

Industrial Supply Association

MARCH 2023

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Economic Overview

Recession in 2024

Current Events

Uncertainty and risks to the financial system have dominated the headlines of late. The recent bank failures have sparked fears of instability, exacerbated by painful memories of the Great Recession. The sharp increase in bond yields in the last year means that bonds bought during the pandemic now command a lower price in the secondary market. This is not a problem when such bonds are held to maturity or where hedging has been employed to address this risk. However, bank runs forced some banks to sell these securities early and cement a real loss. The bank failures to this point have come down to a combination of failing to hedge against this interest rate exposure and an abnormal level of exposure to specific sectors, such as tech. The FDIC has increased its coverage beyond the usual \$250,000-per-depositor limit, and the Federal Reserve has created a new liquidity facility; this seems to have quelled fears. We continue to monitor the situation but are not immediately worried about a systemic failure.

The Federal Reserve has raised the federal funds rate twice so far in 2023. Our current forecasts would accommodate an additional 25–75 basis points of rise. Current Federal Reserve signals are toward the lower end of that range, though the body's actions often deviate from its own projections. Should the Fed raise rates by more than we are currently expecting or keep rates high for longer (we expect cuts by the end of this year), it would pose a downside risk to many of our outlooks and likely lead to a more severe or longer-lasting recession for the US economy than currently forecasted.

Clues on the decline ahead

We are forecasting worsening economic conditions as this year progresses and recession in 2024. Residential construction will likely reach a low sooner, in mid-2023, and nonresidential construction will have a later low in 2025. Cyclical downturns come with a lot of uncertainty and attendant anxiety. Knowing when the trough will occur can help assuage those worries. Our system of leading indicators, proven through decades of business cycles, provides directional guidance for the next two to four quarters. While we have seen some burgeoning upward movement in a handful of indicators, it has not been enough to confirm a shift in momentum. Sustained rise in leading indicators starting late this year would confirm our forecasted late-2024 macroeconomic low.

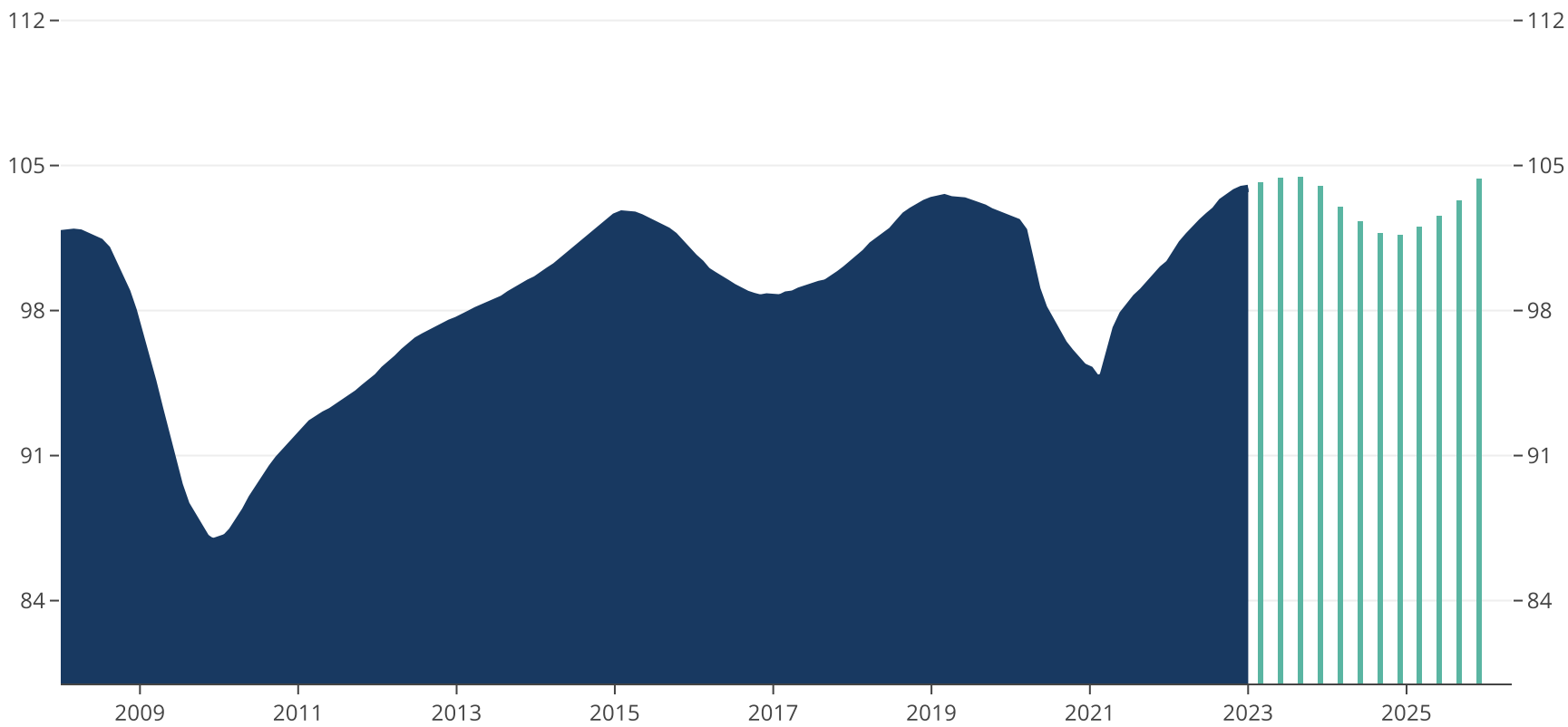
We expect the upcoming recession to be relatively mild. Multiple factors will contribute to this mildness. First, consumer balance sheets remain solid, with relatively low debt-to-income ratios, muted credit delinquency rates, and rising inflation-adjusted income. Second, the trend of onshoring and nearshoring manufacturing facilities to strengthen supply chains is likely to persist, providing new opportunities for domestic manufacturers. Third, many manufacturers built up robust backlogs during the period of supply chain disruption that characterized the pandemic. Provided we do not see large-scale cancelations, these backlogs will act to smooth out activity, contributing to a milder declining trend.

Takeaways for your business

As is the case with many recessions, it will be essential in the coming quarters to know your customers and your market. Given inflationary pressures, we expect this contractionary period will take a heavier toll on lower-income consumers. It will be essential to determine your customer base's willingness to stick with your products over lower-cost alternatives. Promote your business's competitive advantages; ensure your customers know why they do business with you over your competitors. Secondly, re-examine any planned capital expenditures – do they address persistent issues, or are you adding capacity that you will not need for another few years? Given the recent bank failures, as well as higher interest rates, credit conditions are likely to be tight. Be on good terms with your banker and make sure you have sufficient cash on hand. Finally, do not fall into the rabbit hole. In the long term, we expect the US to be well-positioned as a place for business.

