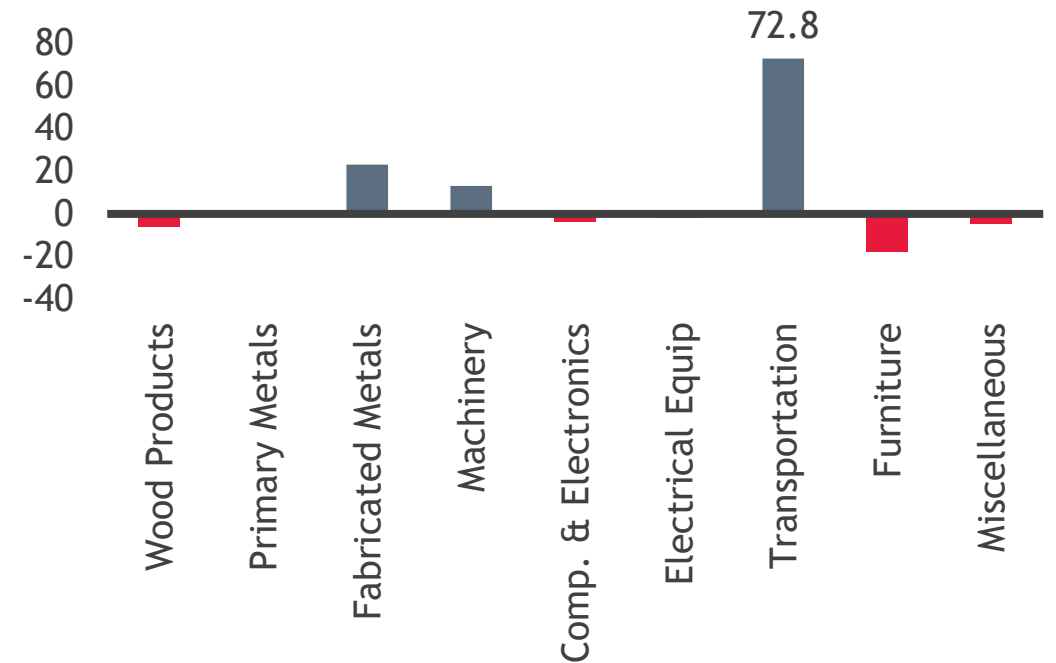


Manufacturing Divide Carries Over to Employment

Manufacturing Employment Changes February 2024 from February 2023 (Ks)

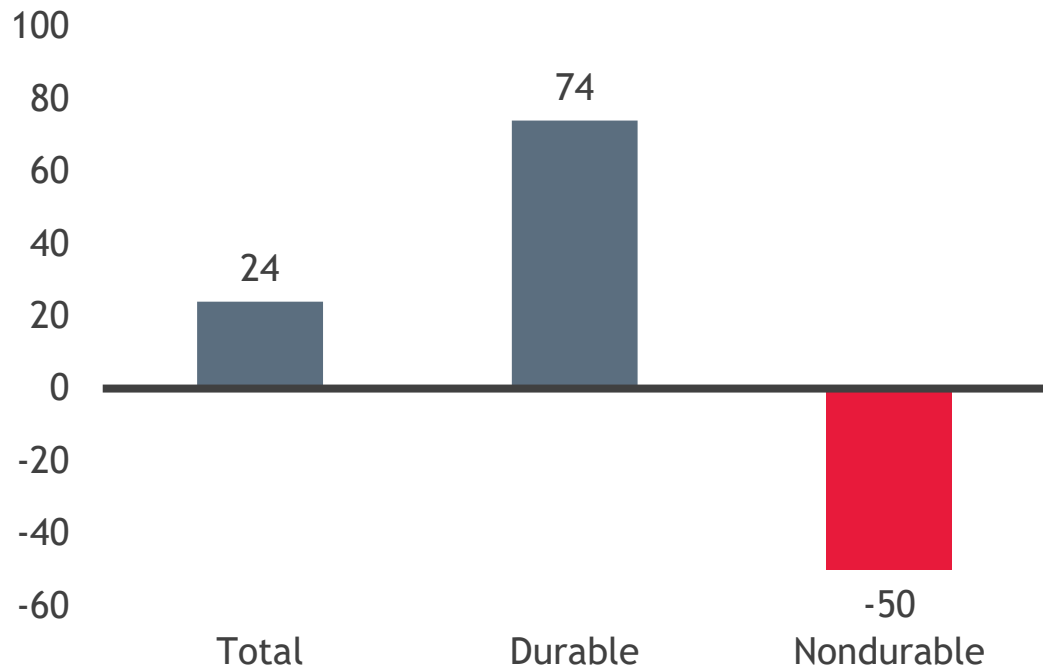


Durable Goods Manufacturing Employment Change February 2024 from February 2023 (Ks)

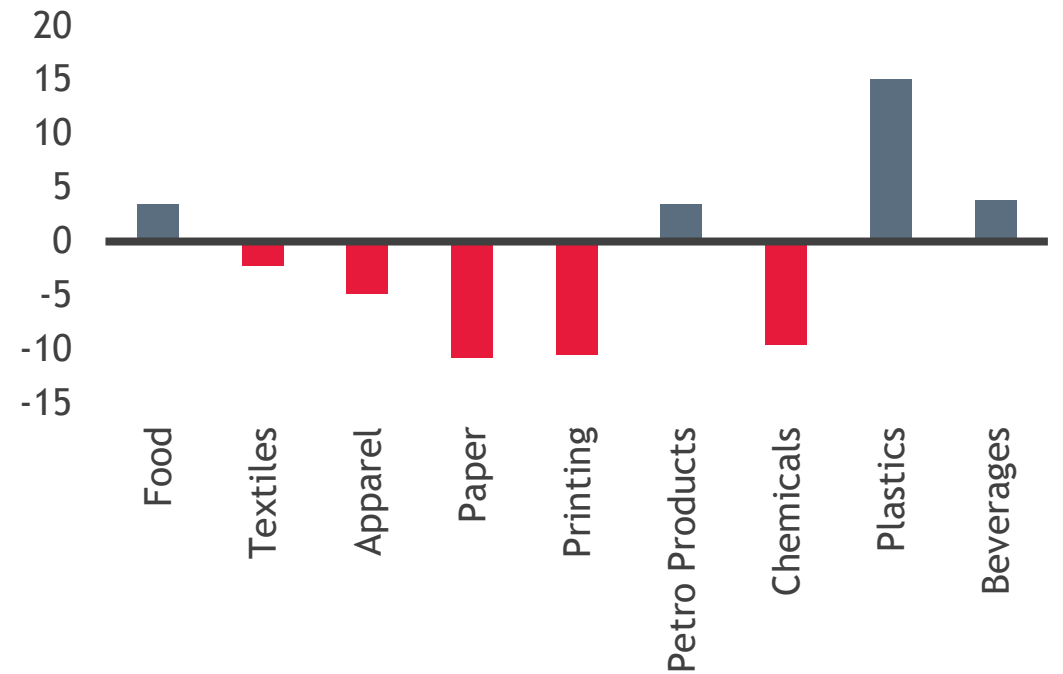


Manufacturing Divide Carries Over to Employment

Manufacturing Employment Change November 2023 from November 2022 (Ks)

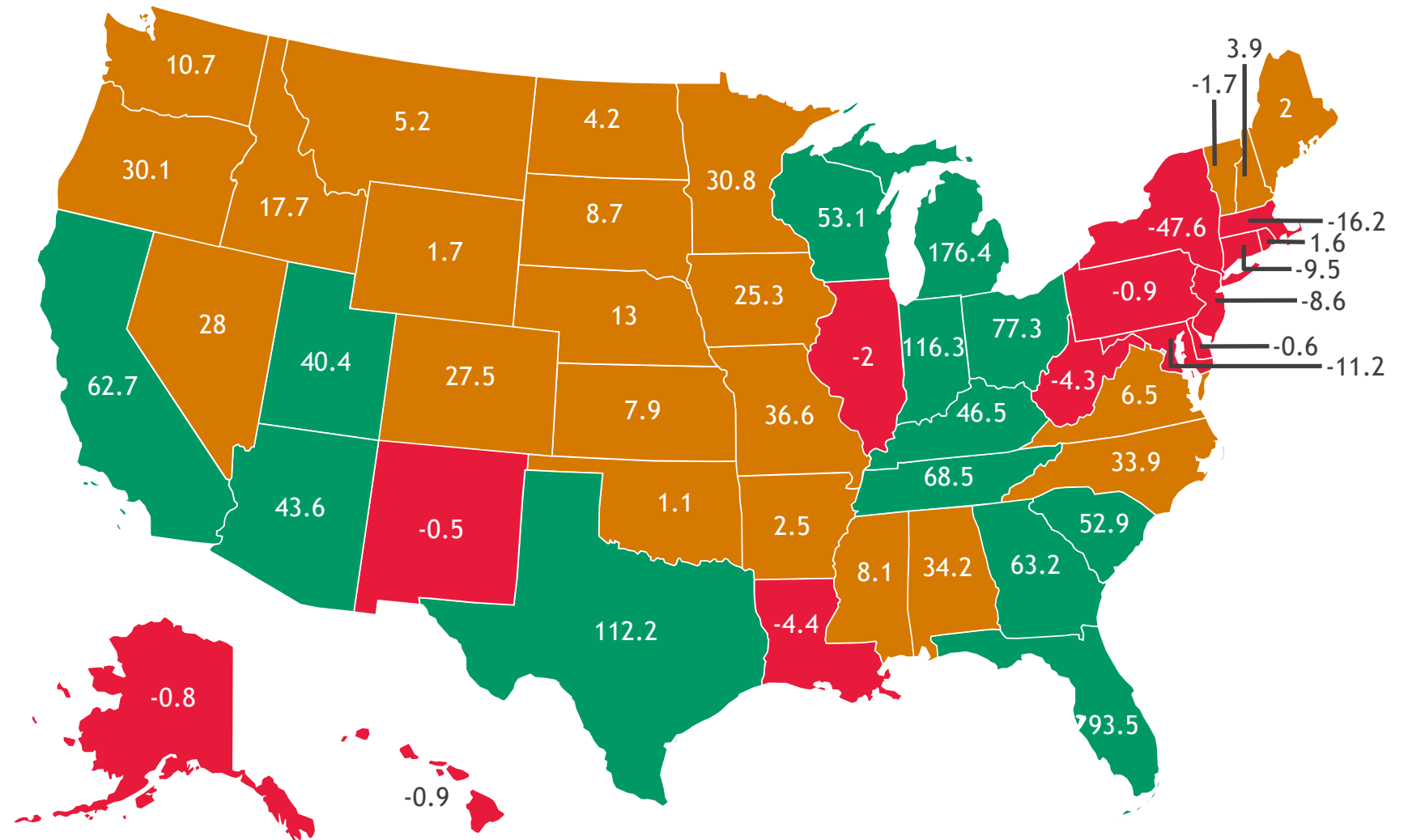


Non-Durable Goods Manufacturing Employment Change: November 2023 from November 2022 (Ks)



