

Industrial Supply Association

DECEMBER 2023



Table of Contents

Economic Overview	1
Terminology and Methodology	2
Industrial Supply Association Markets Dashboard	3
US Industrial Production Index	4
US Civilian Aircraft Equipment Production Index	5
US Automobile Production Index	6
US Private Nonresidential Construction	7
US Primary Metals Production Index	8
US Real Gross Domestic Product	9
US Leading Indicators	10
Market Definitions	11

Economic Overview

Downward pressure is pervasive and intensifying as consumers struggle with the cumulative impact of elevated inflation and tighter financial conditions. Wholesalers and manufacturers are already contending with year-over-year contraction, while retail and business-to-business spending growth is slowing to a crawl. US Single-Unit Housing Starts, which typically lead the economy, are an exception to this widespread weakness; Starts are in the early stages of recovery. The nonresidential construction sector is also an outlier, but the current acceleration will soon give way to slowing growth.

Supply chains continue to adapt to the ripple effects of 2020. A few industries – such as automotive and aerospace – are still rebuilding inventories, while others have overbuilt inventories and are now correcting course. We are keeping a close eye on inventory-to-sales ratios and the state of the supply chain. We are encouraging our clients to try to improve communications along their supply chains in order to minimize any bullwhip effect.

Evidence for the Mild Decline in 2024

For many markets, mild decline will be the predominant trend in 2024. Consumers, who are a driving force of the US economy, are facing budget challenges. Credit card delinquencies are trending around the highest level in a decade, and savings balances (adjusted for inflation) are running below the long-term trend. The cumulative effect of prior high inflation and elevated borrowing costs will put further pressure on consumers' budgets into 2024, impacting many retail markets and the broader economy.

On the business side, corporate profits are below the year-ago level, corporate bond yields are elevated, and bank lending standards are tightening. Amid these financial factors, coupled with softening economic data, businesses will likely be more conservative in their capital goods investments. However, it is important to note that Corporate Cash Holdings are well-above pre-2020 levels, and businesses are so far managing their debts relatively well. These factors suggest the economic decline will be relatively mild. How 2024 feels to your company will depend on its exposure to the more budget-constrained consumer, its sensitivity to interest rates, its inventory levels, and any market share changes.

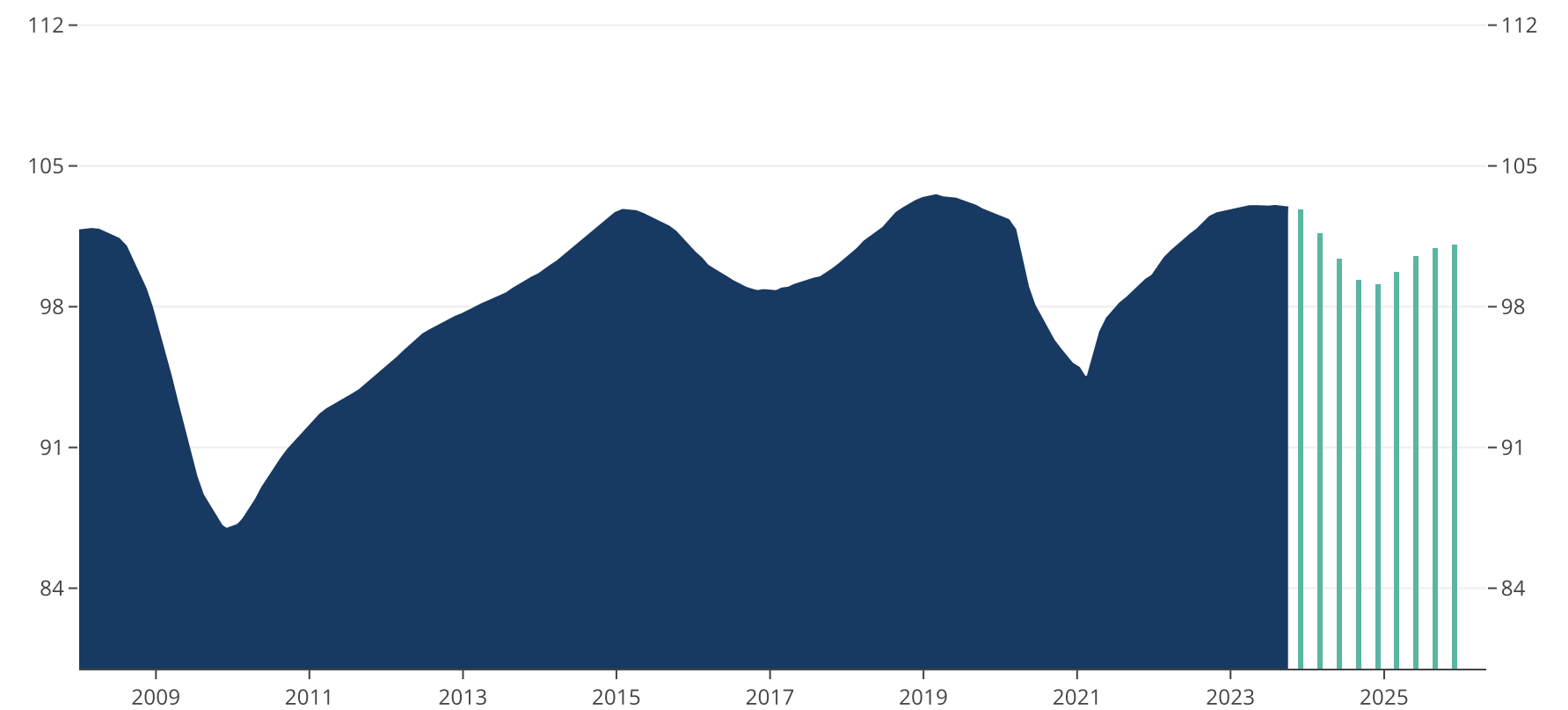
Opportunities Lie Ahead – Plan for Rise in 2025

Try not to get caught up in the volatility and pessimistic bent of the media. Instead, follow data-driven economic analysis and apply the strategies that align with the pertinent phase of the business cycle. Check out the Management Objectives™ on the last page of this report for some ideas, and be sure to look ahead to the Phase A, Recovery, strategies so that you are ready to implement them for maximum benefit when the time comes.