US Industrial Production Index

Annual Average (12MMA)



Terminology and Methodology

Data Trends: Moving Averages and Totals

Quarterly Average *(Three-Month Moving Average, or 3MMA)*

The average of the latest three months of data, updated every month. In the example, \$57.79 is the quarterly average for the three months ending in March 2021 (i.e., the average for January, February, and March 2021).

Example: Monthly US Crude Oil Spot Prices averaged \$57.79 in the first quarter of 2021, a 26.3% increase from the first quarter of 2020.

Quarterly Total *(Three-Month Moving Total, or 3MMT)*

The total of the latest three months of data, updated every month. In the example, \$257.8 billion is the quarterly total for the three months ending in February 2021 (i.e., the total for December 2020, January 2021, and February 2021).

Example: Quarterly US Capital Goods New Orders totaled \$257.8 billion in February 2021.

Annual Average *(12-Month Moving Average, or 12MMA)*

The average of the latest 12 months of data, updated every month. In the example, 119.0 million is the annual average for February 2021 (i.e., the average for the 12-month period from March 2020 through February 2021).

Example: US Private Sector Employment averaged 119.0 million workers during the 12 months through February 2021, down 7.5% from one year earlier.

Annual Total *(12-Month Moving Total, or 12MMT)*

The total of the latest 12 months of data, updated every month. In the example, \$5.849 trillion is the annual total for February 2021 (i.e., the total for the 12-month period from March 2020 through February 2021).

Example: US Wholesale Trade totaled \$5.849 trillion during the 12 months through February 2021.

Growth Rates

Monthly Growth Rate *(1/12 Rate-of-Change)*

The percentage change between a given month and the same month one year earlier. In the example, 79.3% is the monthly growth rate for March 2021.

Example: Monthly US Copper Futures Prices were at \$4.00 per pound in March 2021, 79.3% above the March 2020 level of \$2.29.

Quarterly Growth Rate *(3/12 Rate-of-Change)*

The percentage change between a three-month period and the same three-month period from one year earlier. In the example, 26.3% is the quarterly growth rate for March 2021.

Example: US Crude Oil Spot Prices averaged \$57.79 in the first quarter of 2021, a 26.3% increase from the first quarter of 2020.

Annual Growth Rate *(12/12 Rate-of-Change)*

The percentage change between a 12-month period and the same 12-month period from one year earlier. In the example, -7.5% is the annual growth rate for February 2021; that is, US Private Sector Employment during March 2020 through February 2021 came in 7.5% below Employment from March 2019 through February 2020.

Example: US Private Sector Employment averaged 119.0 million workers during the 12 months through February 2021, down 7.5% from one year earlier.

Business Cycle Phases



Recovery (A)

The annual growth rate (12/12) is rising, but the rate of growth is still negative. We denote this phase with blue (for improving).



Accelerating Growth (B)

The annual growth rate (12/12) is rising, and the rate of growth is positive. We denote this phase with green (for go).



Slowing Growth (C)

The annual growth rate (12/12) is positive, but the rate of growth is declining. We denote this phase with yellow (for caution).



Recession (D)

The annual growth rate (12/12) is declining, and the rate of growth is negative. We denote this phase with red (for warning).

Industrial Supply Association Markets Dashboard

		Current		Annual Growth Rate Forecast (12/12), Year-End*		
Page Number	Indicator	Growth Rate**	Phase	2023**	2024**	2025**
4	US Industrial Production Index	3.6%	C	0.1%	-2.3%	2.7%
5	US Civilian Aircraft Equipment Production Index	6.5%	C	4.0%	-0.6%	10.7%
6	US Automobile Production Index	27.6%	B	2.7%	-4.6%	5.5%
7	US Private Nonresidential Construction	11.1%	B	12.8%	-2.0%	0.1%
8	US Primary Metals Production Index	-1.2%	D	-4.3%	-7.0%	2.7%
9	US Real Gross Domestic Product (Quarterly Growth Rate)	0.9%	C	0.9%	-0.3%	3.3%

*Coloring denotes the business cycle phase at year-end. For example, if a value in the 2021 column is colored blue, the corresponding indicator is forecasted to be in Phase A, Recovery, at year-end 2021. Green denotes Phase B, yellow Phase C, and red Phase D.

**Annual growth rate (12/12) except where otherwise noted.



Recovery (A)



Accelerating Growth (B)



Slowing Growth (C)