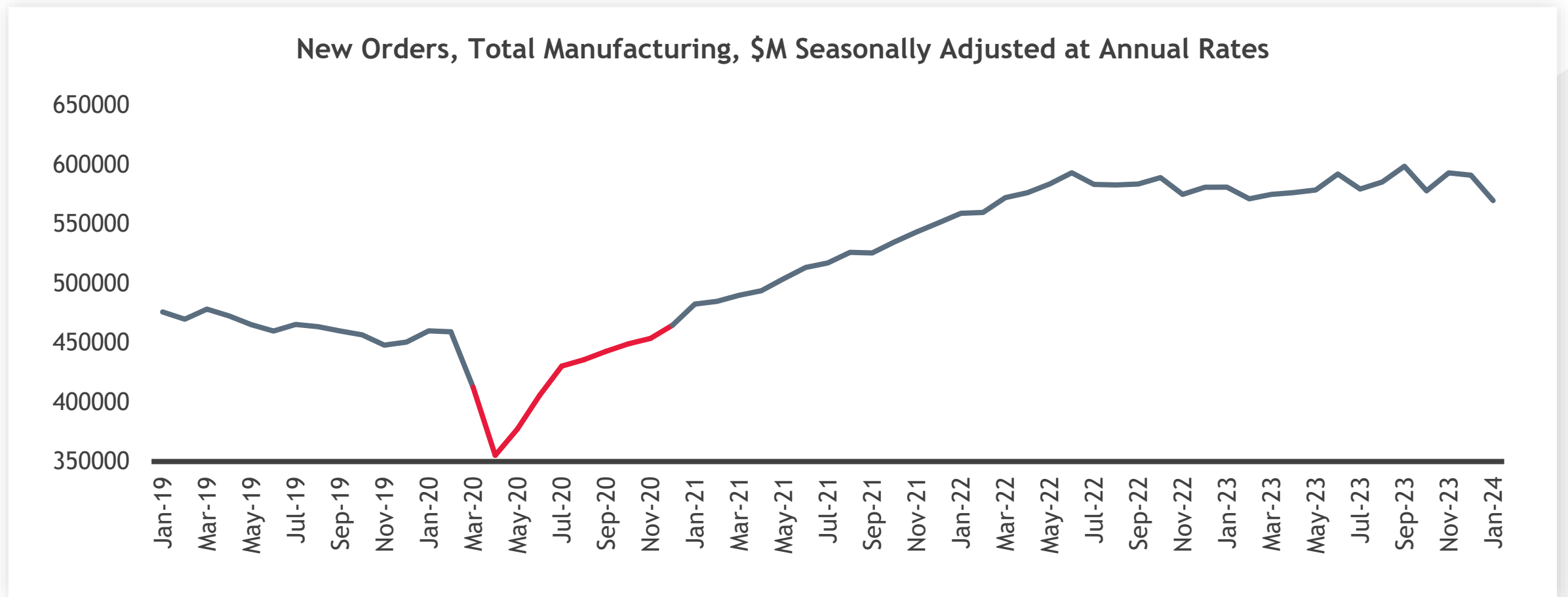
Manufacturing Employment Gains Not Equally Shared Among States

Manufacturing Employment in Thousands Change from June 2009 to March 2023



Total Manufacturing Orders Sliding

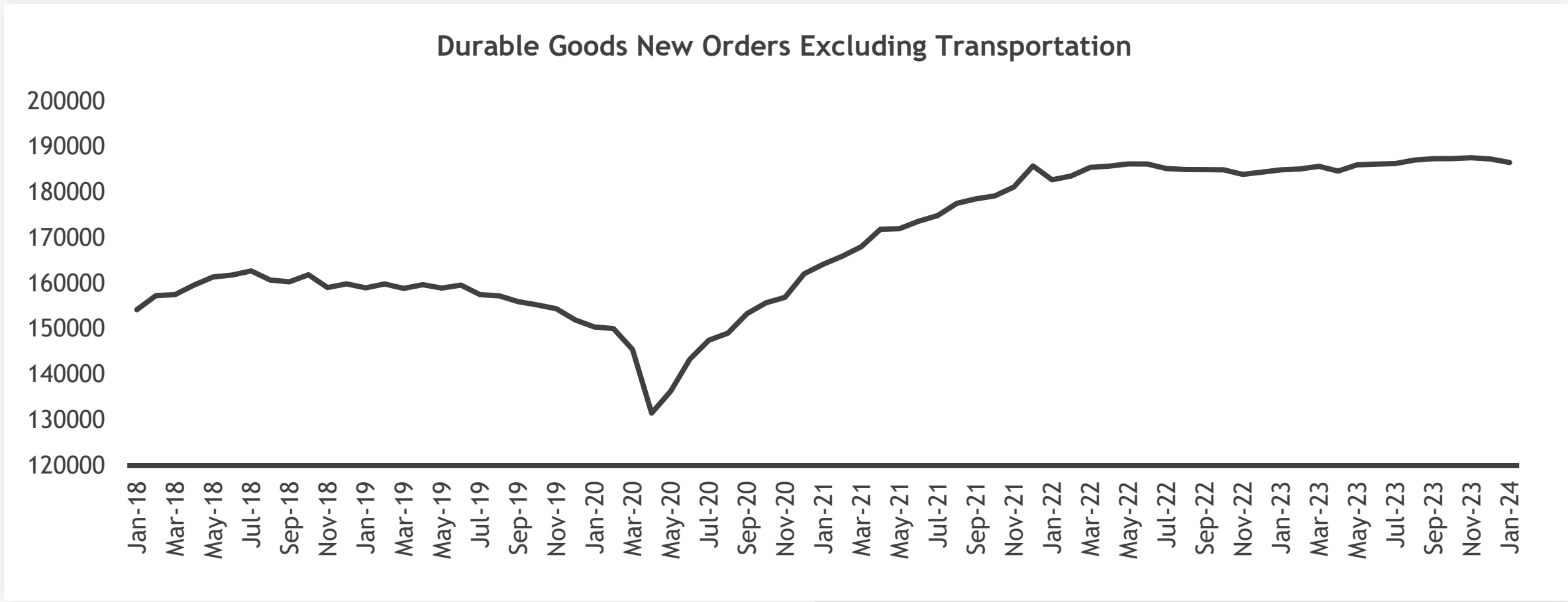
DOWN 1.6% YTD



Durable Goods Orders Down 0.9%, January 2024 over January 2023



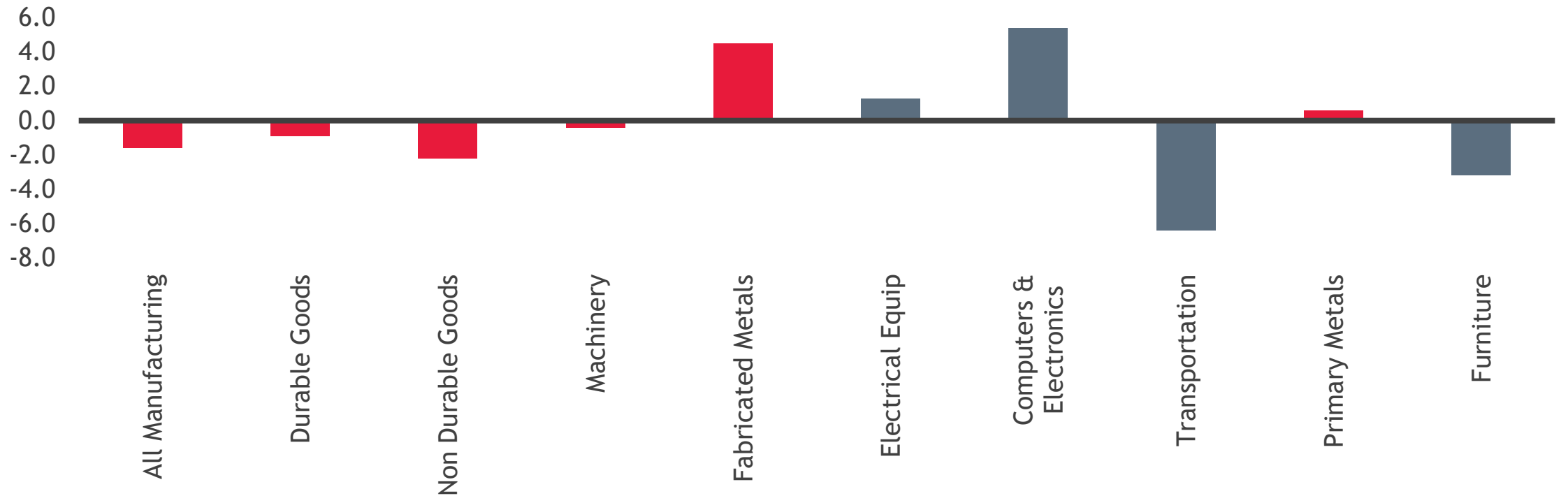
Durable Goods Orders Excluding Transportation Up 1.6% January 2024 Over January 2023