The US is still a great place to do business, and we expect the economy to resume its ascent in 2025. A shift in monetary policy to something more accommodative will likely be a contributing factor. Additionally, we think a 2024 characterized by disinflation and reduced spending will help consumers regain stronger financial footing.

As the volatility of the early 2020s recedes further into the past, the economic ripples will slowly dissipate. Businesses will adapt to new conditions. Still, some challenges will remain. We expect inflation and borrowing costs will remain higher than in the 2010s, so have a plan to protect your margins and do not expect cheap money. Demographic trends will keep the labor market relatively tight, so look for ways to reduce your dependency on labor and increase your efficiency.

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

Page Number	Indicator	Current		Annual Growth Rate Forecast (12/12), Year-End*	
		Growth Rate**	Phase	2024**	2025**
4	US Industrial Production Index	0.4%	C	-3.6%	2.0%
5	US Civilian Aircraft Equipment Production Index	4.1%	C	7.2%	-1.3%
6	US Automobile Production Index	12.7%	C	-6.7%	5.5%
7	US Private Nonresidential Construction	20.7%	B	1.8%	-6.3%
8	US Primary Metals Production Index	-1.9%	D	-3.6%	2.3%
9	US Real Gross Domestic Product (<i>Quarterly Growth Rate</i>)	3.0%	C	-0.4%	2.4%

*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.



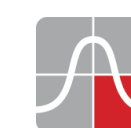
Recovery (A)



Accelerating Growth (B)



Slowing Growth (C)

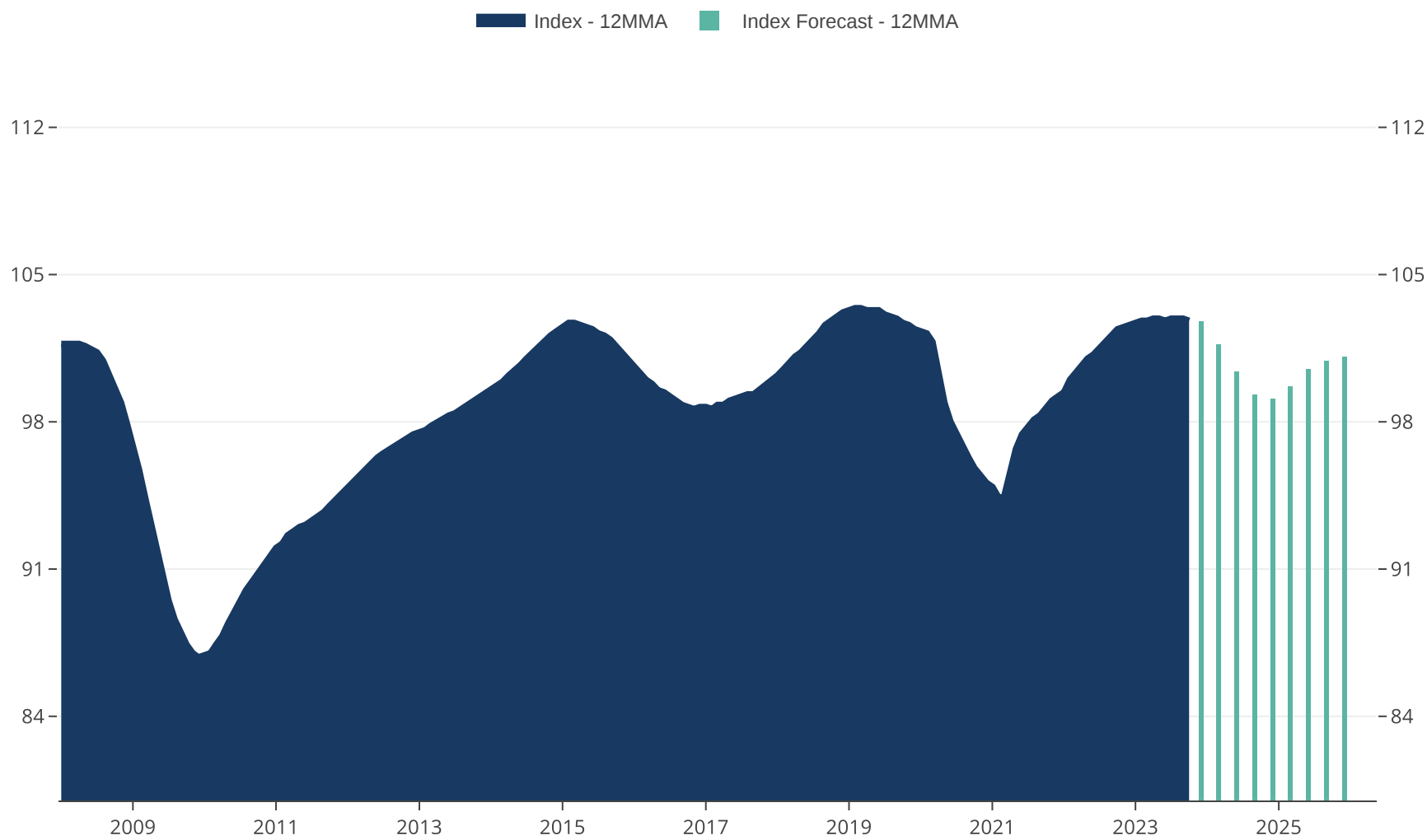


Recession (D)