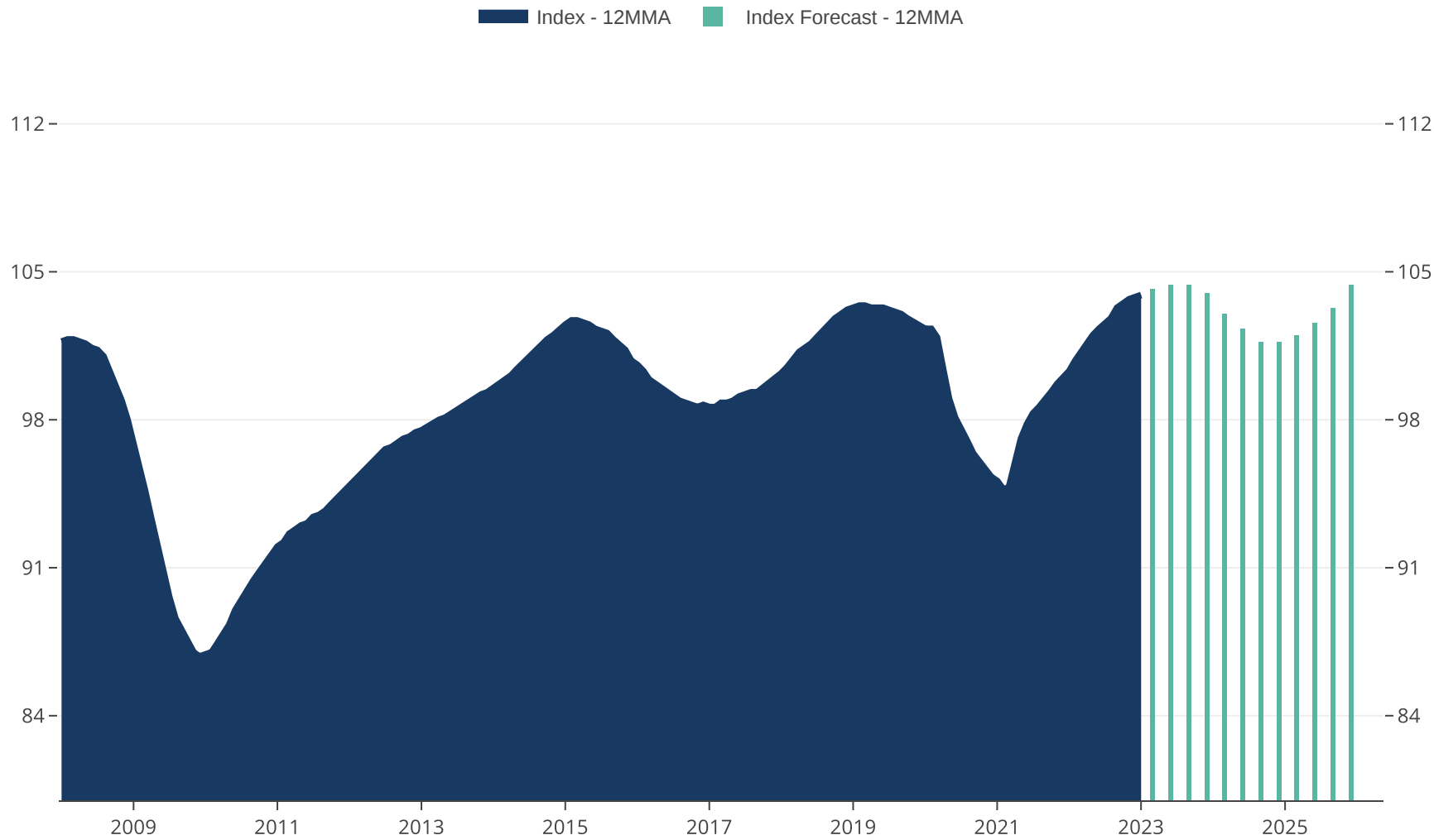


Recession (D)

US Industrial Production Index

Manufacturing Declining as Oil and Gas Drive Rise; Mild Recession Ahead in 2024

Annual Average (12MMA)



Annual Growth Rate (12/12)



Current Phase

Phase C
Slowing Growth

Industry Outlook	
<i>Year</i>	<i>Annual Growth Rate</i>
2023	0.1%
2024	-2.3%
2025	2.7%

Current Indicator Amplitude

- January 2023 Annual Growth Rate (12/12): 3.6%
- January 2023 Annual Average (12MMA), 2017=100: 103.9

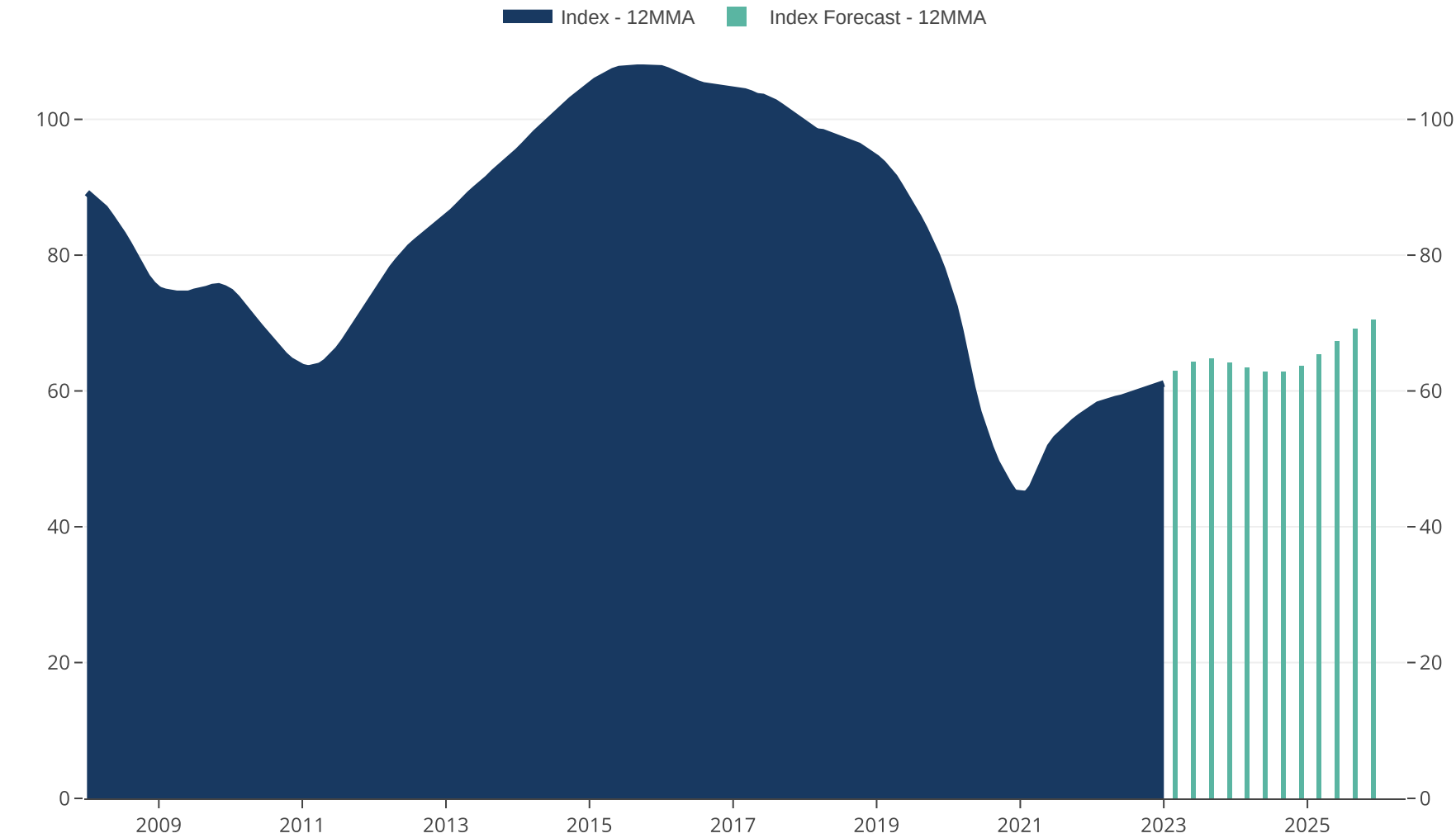
	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Lower Forecast Range	2.4	1.5	0.5	-0.5	-1.8	-2.7	-3.3	-3.0	-1.7	-0.5	0.8	1.9
Annual Growth Rate (%)	2.9	2.1	1.1	0.1	-1.1	-2.0	-2.6	-2.3	-1.0	0.3	1.6	2.7
Upper Forecast Range	3.4	2.6	1.7	0.7	-0.4	-1.3	-1.9	-1.5	-0.2	1.0	2.3	3.4