NEW ORDERS

Durable Goods New Orders Weakening

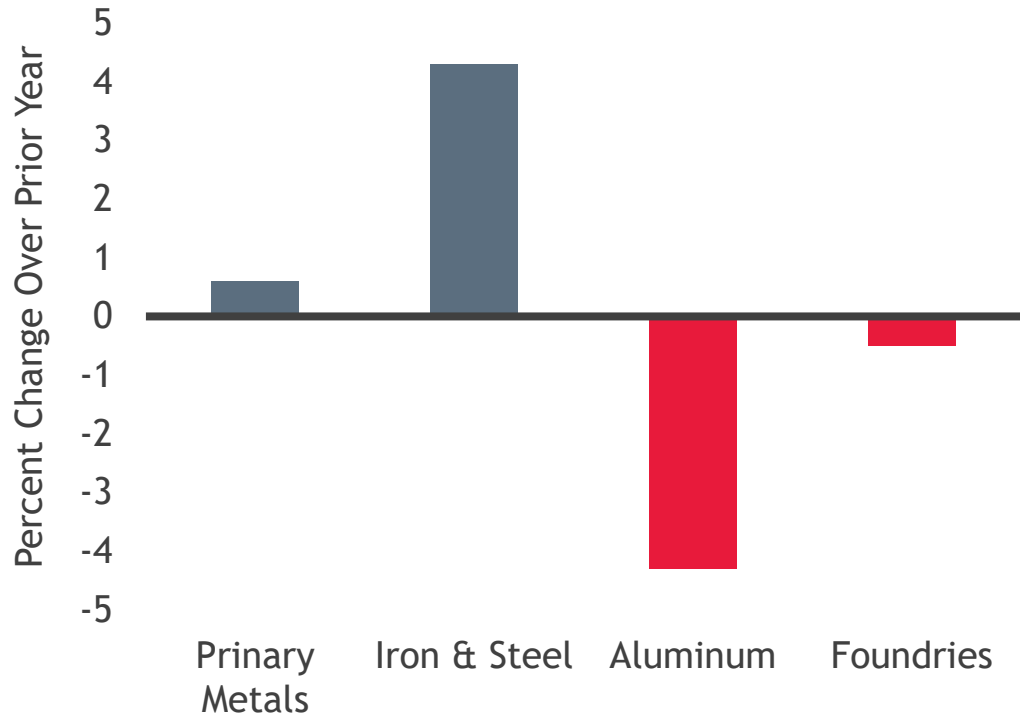
Value of Manufacturing New Orders, January 2024 Over January 2023 Percent Change Over Prior Year



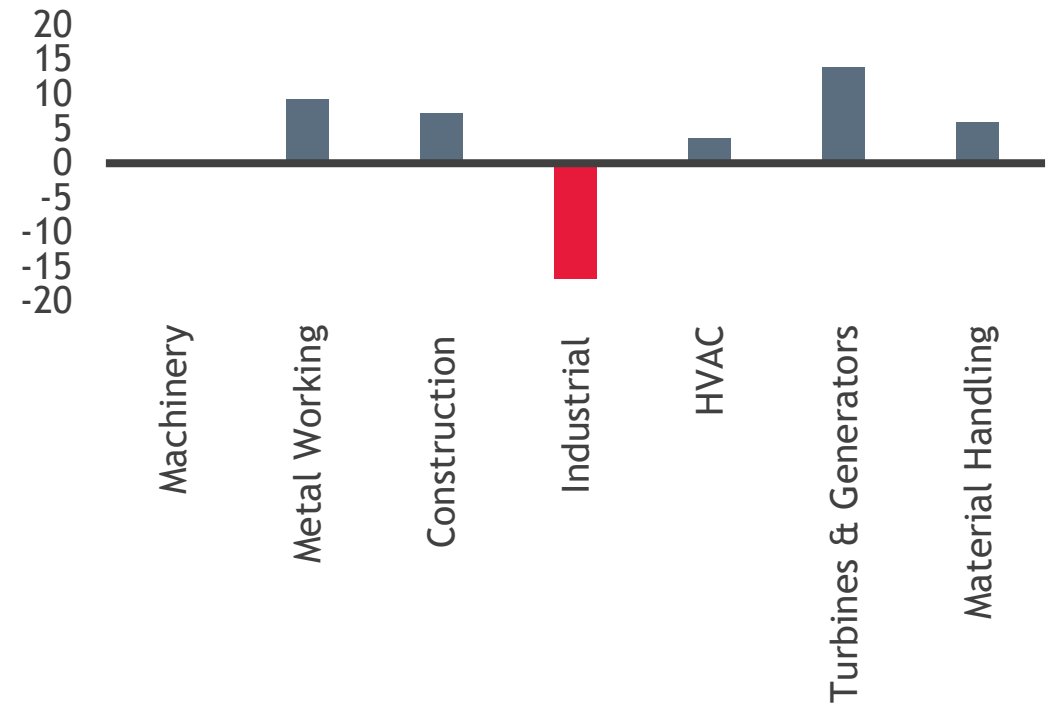
ONE SIZE DOES NOT FIT ALL

Subsectors Experiencing Different Results

Primary Metals Value of New Orders YTD January 2024



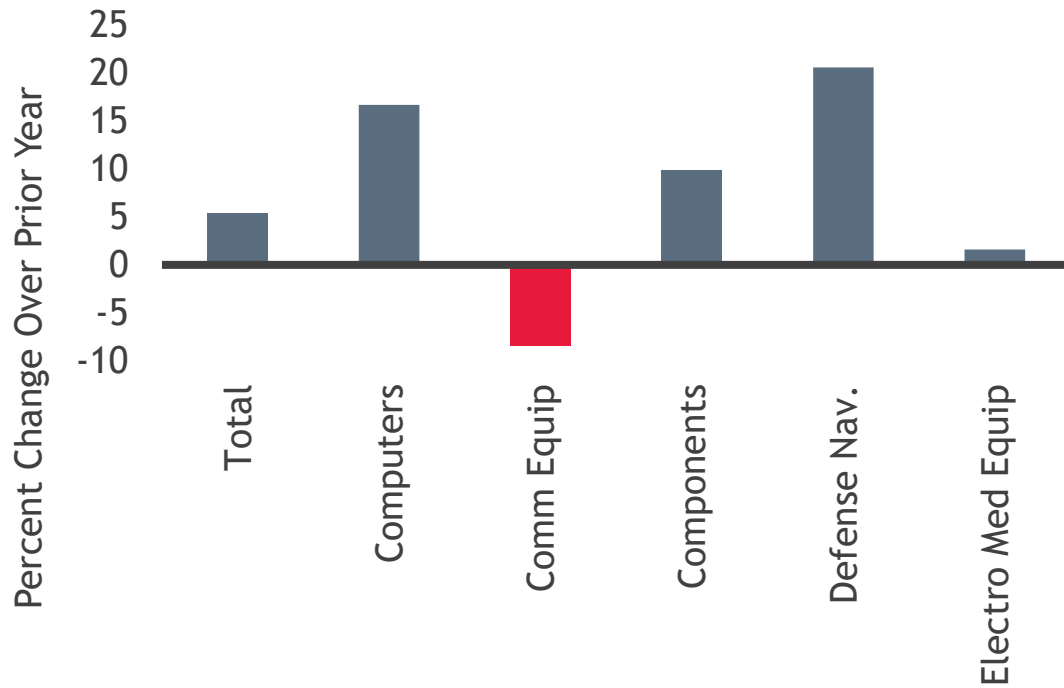
Machinery Value of New Orders YTD January 2024