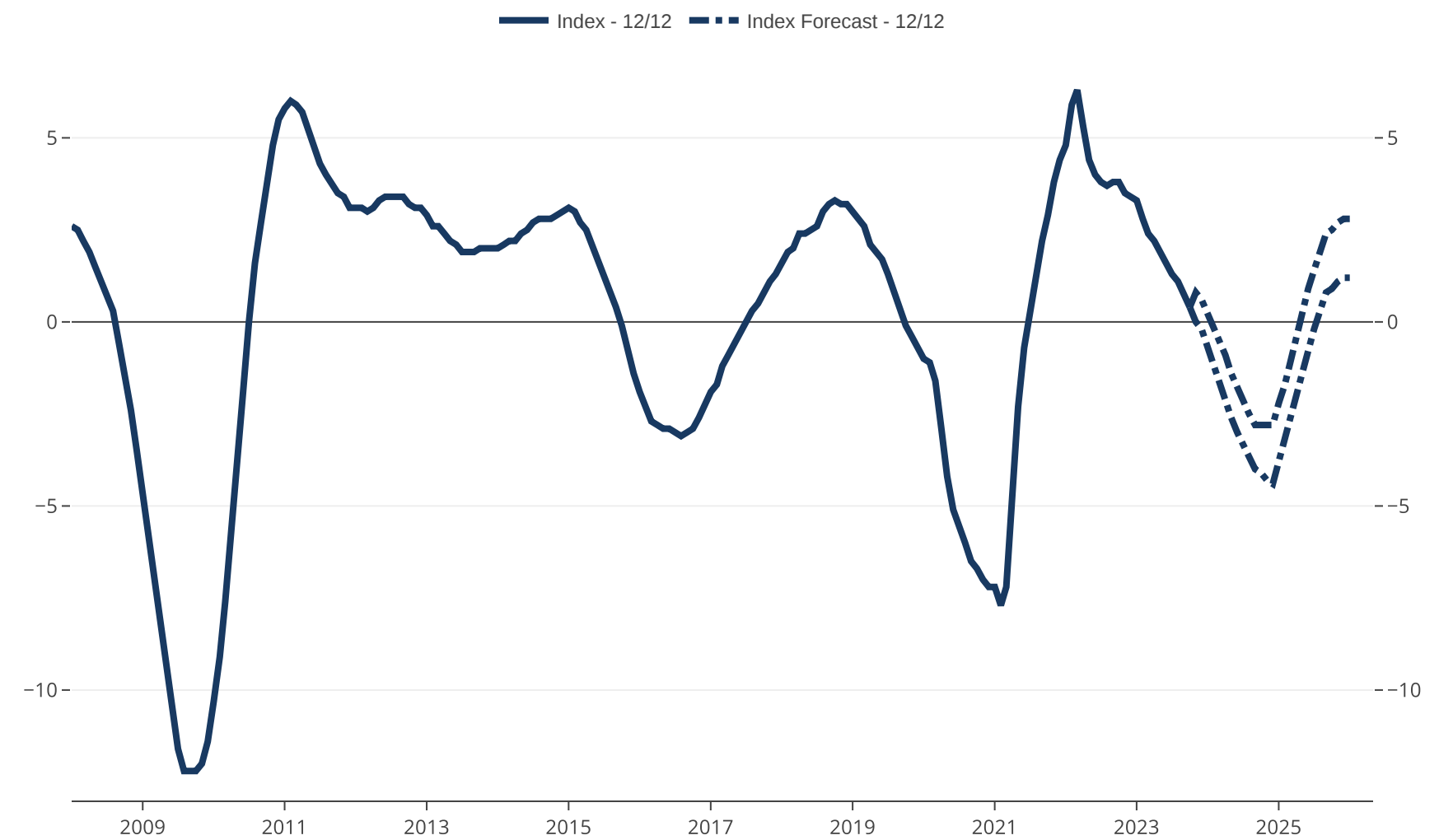
US Industrial Production Index

Expect Phase D, Recession, in the Near Term as Inventories Build and Demand Softens

Annual Average (12MMA)



Annual Growth Rate (12/12)



Current Phase

**Phase C
Slowing Growth**

Industry Outlook

Year	Annual Growth Rate
2023	0.2%
2024	-3.6%
2025	2.0%

Current Indicator Amplitude

- October 2023 Annual Growth Rate (12/12): 0.4%
- October 2023 Annual Average (12MMA), 2017=100: 102.8