Lower Forecast Range	103.7	103.8	103.8	103.4	102.3	101.6	101.0	100.9	101.3	101.8	102.5	103.6
Annual Average Index (2017=100)	104.2	104.4	104.4	104.0	103.0	102.3	101.7	101.7	102.0	102.6	103.3	104.4
Upper Forecast Range	104.7	105.0	105.1	104.6	103.8	103.0	102.5	102.4	102.8	103.3	104.1	105.1

US Civilian Aircraft Equipment Production Index

Boeing Reports a Sizable Backlog, but Capacity Is Constrained; Mild Decline Expected in 2024

Annual Average (12MMA)



Annual Growth Rate (12/12)



Current Phase

Phase C
Slowing Growth

Industry Outlook	
Year	Annual Growth Rate
2023	4.0%
2024	-0.6%
2025	10.7%

Current Indicator Amplitude

- January 2023 Annual Growth Rate (12/12): 6.5%
- January 2023 Annual Average (12MMA), 2017=100: 61.1

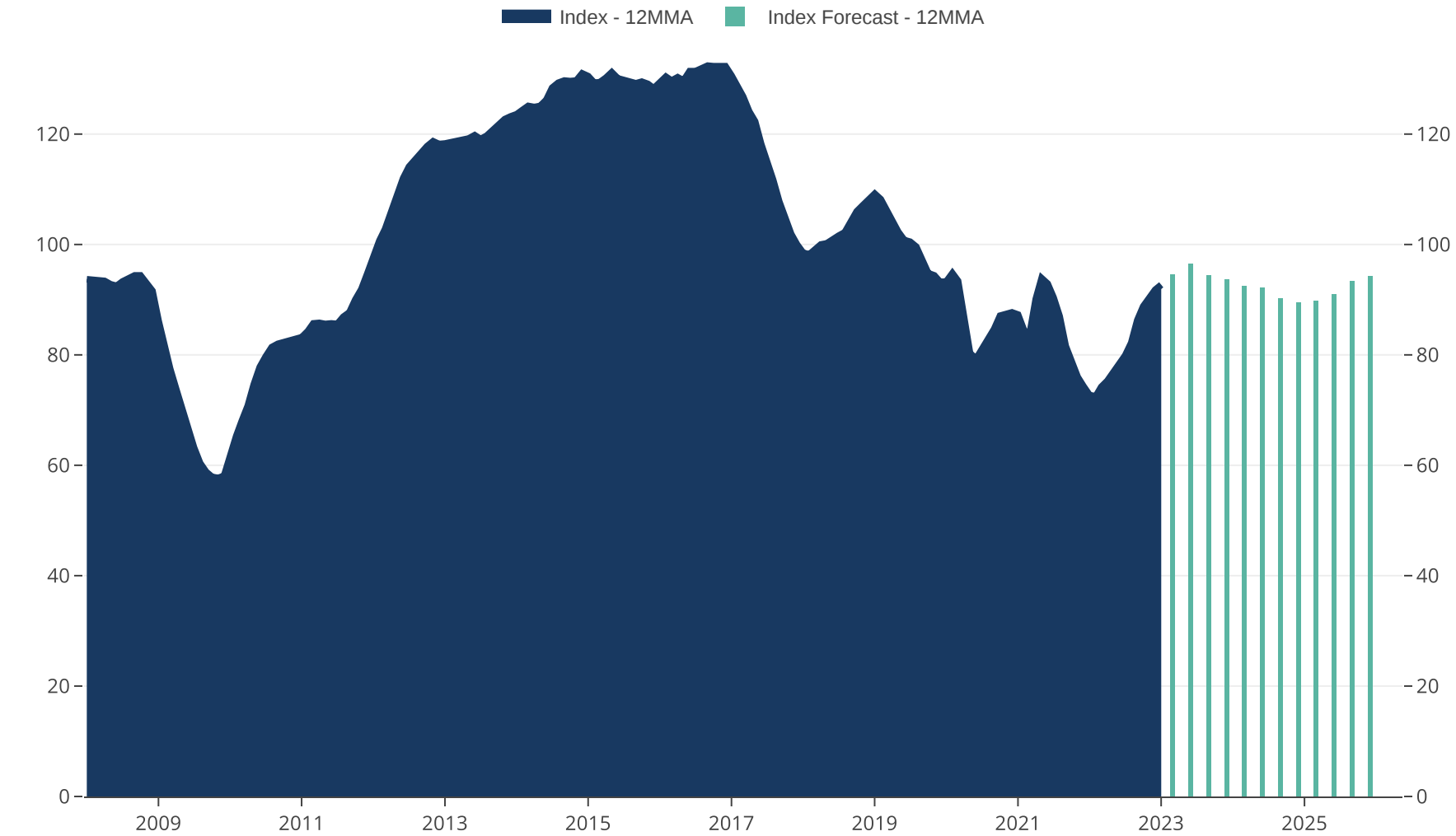
	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Lower Forecast Range	6.7	7.7	6.3	2.6	-0.8	-3.9	-4.4	-2.1	1.6	5.7	8.6	9.2
Annual Growth Rate (%)	8.0	9.0	7.7	4.0	0.7	-2.4	-2.9	-0.6	3.1	7.2	10.1	10.7
Upper Forecast Range	9.3	10.3	9.1	5.4	2.2	-0.9	-1.4	0.9	4.6	8.7	11.6	12.2

Lower Forecast Range	62.2	63.6	63.8	63.2	62.4	61.8	61.8	62.7	64.4	66.4	68.2	69.6
Annual Average Index (2017=100)	62.9	64.3	64.7	64.1	63.4	62.8	62.8	63.7	65.3	67.3	69.1	70.5
Upper Forecast Range	63.7	65.1	65.5	64.9	64.3	63.8	63.8	64.7	66.3	68.3	70.1	71.5