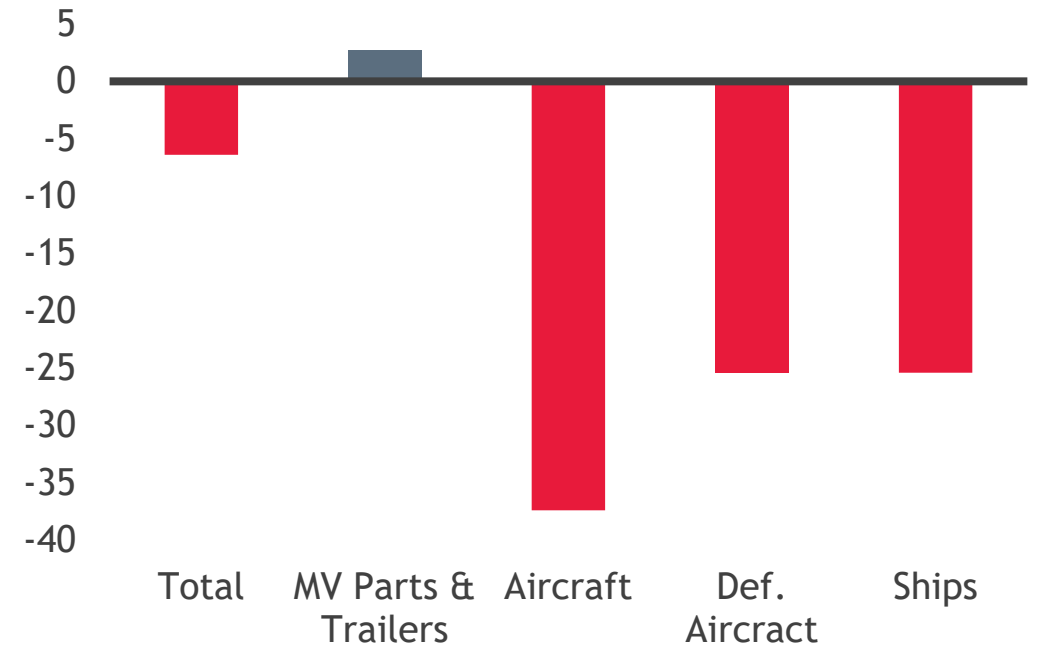
ONE SIZE DOES NOT FIT ALL

Subsectors Experiencing Different Results

Computers & Electronics Value of New Orders YTD,
January 2024

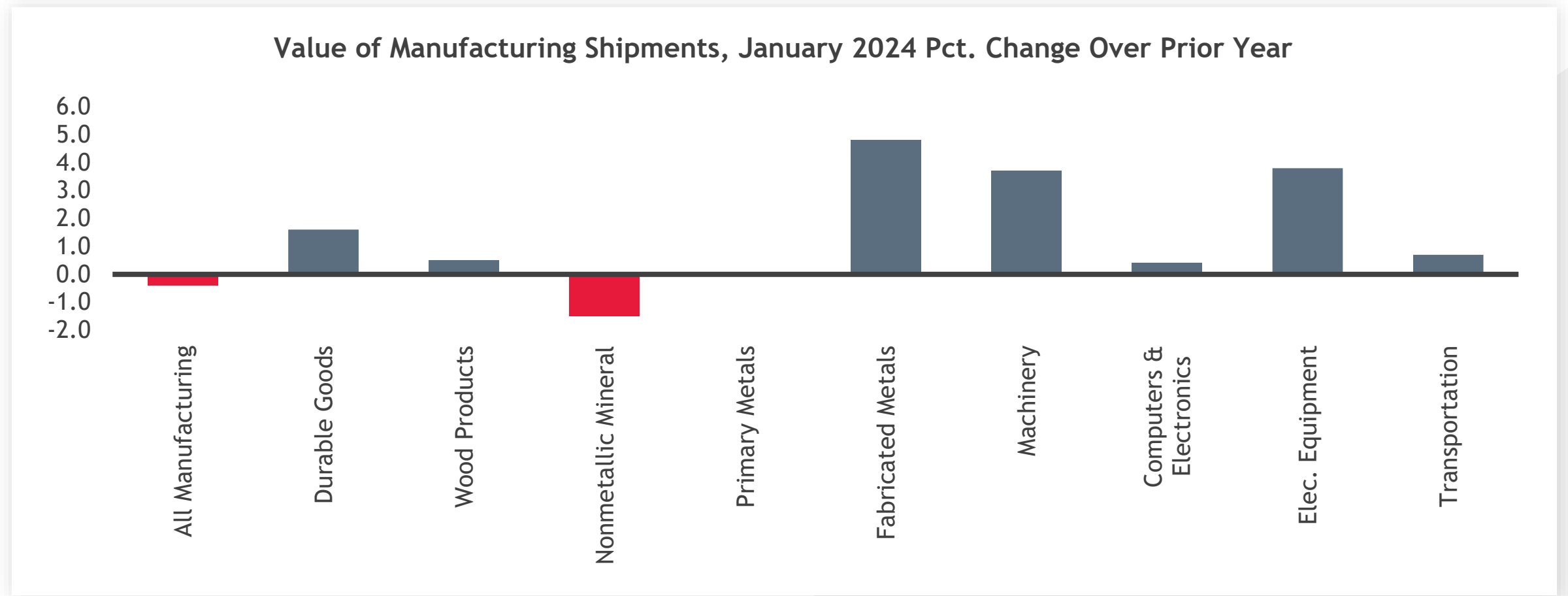


Transportation Value of New Orders YTD,
November 2023



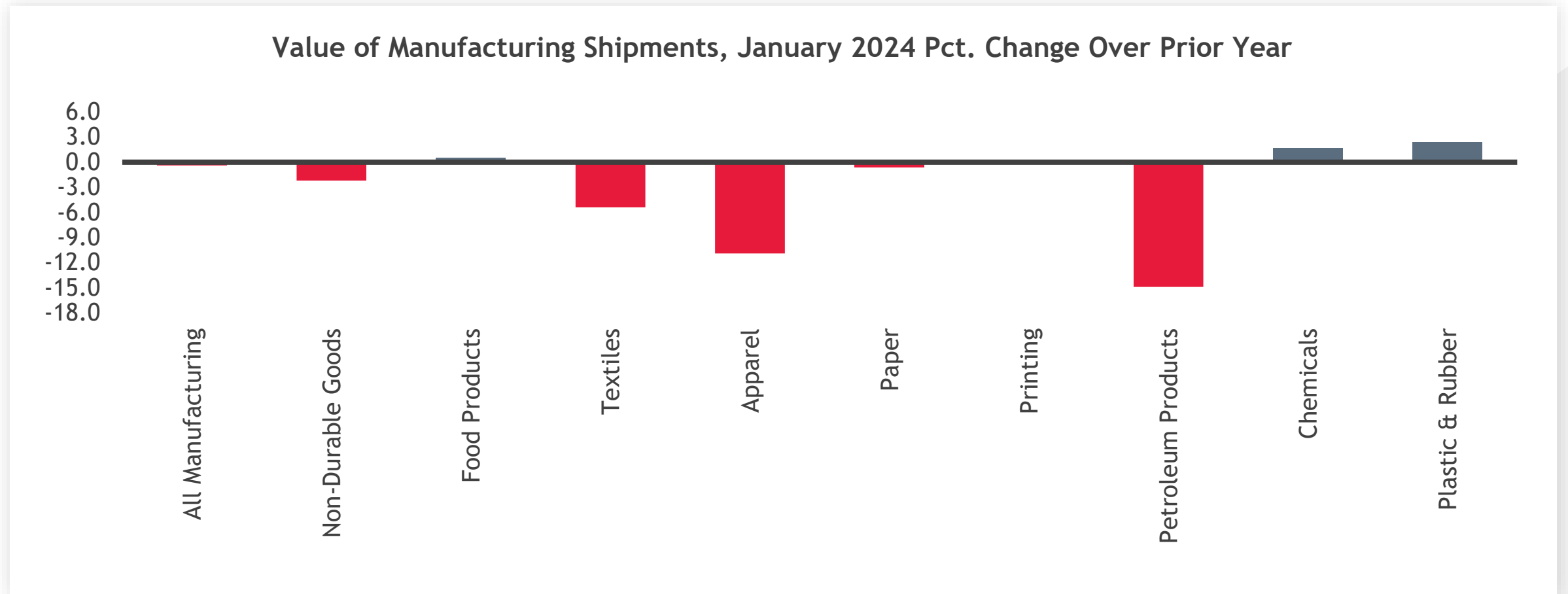
SHIPMENTS

Durable Goods Shipments Up Over 2023



SHIPMENTS

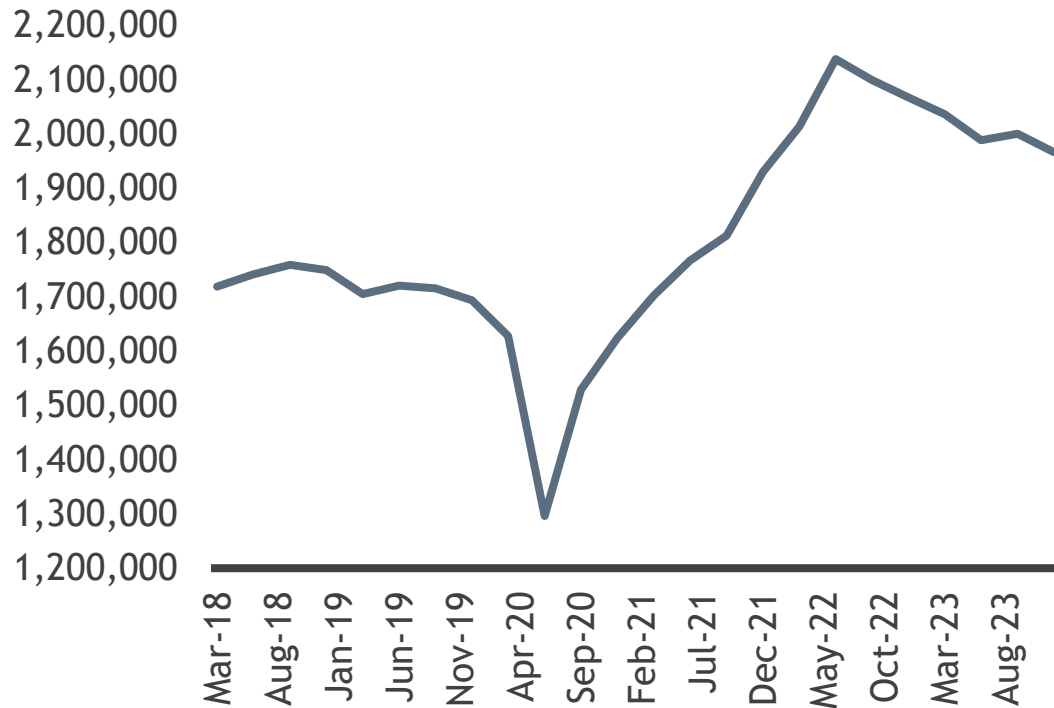
Non-Durable Goods Shipments Declining Petroleum Products Down Sharply