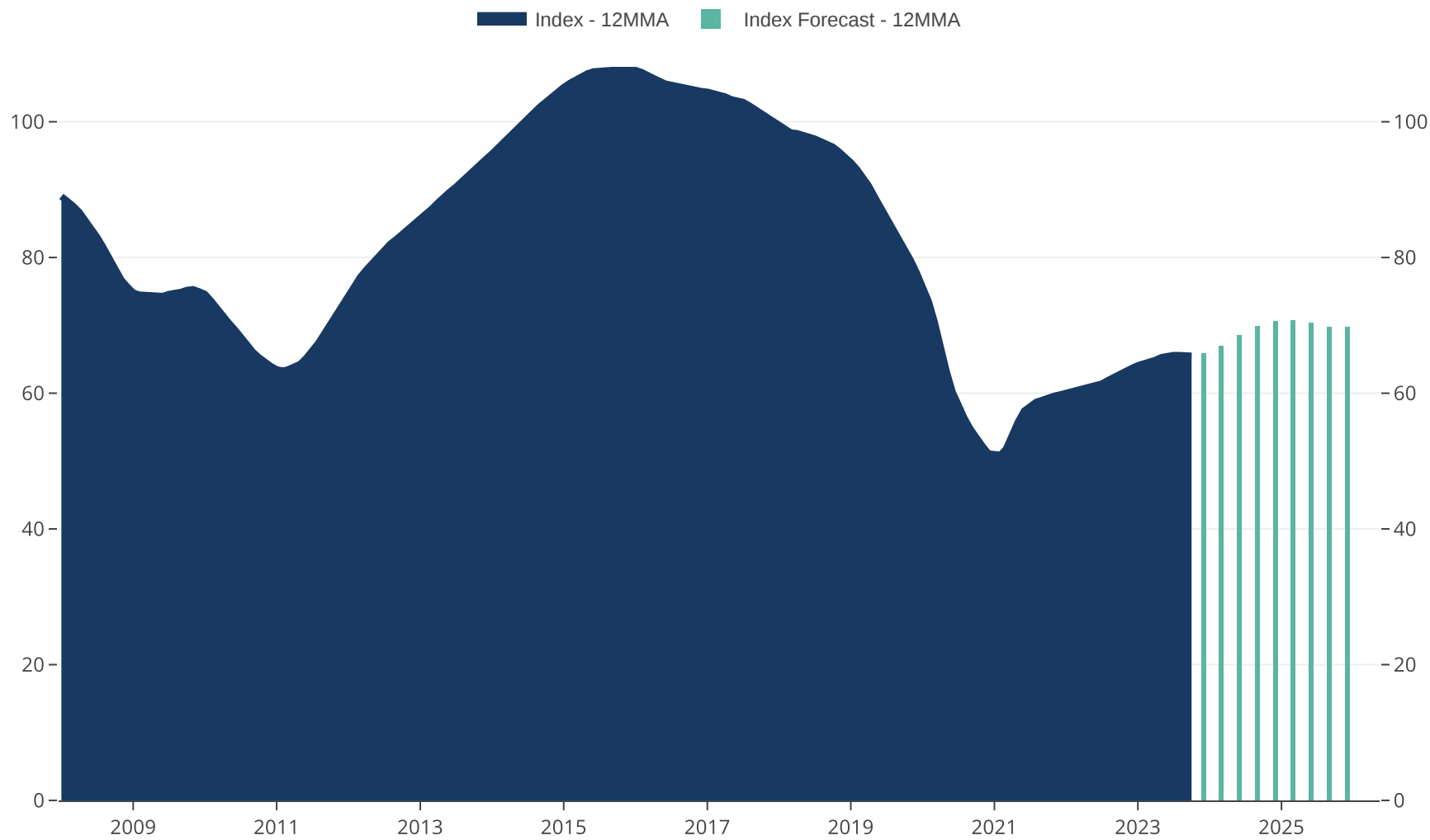
	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Lower Forecast Range	-0.2	-1.7	-3.0	-4.0	-4.4	-2.7	-0.7	0.8	1.2
Annual Growth Rate (%)	0.2	-1.1	-2.4	-3.4	-3.6	-1.9	0.1	1.6	2.0
Upper Forecast Range	0.6	-0.5	-1.8	-2.8	-2.8	-1.1	0.9	2.4	2.8

Lower Forecast Range	102.4	101.0	99.8	98.7	98.3	98.9	99.7	100.1	100.3
Annual Average Index (2017=100)	102.8	101.7	100.4	99.3	99.1	99.7	100.5	100.9	101.1
Upper Forecast Range	103.2	102.3	101.0	100.0	99.9	100.5	101.3	101.7	101.9

US Civilian Aircraft Equipment Production Index

Aircraft Orders Are Strong but Production Is Constrained; Muted Rise to Last Into Early 2025

Annual Average (12MMA)



Annual Growth Rate (12/12)



Current Phase

**Phase C
Slowing Growth**

Industry Outlook

Year	Annual Growth Rate
2023	3.3%
2024	7.2%
2025	-1.3%

Current Indicator Amplitude

- October 2023 Annual Growth Rate (12/12): 4.1%
- October 2023 Annual Average (12MMA), 2017=100: 65.5

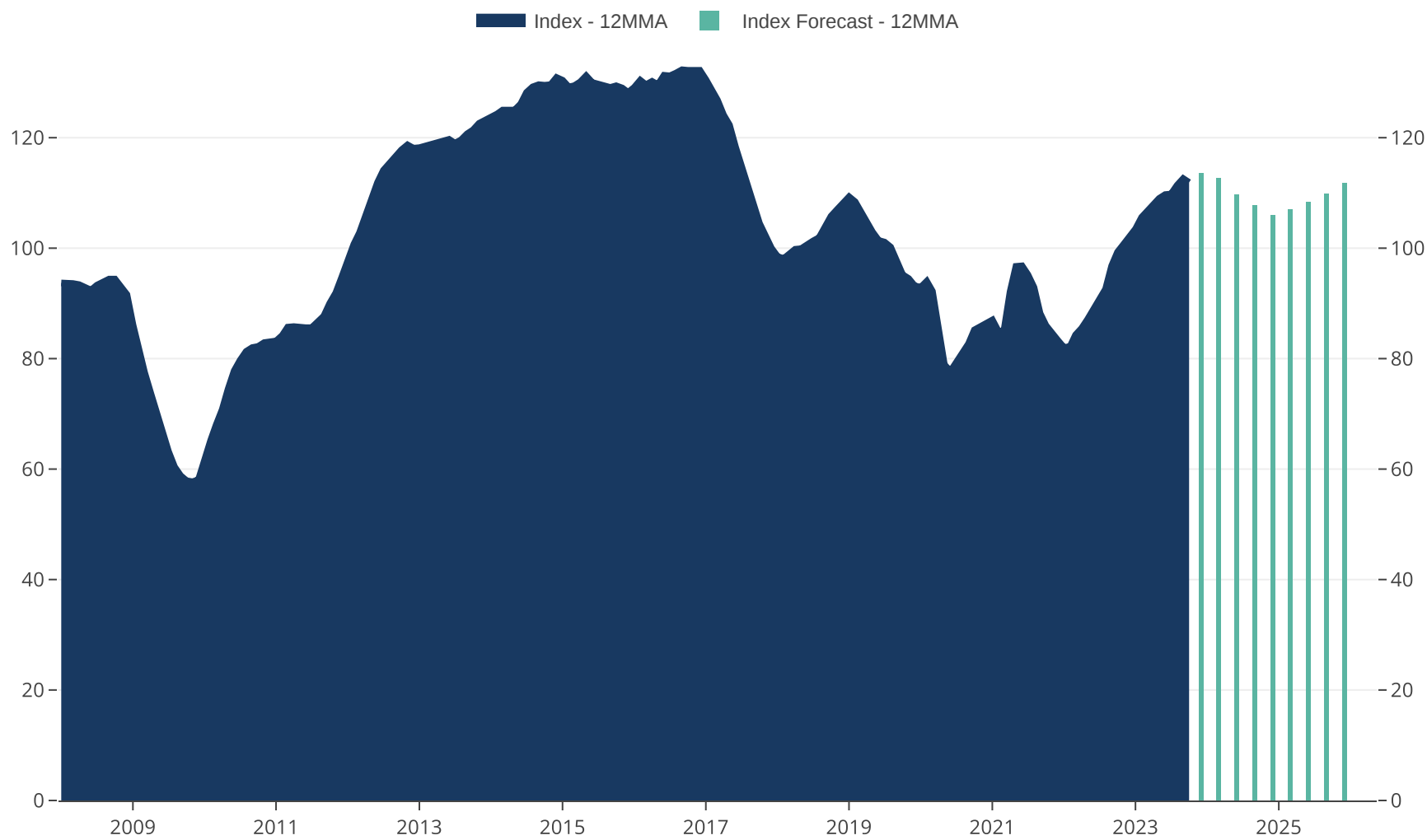
	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Lower Forecast Range	2.1	2.5	4.3	5.8	6.0	4.3	1.0	-1.6	-2.8
Annual Growth Rate (%)	3.3	3.7	5.5	7.0	7.2	5.7	2.5	-0.1	-1.3
Upper Forecast Range	4.5	4.9	6.7	8.2	8.4	7.1	4.0	1.4	0.2