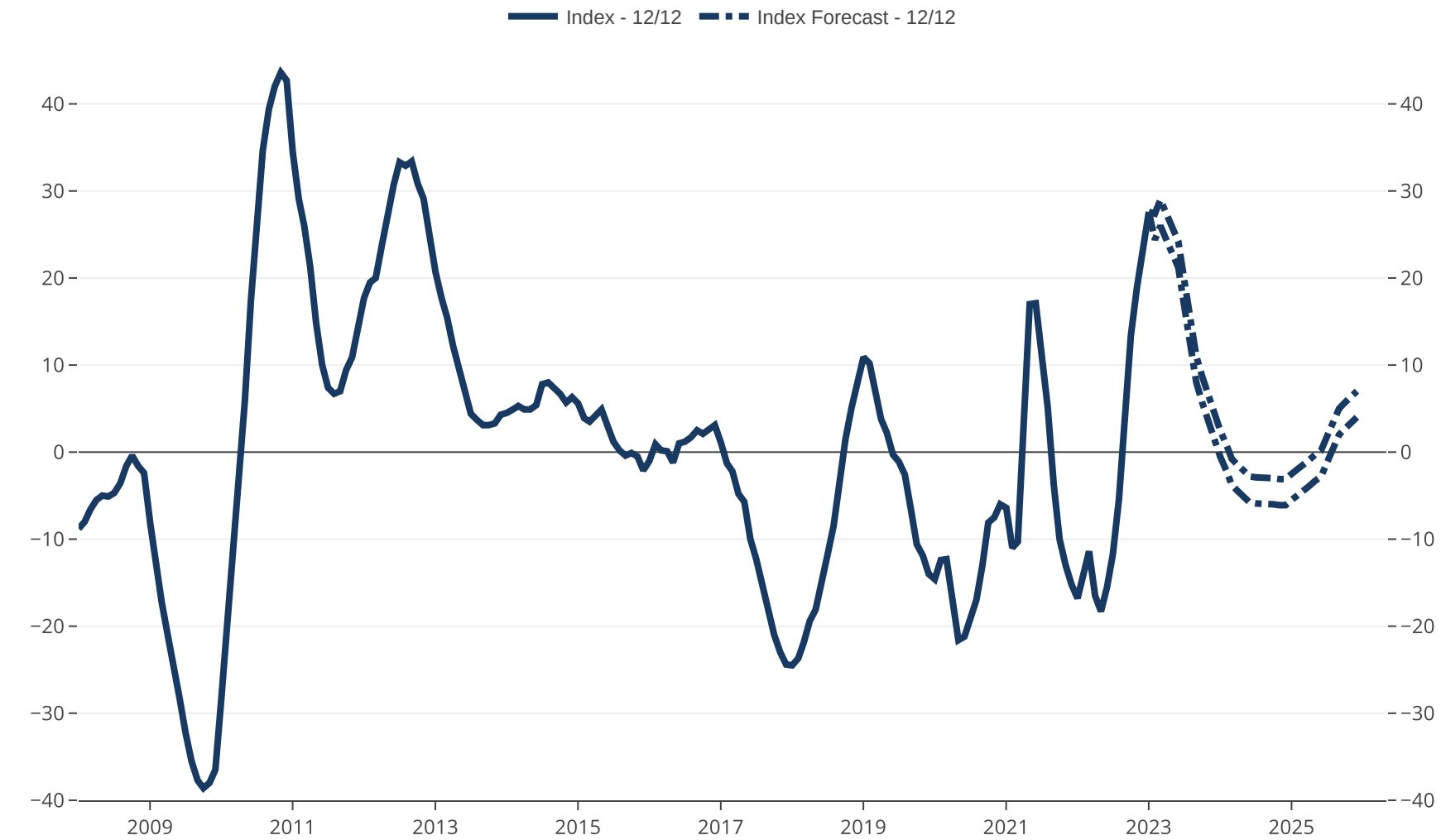
US Automobile Production Index

Production to Rise to Replenish Low Inventories, but Elevated Interest Rates Likely to Cool Demand

Annual Average (12MMA)



Annual Growth Rate (12/12)



Current Phase



Phase B
Accelerating
Growth

Industry Outlook

Year Annual Growth Rate

2023	2.7%
2024	-4.6%
2025	5.5%

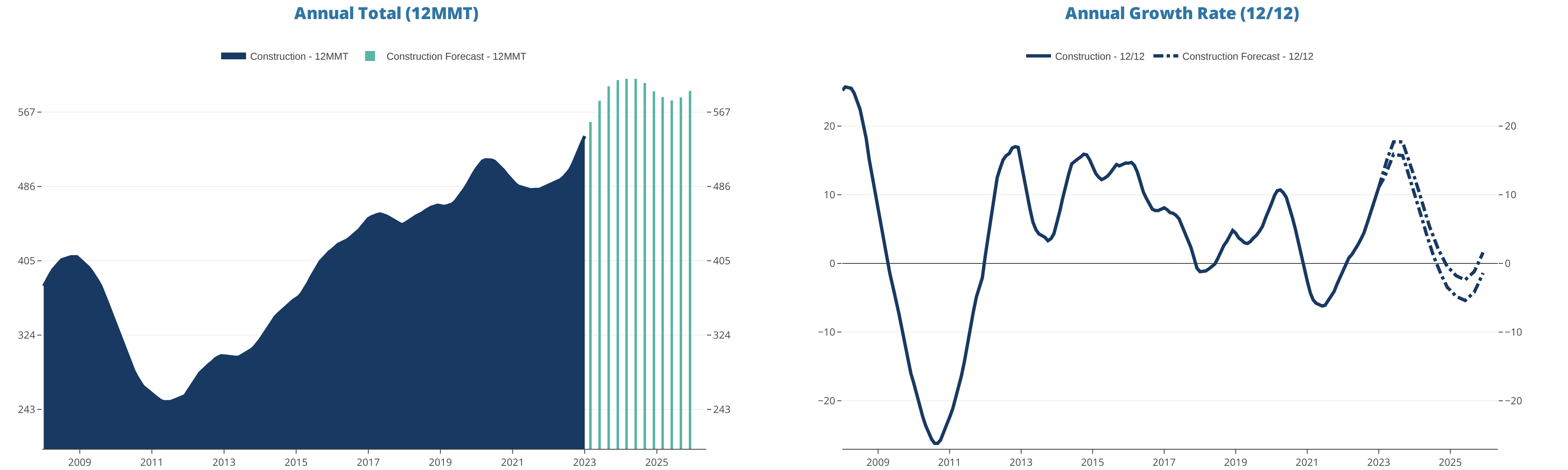
Current Indicator
Amplitude

- January 2023 Annual Growth Rate (12/12): 27.6%
- January 2023 Annual Average (12MMA), 2017=100: 92.7