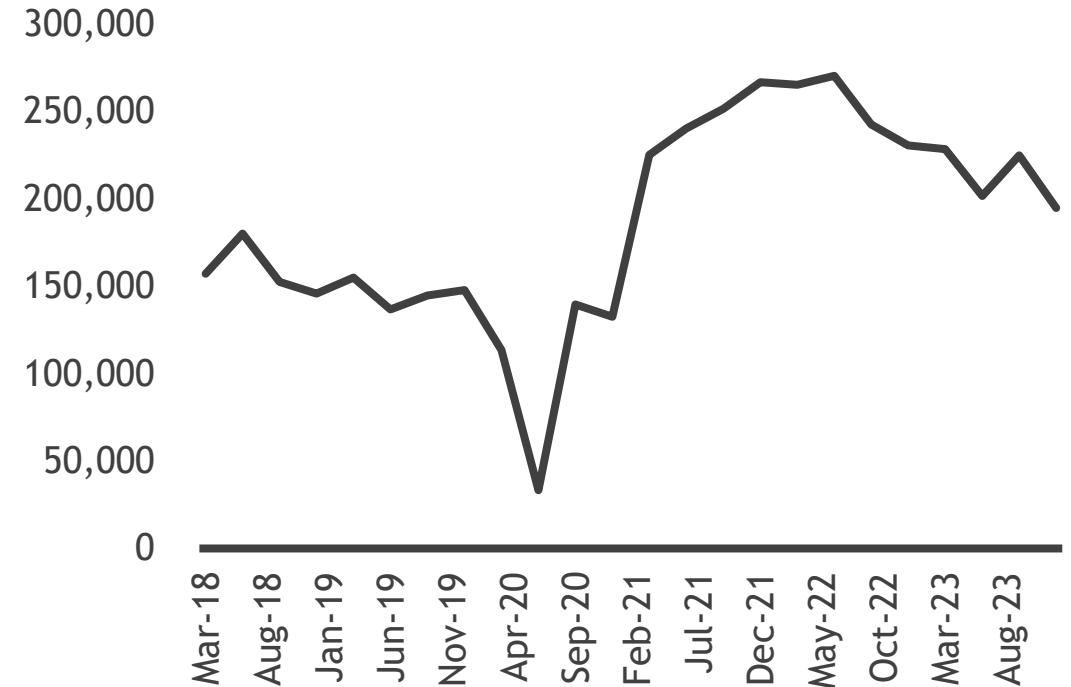
TOTAL MANUFACTURING SALES & NET INCOME

Slow Slide From Record Highs, Ahead of Pre-Pandemic Levels

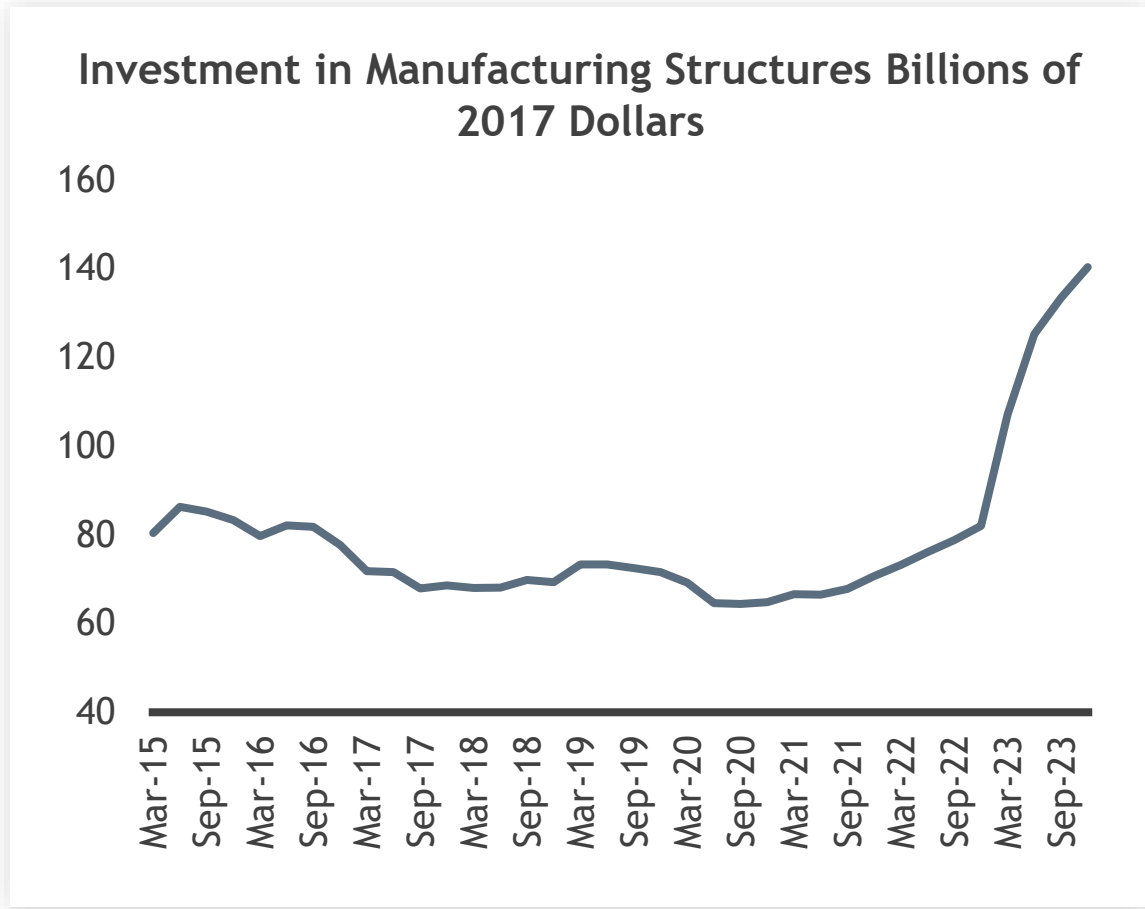
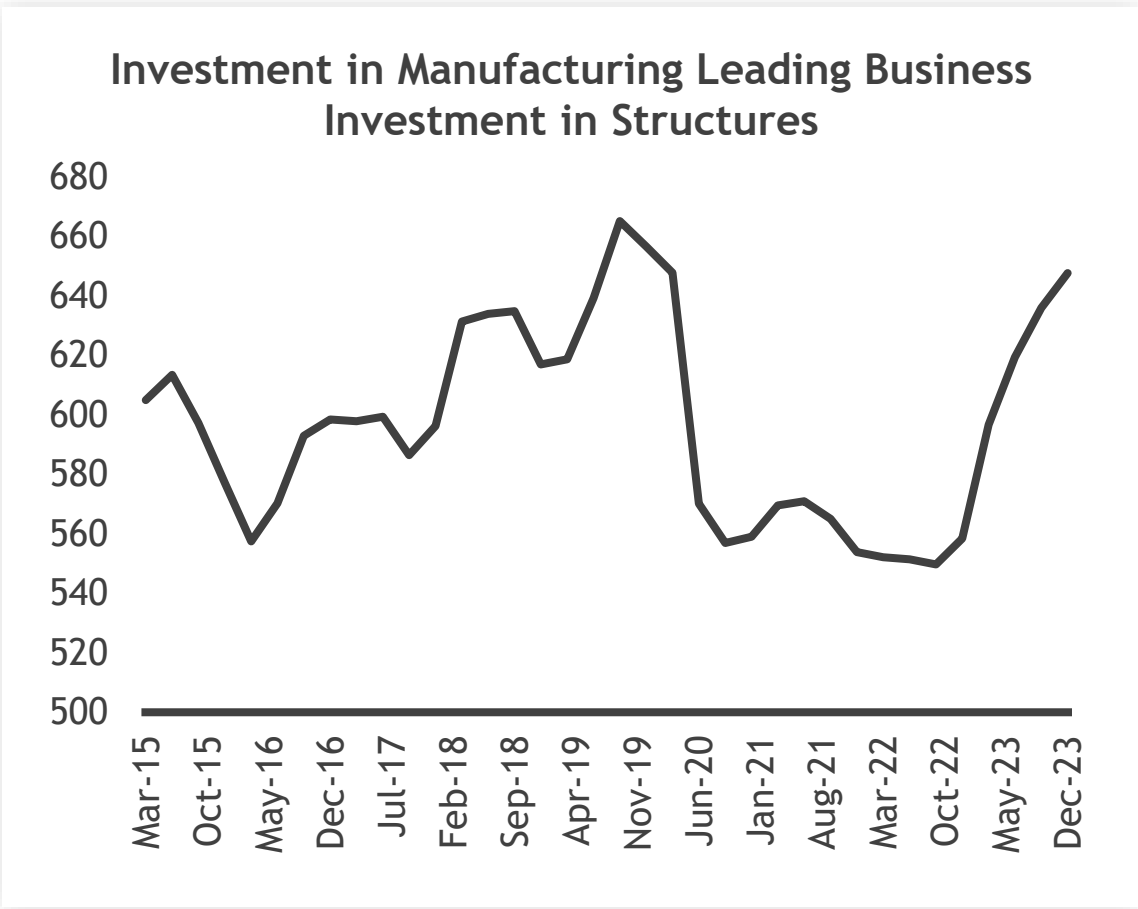
Total Manufacturing Sales \$M