Lower Forecast Range	65.1	66.2	67.8	69.0	69.8	69.8	69.2	68.6	68.6
Annual Average Index (2017=100)	65.8	66.9	68.5	69.8	70.6	70.7	70.3	69.7	69.7
Upper Forecast Range	66.6	67.7	69.3	70.5	71.4	71.7	71.3	70.7	70.7

US Automobile Production Index

Decline Imminent as Consumers Contend With Financing Costs and Macroeconomy Weakens

Annual Average (12MMA)



Annual Growth Rate (12/12)



Current Phase

Phase C
Slowing Growth

Industry Outlook

Year	Annual Growth Rate
2023	11.3%
2024	-6.7%
2025	5.5%

Current Indicator Amplitude

- October 2023 Annual Growth Rate (12/12): 12.7%
- October 2023 Annual Average (12MMA), 2017=100: 111.9

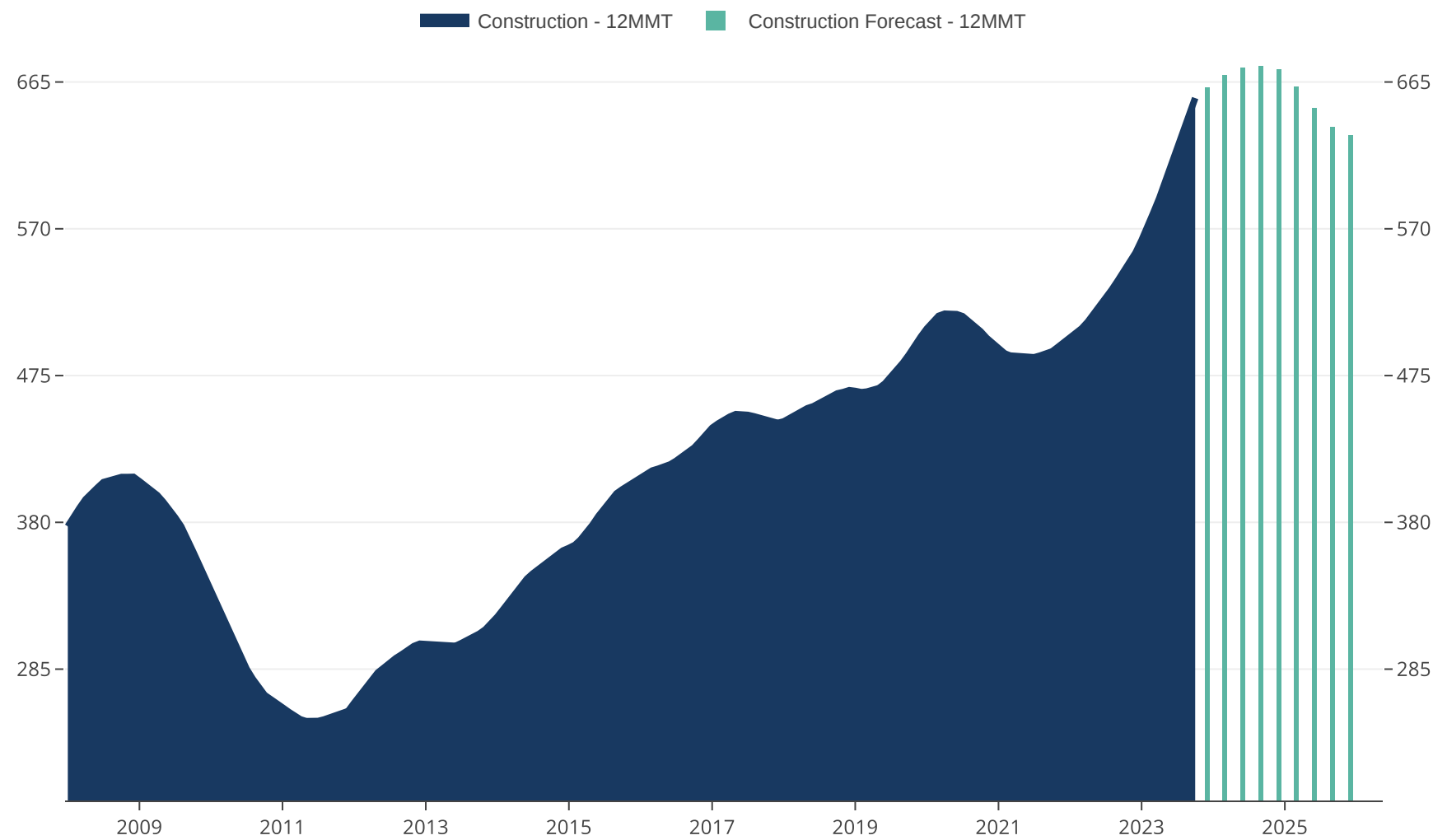
	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Lower Forecast Range	9.8	4.1	-3.7	-6.2	-8.2	-6.6	-2.7	0.4	4.0
Annual Growth Rate (%)	11.3	5.6	-2.2	-4.7	-6.7	-5.1	-1.2	1.9	5.5
Upper Forecast Range	12.8	7.1	-0.7	-3.2	-5.2	-3.6	0.3	3.4	7.0