	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Lower Forecast Range	26.0	21.2	8.0	1.2	-3.8	-5.8	-6.0	-6.1	-4.4	-2.8	2.0	4.0
Annual Growth Rate (%)	27.5	22.7	9.5	2.7	-2.3	-4.3	-4.5	-4.6	-2.9	-1.3	3.5	5.5
Upper Forecast Range	29.0	24.2	11.0	4.2	-0.8	-2.8	-3.0	-3.1	-1.4	0.2	5.0	7.0

Lower Forecast Range	93.5	95.2	93.2	92.3	91.0	90.8	88.8	88.0	88.4	89.7	92.0	92.9
Annual Average Index (2017=100)	94.6	96.4	94.4	93.7	92.4	92.2	90.2	89.4	89.8	91.0	93.4	94.3
Upper Forecast Range	95.7	97.6	95.7	95.0	93.9	93.7	91.6	90.8	91.1	92.4	94.7	95.6

Near-Term Outlook Lifted on Data Revision; 2024 Growth Rate Downgraded on Pricing Expectations



Current Phase



Phase B
Accelerating
Growth

Industry Outlook	
<i>Year</i>	<i>Annual Growth Rate</i>
2023	12.8%
2024	-2.0%
2025	0.1%

Current Indicator Amplitude

- January 2023 Annual Growth Rate (12/12): 11.1%
- January 2023 Annual Total (12MMT), Billions of \$: 540.9

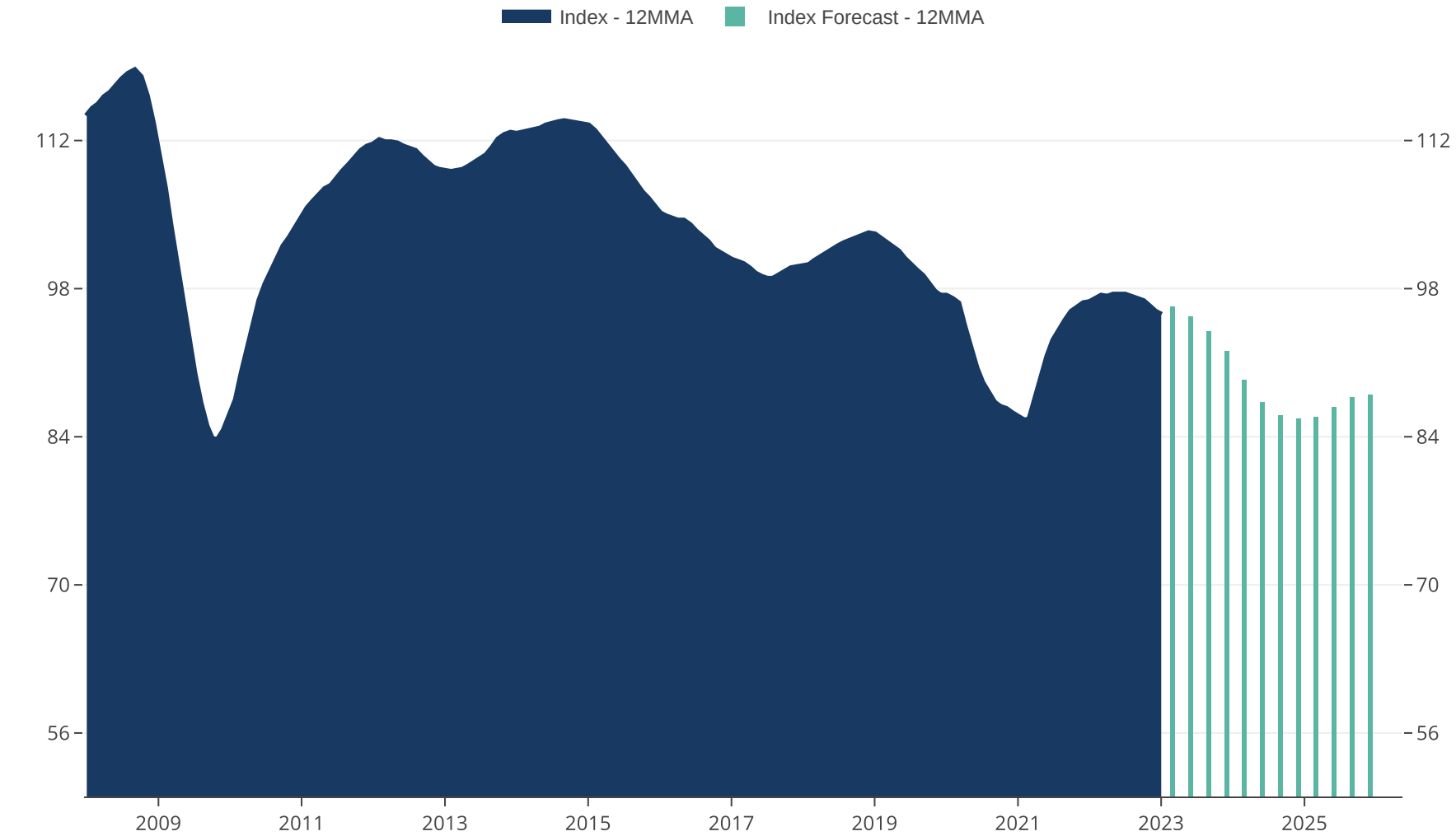
	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Lower Forecast Range	12.6	15.9	15.7	11.7	7.3	2.8	-0.8	-3.5	-4.8	-5.4	-4.2	-1.4
Annual Growth Rate (%)	13.4	16.8	16.7	12.8	8.5	4.1	0.6	-2.0	-3.3	-3.9	-2.7	0.1
Upper Forecast Range	14.2	17.7	17.7	13.9	9.7	5.4	2.0	-0.5	-1.8	-2.4	-1.2	1.6

Lower Forecast Range	552.1	575.0	590.2	595.8	596.6	595.7	590.5	580.6	574.3	570.6	573.7	581.4
Annual Total Construction (Billions of \$)	556.0	579.4	595.3	601.7	603.2	603.2	598.9	589.7	583.3	579.7	582.7	590.3
Upper Forecast Range	559.9	583.9	600.4	607.6	609.9	610.7	607.2	598.7	592.4	588.7	591.7	599.1

US Primary Metals Production Index

Softening Demand for Goods Will Impact Commodities Demand; Decline Expected Through 2024

Annual Average (12MMA)



Annual Growth Rate (12/12)



Current Phase

Phase D
Recession

Industry Outlook	
<i>Year</i>	<i>Annual Growth Rate</i>
2023	-4.3%
2024	-7.0%
2025	2.7%