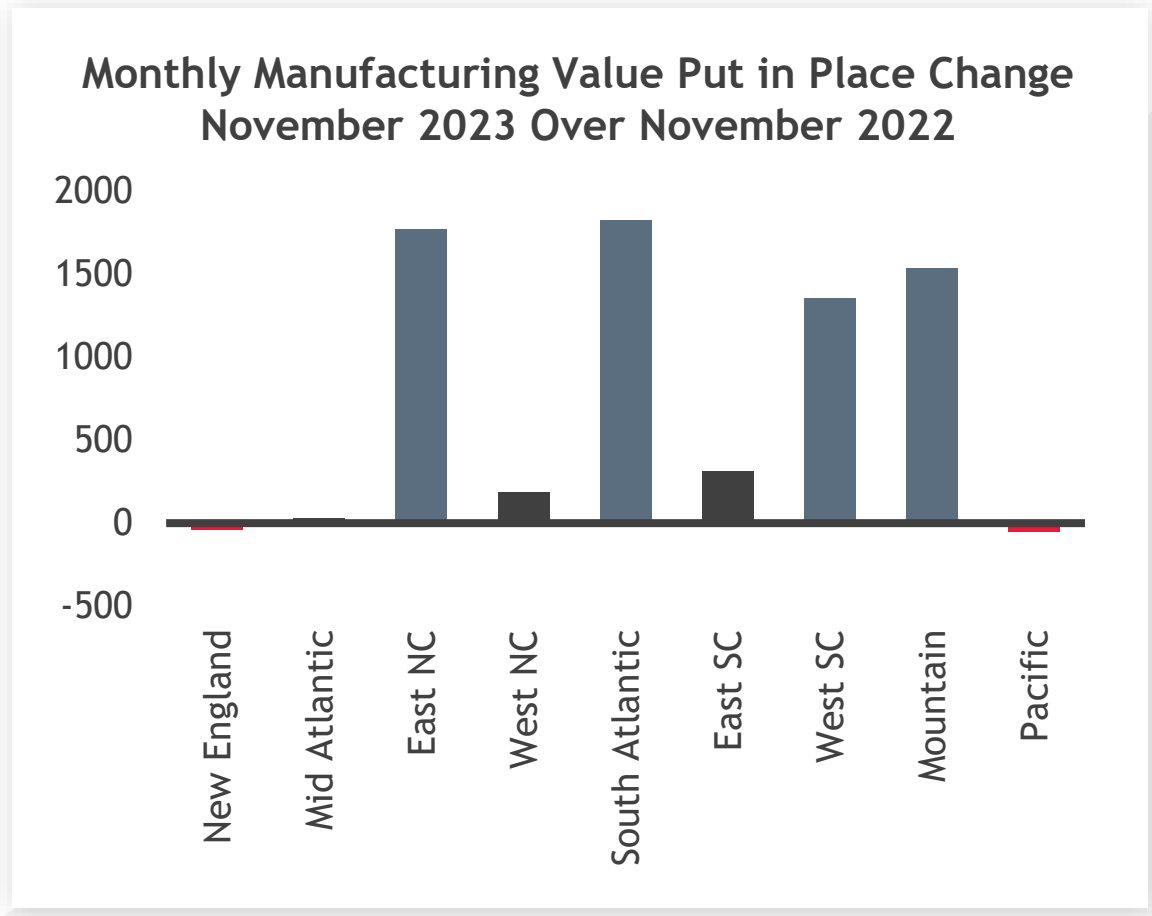
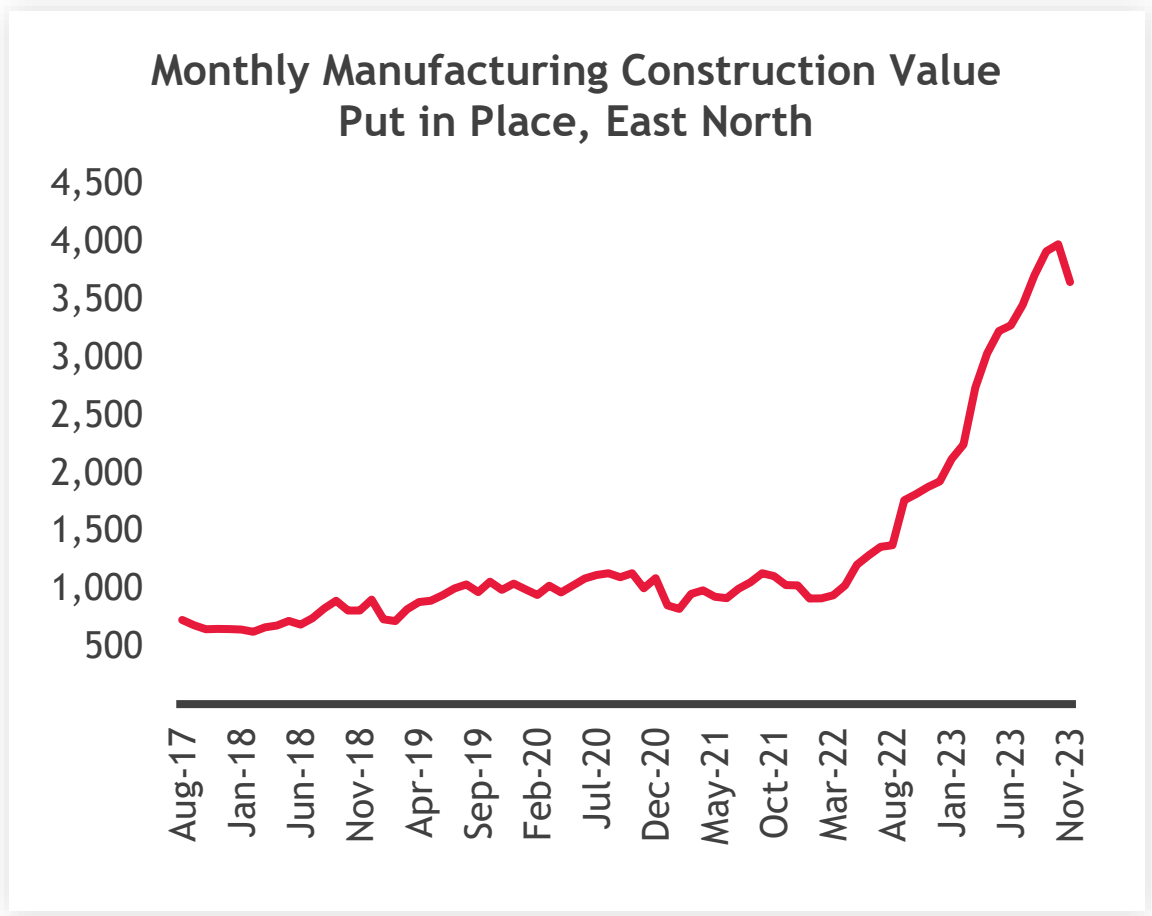
Total Manufacturing Net Income After Tax \$M



Investment in Manufacturing Leading Business Investment in Structures



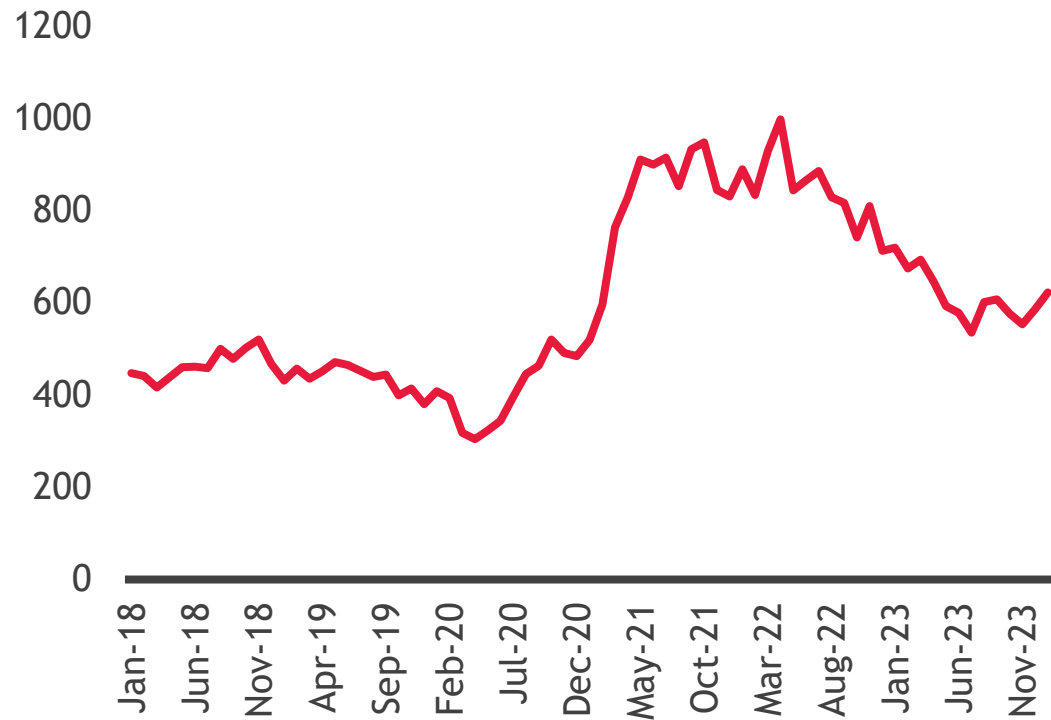
Substantial Variance for Increase in Manufacturing Value Put in Place by Region