	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Lower Forecast Range	112.1	111.1	107.9	106.0	104.3	105.3	106.6	108.2	110.2
Annual Average Index (2017=100)	113.6	112.7	109.6	107.7	106.0	107.0	108.3	109.8	111.8
Upper Forecast Range	115.1	114.3	111.3	109.4	107.7	108.7	109.9	111.4	113.4

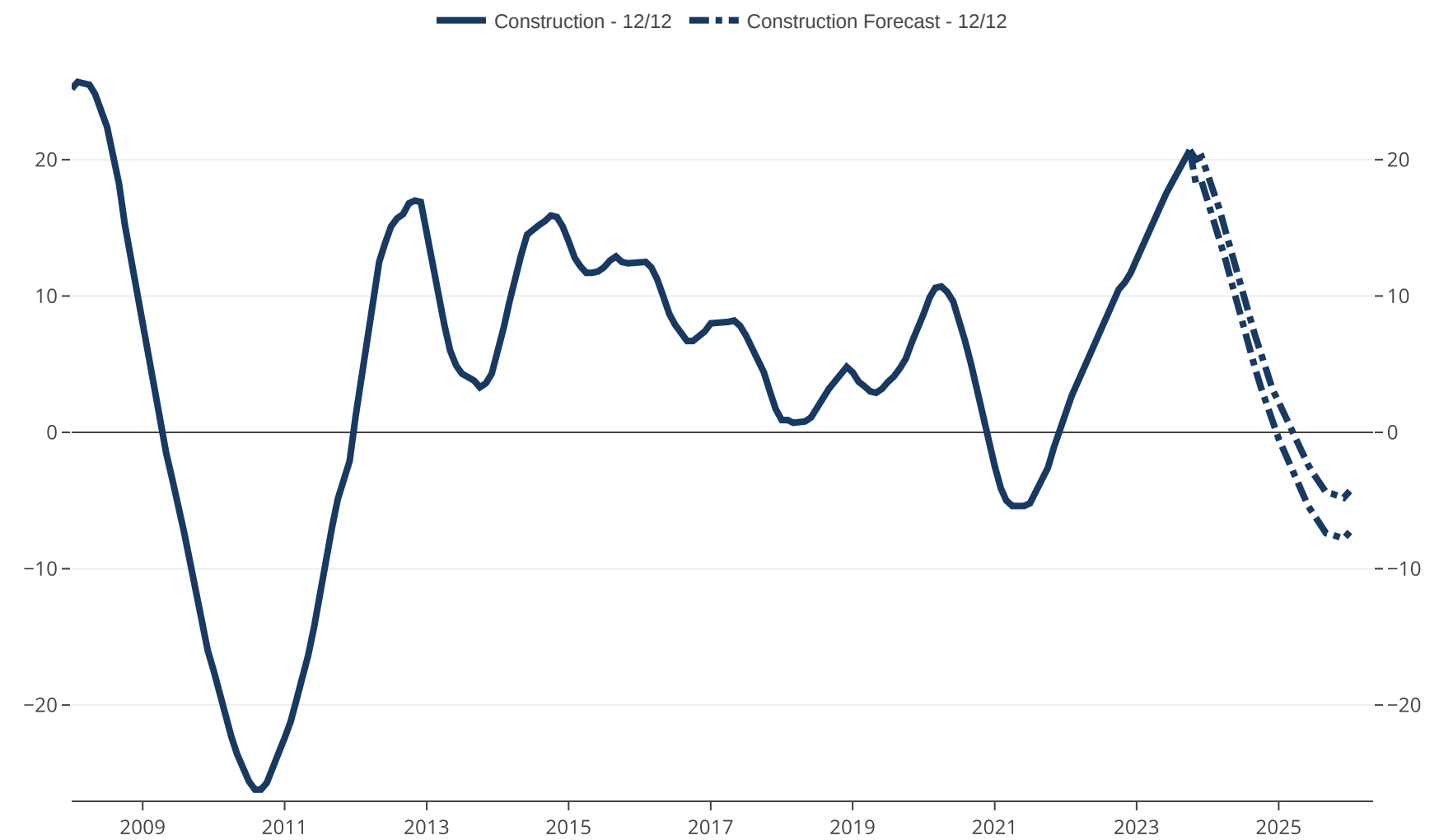
US Private Nonresidential Construction

Annual Construction Spending to Rise Into About 3Q24 Given Lagging Relationship to the Macroeconomy

Annual Total (12MMT)



Annual Growth Rate (12/12)



Current Phase



**Phase B
Accelerating
Growth**

Industry Outlook

Year	Annual Growth Rate
2023	19.3%
2024	1.8%
2025	-6.3%

Current Indicator Amplitude

- October 2023 Annual Growth Rate (12/12): 20.7%
- October 2023 Annual Total (12MMT), Billions of \$: 654.6