Current Indicator Amplitude

- January 2023 Annual Growth Rate (12/12): -1.2%
- January 2023 Annual Average (12MMA), 2017=100: 95.5

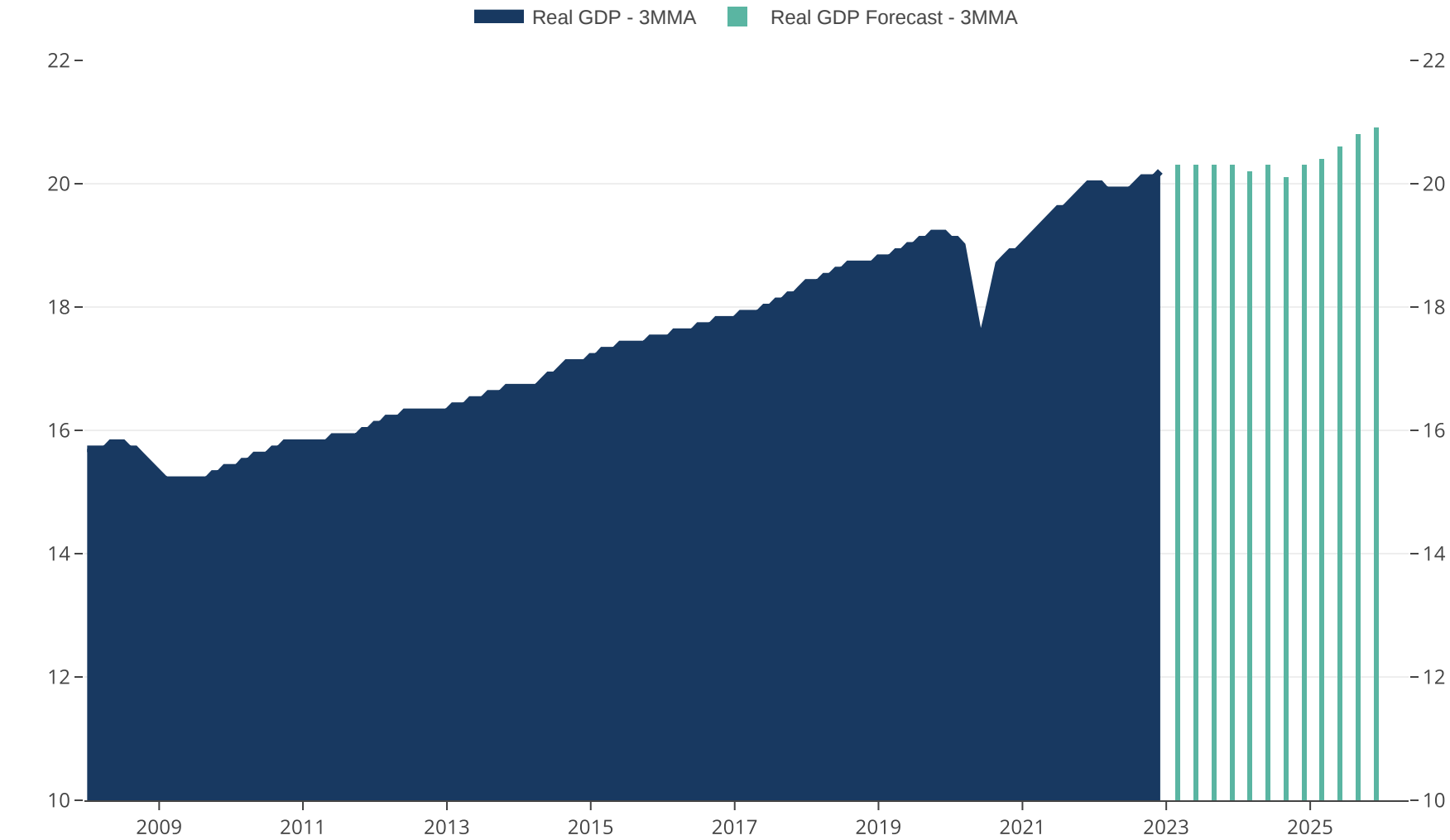
	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Lower Forecast Range	-1.8	-3.0	-4.1	-5.3	-8.1	-10.0	-10.0	-8.5	-5.5	-2.1	0.5	1.2
Annual Growth Rate (%)	-1.0	-2.0	-3.1	-4.3	-7.1	-8.5	-8.5	-7.0	-4.0	-0.6	2.0	2.7
Upper Forecast Range	-0.2	-1.0	-2.1	-3.3	-6.1	-7.0	-7.0	-5.5	-2.5	0.9	3.5	4.2

Lower Forecast Range	95.5	94.5	93.0	91.2	88.5	85.9	84.6	84.3	84.5	85.5	86.5	86.7
Annual Average Index (2017=100)	96.3	95.4	94.0	92.1	89.4	87.3	86.0	85.7	85.9	86.8	87.7	88.0
Upper Forecast Range	97.1	96.4	95.0	93.1	90.4	88.8	87.4	87.0	87.2	88.1	89.0	89.3

US Real Gross Domestic Product

GDP to Flatten as Year Progresses, Then Decline Mildly for About Two Quarters of 2024


Quarterly Average (3MMA)



Quarterly Growth Rate (3/12)



Current Phase

Phase C
Slowing Growth

Industry Outlook	
Year	Quarterly Growth Rate
2023	0.9%
2024	-0.3%
2025	3.3%

Current Indicator Amplitude

- December 2022 Quarterly Growth Rate (3/12): 0.9%
- December 2022 Quarterly Average (3MMA), Trillions of Chained 2012 \$: 20.2

	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Lower Forecast Range	1.4	2.0	1.3	0.7	-0.4	-0.6	-1.3	-0.7	0.7	1.0	2.7	2.9
Quarterly Growth Rate (%)	1.6	2.2	1.5	0.9	-0.1	-0.2	-0.9	-0.3	1.1	1.4	3.1	3.3
Upper Forecast Range	1.8	2.4	1.7	1.2	0.2	0.2	-0.5	0.1	1.5	1.8	3.5	3.7

Lower Forecast Range	20.2	20.3	20.3	20.3	20.2	20.2	20.1	20.2	20.4	20.5	20.7	20.9
Quarterly Average Real GDP (Trillions of Chained 2012 \$)	20.3	20.3	20.3	20.3	20.2	20.3	20.1	20.3	20.4	20.6	20.8	20.9
Upper Forecast Range	20.3	20.4	20.4	20.4	20.3	20.4	20.2	20.4	20.5	20.6	20.8	21.0

US Leading Indicators

Indicator	Direction		
	2Q23	3Q23	4Q23
ITR LEADING INDICATOR™	●	●	●
ITR RETAIL SALES LEADING INDICATOR™	●	●	●
US OECD LEADING INDICATOR	●	●	N/A
US ISM PMI (PURCHASING MANAGERS INDEX)	●	●	●
US TOTAL CAPACITY UTILIZATION RATE	●	●	N/A

Green denotes that the indicator signals cyclical rise for the economy in the given quarter. Red denotes the opposite.