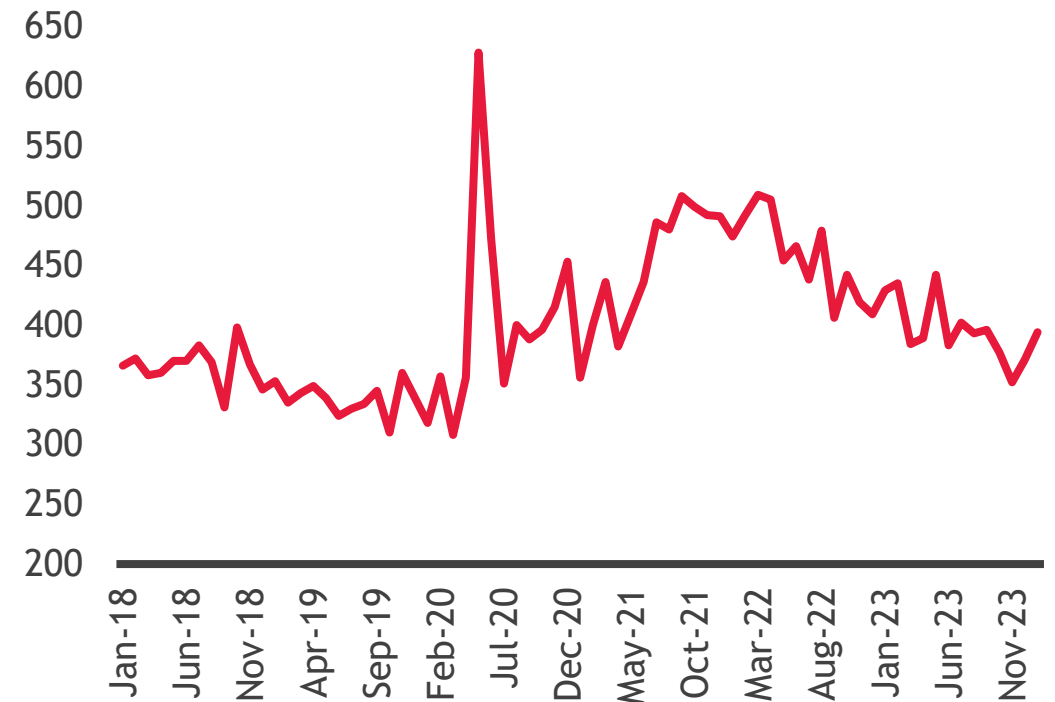
REBUILDING WORKFORCE

Manufacturing Job Openings Decline as Hiring Increases

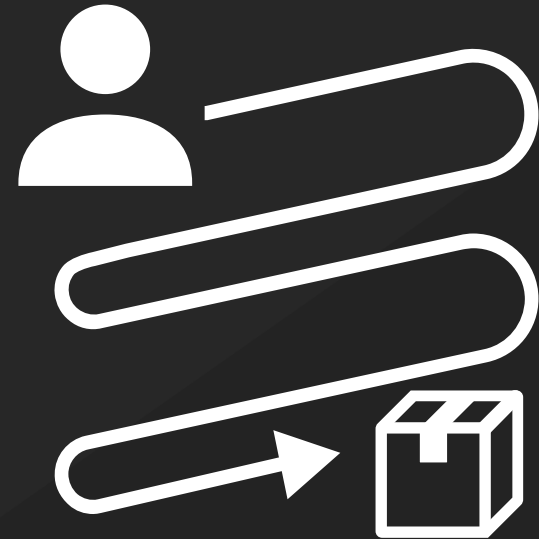
U.S. Manufacturing Job Opening Ks



U.S. Manufacturing Hires in Thousands



Evolving Supply Chains



Top Supply Chain Challenges for 2024



Actions Planned in the Next 12 Months to Mitigate Higher COGS

45%

Will Invest in Supply Chain Visibility



40%

Will Expand Their Distribution Footprint



37%

Will Look for Alternative Suppliers



35%

Will Pursue M&A Opportunities



25%

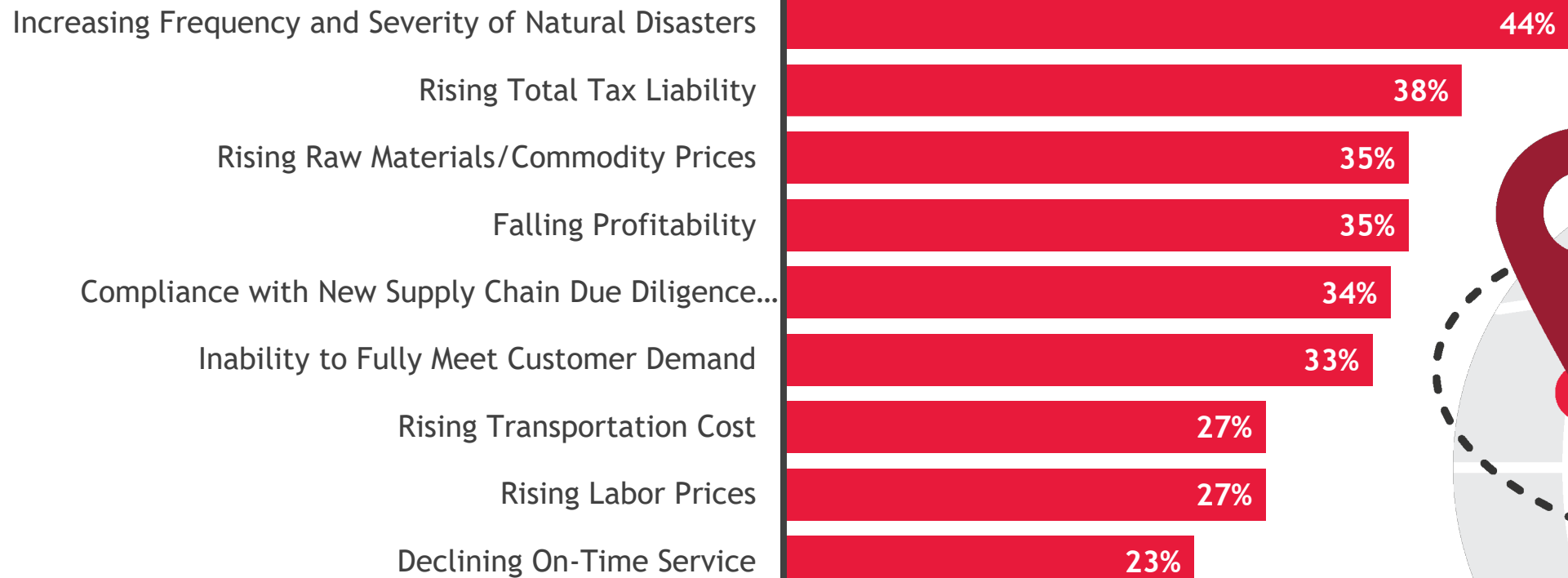
Will Move Production to the U.S. or a Geopolitically Close U.S. Ally



Manufacturers Shifting Countries

- ▶ Supply chain management as a discipline is growing increasingly complex.
- ▶ To mitigate risks and improve profitability, manufacturers are shifting countries, but with those shifts come new challenges.

Motivations for Shifting Countries in 2024



Discussion

Evolving Supply Chains



Accelerating Innovation



2024 Manufacturing Innovation

Investing in Analytics & AI

47% Will increase investment in AI

45% Will build a proprietary generative AI platform

39% Will increase investment in data analytics

Greatest Opportunities for AI



1. Compliance and Reporting



2. Safety

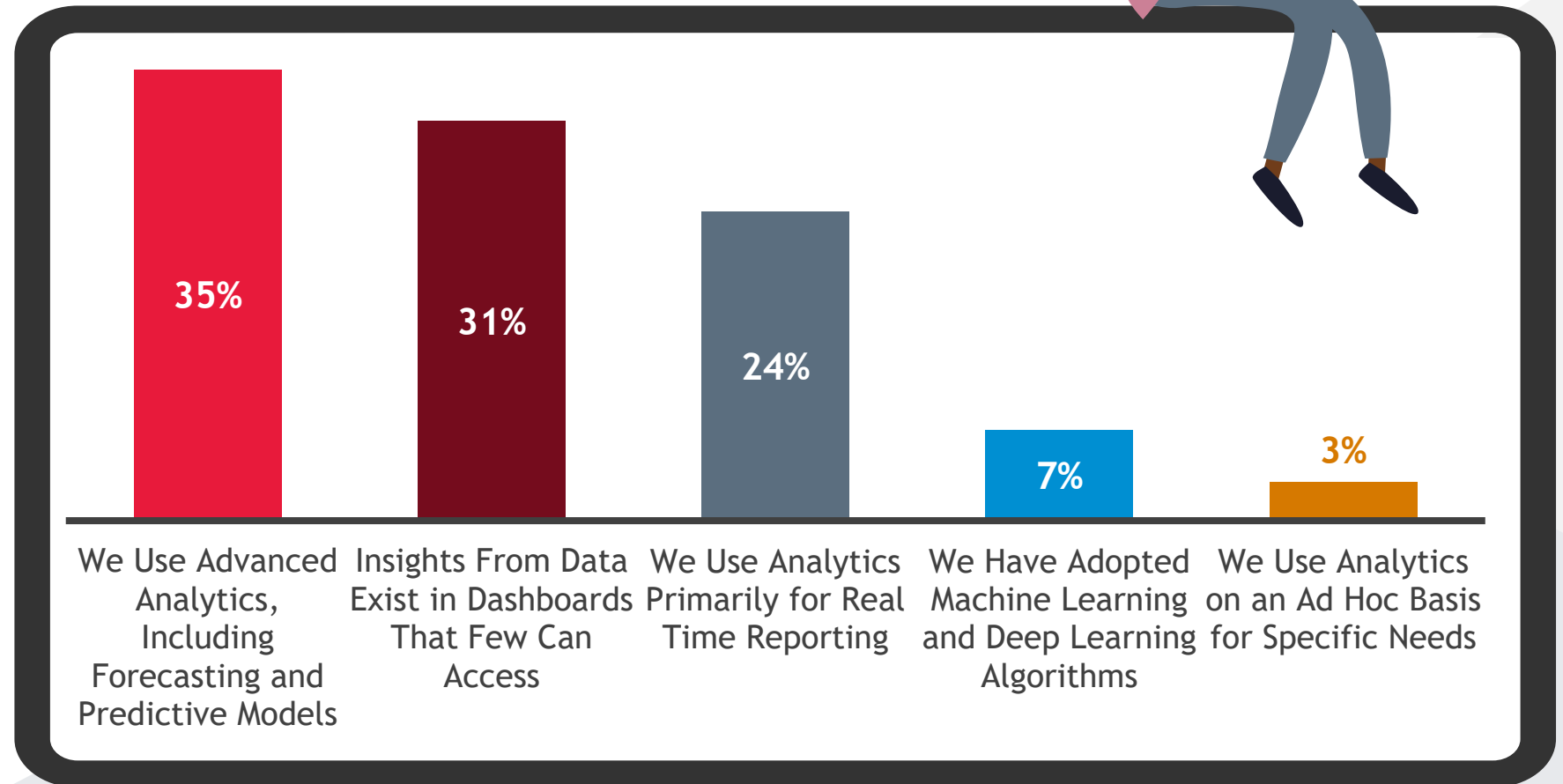


3. Customer Service

2024 Data Analytics Capabilities

Building the foundation for AI maturity begins by improving your ability to capture and process data from across the business.

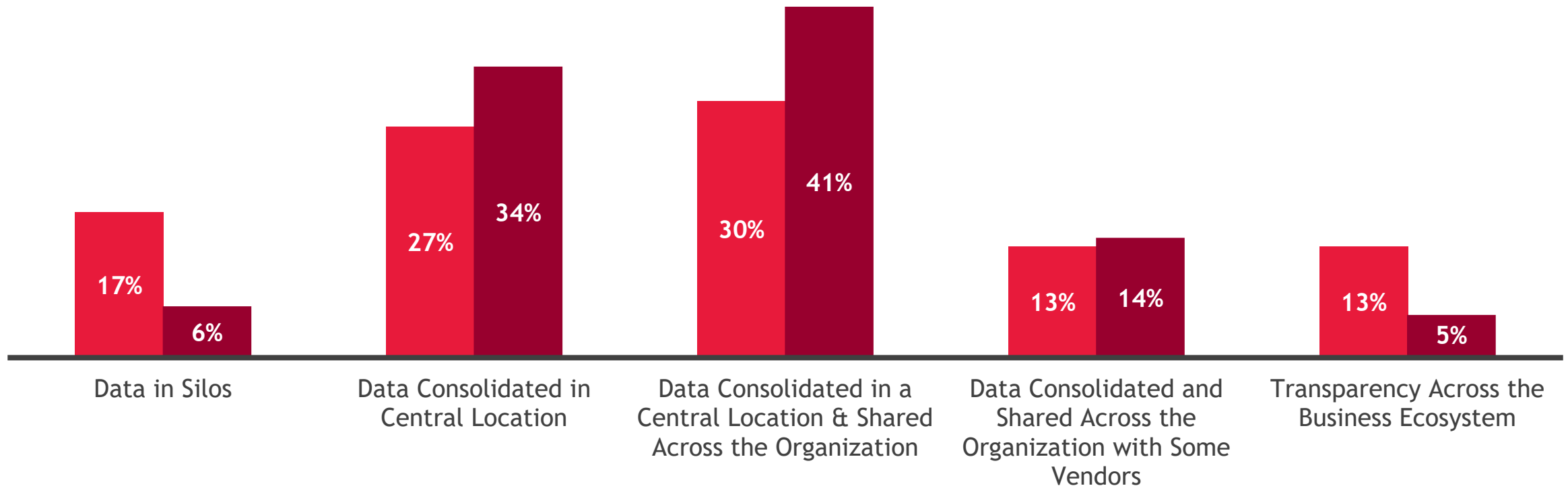
Data Analytics Maturity



State of the Digital Thread

- ▶ The digital thread is a framework for end-to-end information transparency between manufacturers and their suppliers and vendors.
- ▶ It enables closer collaboration and enhanced decision-making across the supply chain.