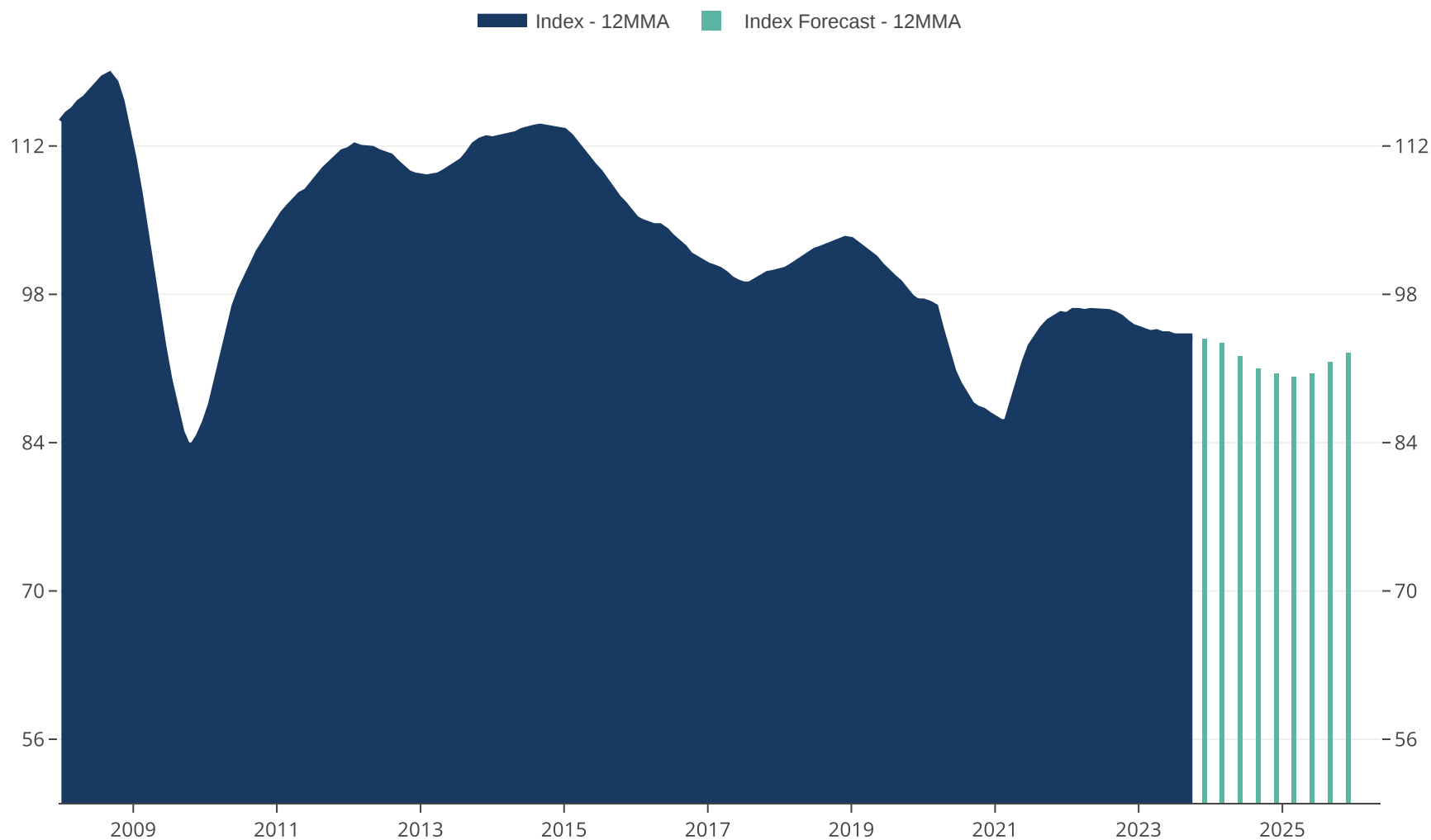
	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Lower Forecast Range	18.4	14.4	9.4	4.7	0.5	-2.5	-5.4	-7.4	-7.8
Annual Growth Rate (%)	19.3	15.4	10.5	5.9	1.8	-1.1	-3.9	-5.9	-6.3
Upper Forecast Range	20.2	16.4	11.6	7.1	3.1	0.3	-2.4	-4.4	-4.8

	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Lower Forecast Range	656.2	663.8	667.6	667.8	664.5	652.8	637.9	625.5	620.6
Annual Total Construction (Billions of \$)	661.2	669.6	674.4	675.5	673.1	662.2	648.1	635.6	630.7
Upper Forecast Range	666.2	675.4	681.1	683.1	681.7	671.6	658.2	645.7	640.8

US Primary Metals Production Index

Forecast Lifted about 2%-3%, but Expectation for General Decline in 2024 Is Unchanged

Annual Average (12MMA)



Annual Growth Rate (12/12)



Current Phase



**Phase D
Recession**

Industry Outlook

<i>Year</i>	<i>Annual Growth Rate</i>
2023	-1.1%
2024	-3.6%
2025	2.3%

Current Indicator Amplitude

- October 2023 Annual Growth Rate (12/12): -1.9%
- October 2023 Annual Average (12MMA), 2017=100: 94.0

	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Lower Forecast Range	-1.9	-1.8	-2.9	-4.0	-4.6	-4.4	-2.9	-0.4	1.3
Annual Growth Rate (%)	-1.1	-1.0	-2.1	-3.2	-3.6	-3.4	-1.9	0.6	2.3
Upper Forecast Range	-0.3	-0.2	-1.3	-2.4	-2.6	-2.4	-0.9	1.6	3.3