What It Means for the US Economy

- The ITR Leading Indicator™ moved lower in February, signaling ongoing business cycle decline for the US industrial economy into at least late 2023.
- The US Total Industry Capacity Utilization Rate also signals that US Industrial Production will be on the back side of the business cycle into at least late 2023.
- The US OECD Leading Indicator monthly rate-of-change has tentatively moved higher but has not yet exhibited a statistically significant trend reversal. The indicator rate-of-change decline through November 2022 suggests that the US Industrial Production growth rate will decline into at least the second half of next year, in line with our outlook.
- Downward movement in the ITR Retail Sales Leading Indicator™ corroborates our expectation for further growth rate decline for US Total Retail Sales.

Leading indicators point to tougher economic conditions ahead in the coming quarters. Monitor your company's quarterly and annual rolling rates-of-change to assess how you are being impacted. Consider your end markets and client demographics to estimate your sensitivity to downward pressure. For many companies that trend with the industrial sector, we are expecting a relatively mild downturn, more akin to 2015-16 than the Great Recession.

Market Definitions

US Industrial Production Index

Index of total industrial production in the United States; includes manufacturing, mining, and utilities. Source: Federal Reserve Board (FRB). 2017 = 100, not seasonally adjusted (NSA).

US Automobile Production Index

Automobile Production. This U.S. industry comprises establishments primarily engaged in (1) manufacturing complete automobiles (i.e., body and chassis or unibody) or (2) manufacturing automobile chassis only. Source: FRB. Index, 2017 = 100, NSA.

US Primary Metals Production Index

Industries in the Primary Metal Manufacturing subsector smelt and/or refine ferrous and nonferrous metals from ore, pig or scrap, using electrometallurgical and other process metallurgical techniques. Establishments in this subsector also manufacture metal alloys and superalloys by introducing other chemical elements to pure metals. The output of smelting and refining, usually in ingot form, is used in rolling, drawing, and extruding operations to make sheet, strip, bar, rod, or wire, and in molten form to make castings and other basic metal products. Source: FRB. Index, 2017 = 100, NSA.

US Civilian Aircraft Equipment Production Index

Index for US establishments primarily engaged in one or more of the following: (1) manufacturing aircraft engines and engine parts; (2) developing and making prototypes of aircraft engines and engine parts; (3) aircraft propulsion system conversion (i.e., major modifications to systems); (4) aircraft propulsion systems overhaul and rebuilding (i.e., periodic restoration of aircraft propulsion system to original design specifications). Source: FRB. NAICS Code: 336412,3. Index, 2017 = 100, NSA.


US Private Nonresidential Construction

Private nonresidential construction in the United States. Includes private construction of the following types: office, commercial, automotive, lodging, dining, retail, warehouse, storage facilities, schools, dormitories, sports facilities, galleries, museums, hospitals, medical buildings, special care facilities, religious buildings, fitness centers, amusement parks, movie theaters, social centers, transportation facilities, power facilities, and manufacturing facilities. Source: US Census Bureau. Measured in billions of dollars, NSA.

US Real Gross Domestic Product

Real (inflation-adjusted) gross domestic product (GDP) in the United States. GDP is the monetary value of all the finished goods and services produced within a country's borders in a specific time period. GDP includes all private and public consumption, government outlays, investments and exports minus imports that occur within a defined territory. Put simply, GDP is a broad measurement of a nation's overall economic activity. Source: Bureau of Economic Analysis. Measured in trillions of 2012 chained dollars, seasonally adjusted annual rate (SAAR).

Management Objectives™

Phase A	Phase B	Phase C	Phase D
<div><div></div><div>Recovery</div></div> <div><ul style="list-style-type: none">● Scrupulously evaluate the supply chain● Model positive leadership (culture turns to behavior)● Start to phase out marginal opportunities (products, processes, people); repair margins● Perform due diligence on customers and extend credit● Be on good terms with a banker; you will need the cash more now than in any other phase● Invest in customer market research; know what they value and market/price accordingly● Hire key people and implement company-wide training programs ahead of Phase B● Allocate additional resources to sales and marketing● Invest in system/process efficiencies● Make opportunistic capital and business acquisitions; use pessimism to your advantage</div>	<div><div></div><div>Accelerating Growth</div></div> <div><ul style="list-style-type: none">● Ensure quality control keeps pace with increasing volume● Invest in workforce development: hiring, training, retention● Ensure you have the right price escalator; space out price increases● Maximize your profit margins through differentiation; stand out from the crowd and set yourself apart● Use improved cash flow to strategically position the business to beat the business cycle● Expand credit to customers● Improve corporate governance (rent a CFO; establish a board of advisors or board of directors)● Communicate competitive advantages; build the brand● Query users for what they want and what is important to them● Sell the business in a climate of maximum goodwill</div>	<div><div></div><div>Slowing Growth</div></div> <div><ul style="list-style-type: none">● Know if your markets are headed for a soft landing or a hard landing● Cash is king; beware of unwarranted optimism● Stay on top of aging receivables● Revisit capital expenditure plans● Lose the losers: if established business segments are not profitable during this phase, eliminate them● Use competitive pricing to manage your backlog through the coming slowdown● Avoid committing yourself to long-term expenses at the top of the price cycle, but lock in revenue● Go entrepreneurial and/or counter-cyclical● Evaluate your vendors for financial strength; if needed, look for additional vendors as a safety net● If the cycle looks recessionary, cross-train key people to prepare for workforce attrition/reduction</div>	<div><div></div><div>Recession</div></div> <div><ul style="list-style-type: none">● Implement aggressive cost-cutting measures● Offer alternative products with a lower cost basis● Perform due diligence on acquisitions while valuations are falling● Reduce advertising as consumers become more price conscious● Enter or renegotiate long-term leases● Negotiate labor contracts● Consider capital equipment needs for the next cycle● Tighten credit policies● Develop programs for advertising, training, and marketing to implement in Phase A● Lead with optimism, remembering that Phase D is temporary</div>