Level of Information Sharing



Discussion

Innovation



Revitalizing U.S. Manufacturing

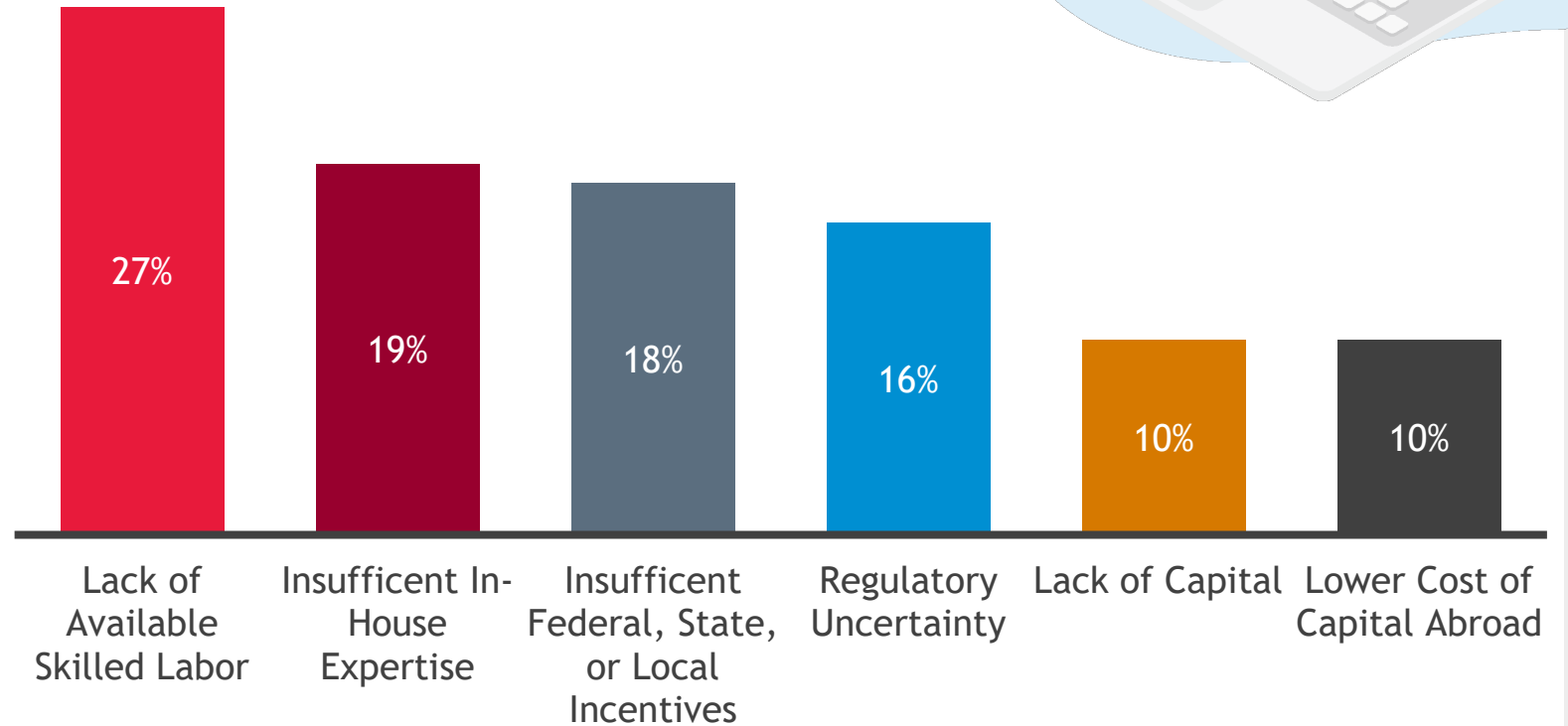


State of U.S. Manufacturing

Expansion Plans & Hurdles

- ▶ 89% of manufacturers will expand U.S. capacity in 2024
- ▶ The labor shortage remains the top barrier to expansion
- ▶ Manufacturers need to build stronger workforce pipelines

Top Onshoring Barriers

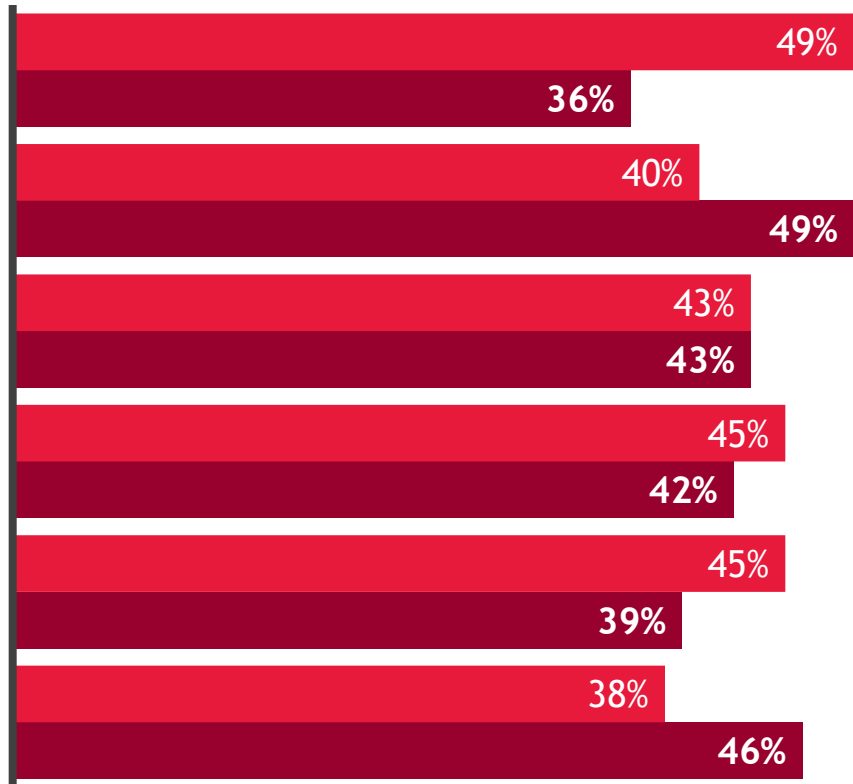


State of U.S. Manufacturing

Tax Credit Plans for 2024

Advanced Manufacturing Production Credit (45X)
 Research & Development Tax Credit
 Commercial Clean Vehicle Credit (45W)
 State and Local-Specific Tax Credit
 Qualifying Advanced Energy Product Credit (48C)
 Work Opportunity Tax Credit

- Planning to claim/apply in next 12 months
- Already claimed/applied for in last 12 months



State of Manufacturing Tax Credits

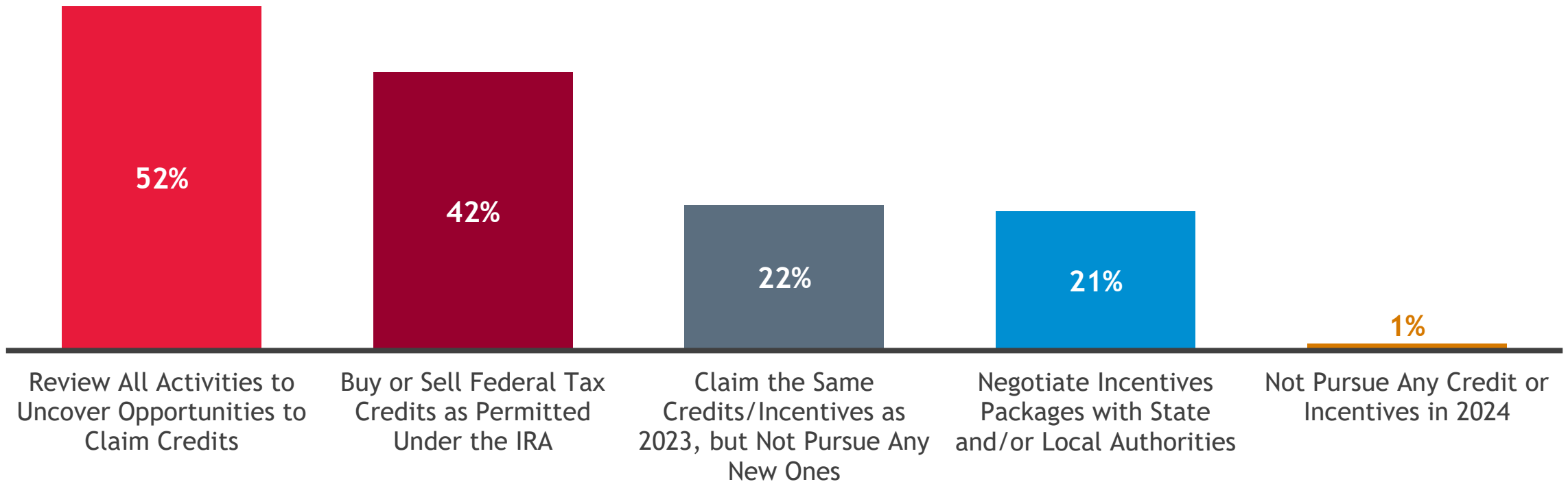
- ▶ Tax credits and incentives introduced by the Inflation Reduction Act (IRA) and CHIPS For America Act will play a key role in manufacturing expansion
- ▶ We expect more companies to consider onshoring in 2024



Tax Strategies to Fuel U.S. Expansion

- ▶ Many manufacturers are not taking advantage of all the tax credit opportunities available to them
- ▶ The credit monetization market, permitted via the IRA, will continue to grow in 2024
- ▶ Negotiating incentives is an overlooked strategy

Tax Credit Strategies in 2024



Discussion

Revitalizing U.S. Manufacturing



Thank You!



A modern office interior featuring a staircase with a glass railing, a reception desk with the BDO logo, and large windows overlooking a city skyline. The scene is dimly lit, with light coming from the windows and the reception desk.

About BDO USA

Our purpose is helping people thrive, every day. Together, we are focused on delivering exceptional and sustainable outcomes and value for our people, our clients and our communities. BDO is proud to be an ESOP company, reflecting a culture that puts people first. BDO professionals provide assurance, tax and advisory services for a diverse range of clients across the U.S. and in over 160 countries through our global organization.

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