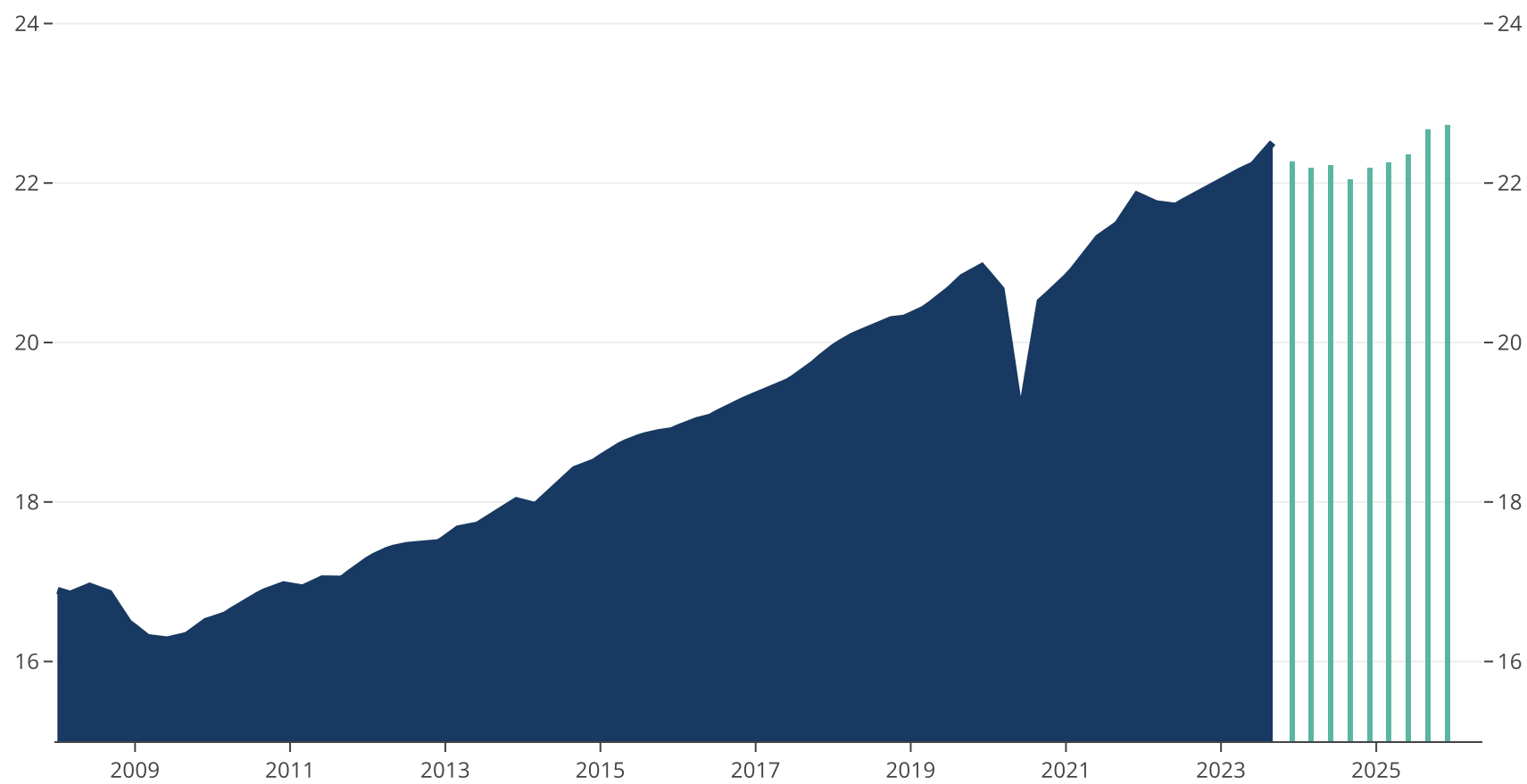
Lower Forecast Range	93.1	92.7	91.5	90.3	89.5	89.3	89.6	90.7	91.6
Annual Average Index (2017=100)	93.8	93.4	92.2	91.0	90.5	90.2	90.5	91.6	92.5
Upper Forecast Range	94.6	94.2	93.0	91.8	91.4	91.2	91.4	92.5	93.4

US Real Gross Domestic Product

Forecast Adjusted Due to Data Rebase, Expectation for Two Quarters of Decline in 2024 Remains

Quarterly Average (3MMA)

Real GDP - 3MMA Real GDP Forecast - 3MMA



Quarterly Growth Rate (3/12)

Real GDP - 3/12 Real GDP Forecast - 3/12



Current Phase



**Phase C
Slowing Growth**

**Current Indicator
Amplitude**

- September 2023 Quarterly Growth Rate (3/12): 3.0%
- September 2023 Quarterly Average (3MMA), Trillions of Chained 2017 \$: 22.506

Industry Outlook

Year Quarterly Growth Rate

2023	1.3%
2024	-0.4%
2025	2.4%

	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Lower Forecast Range	1.0	0.0	-0.3	-1.2	-0.8	-0.1	0.2	2.4	2.1
Quarterly Growth Rate (%)	1.3	0.3	0.0	-0.8	-0.4	0.3	0.6	2.8	2.4
Upper Forecast Range	1.5	0.6	0.3	-0.4	0.0	0.7	1.0	3.2	2.8

Lower Forecast Range	22.210	22.119	22.154	21.957	22.098	22.170	22.266	22.582	22.648
Quarterly Average Real GDP (Trillions of Chained 2017 \$)	22.266	22.186	22.221	22.045	22.186	22.259	22.354	22.672	22.727
Upper Forecast Range	22.321	22.252	22.287	22.134	22.275	22.348	22.442	22.763	22.807

US Leading Indicators

Indicator	Direction		
	4Q23	1Q24	2Q24
ITR LEADING INDICATOR™	●	●	●
ITR RETAIL SALES LEADING INDICATOR™	●	●	●
US OECD LEADING INDICATOR	●	●	●
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 US ISM PMI (Purchasing Managers Index) monthly rate-of-change moved lower in October. General rise – with the exception of October’s tick down – in the indicator suggests an earlier cyclical low for the industrial sector than we are forecasting. However, our overall analysis of PMI components signals that decline is probable for industrial activity in the quarters ahead. The ITR Leading Indicator™ and US OECD Leading Indicator are telling a similar story, with the sustained inversion of the Treasury yield curve signaling that industrial sector decline remains likely to extend into around the end of 2024.
- The ITR Retail Sales Leading Indicator™ has bounced around in recent months, but the overarching trend is indicative of consumer weakness ahead. This suggests that the US Total Retail Sales rate-of-change will decline into at least late 2024, in line with our outlook. We expect deteriorating consumer finances and a tight lending market to contribute to muted retail sector performance for the coming quarters.
- A general declining trend in the US Total Industry Capacity Utilization Rate signals probable cyclical decline for US Industrial Production through at least the first quarter of 2024.

Many indicators point to decline in industrial activity in the quarters ahead. Sustained inversion of the yield curve remains a downside risk, and we foresee consumer weakness on the horizon. Evaluate your cash position periodically as we head into a mild macroeconomic recession, and lead with optimism, as downturns are temporary.

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).