Industrial Supply Association JUNE 2023



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Economic Overview

Where We Are: Nearing or in Year-Over-Year Decline

Downward pressures are intensifying across a wide breadth of markets, and we are seeing more growth rates drop to near or below zero. The single-family residential construction market has been bludgeoned by elevated interest rates, with annual US Single-Unit Housing Starts down 22.2% from one year prior. Adjusted for inflation, annual US Total Retail Sales are virtually flat. The industrial sector is still rising, but the growth is being driven by the oil and gas sector; the manufacturing and utilities segments are declining. Nonresidential construction, which lags other sectors of the economy, is accelerating, but elevated interest rates, tightening credit standards, and a weakening economy will likely discourage new projects.

As demand softens, an accompanying shift in prices is occurring. US Consumer Prices inflation has declined from a peak of +9.1% in June 2022 to +4.0% in May, but the Federal Reserve is maintaining a hawkish tone. Meanwhile, the more volatile US Producer Prices inflation has moved from +18.3% to -0.9% over that same time. The factors that drive prices have flipped: With elevated interest rates raising the cost of borrowing, there is no more "free" or "cheap" money. Seized-up supply chains have loosened. Consumers' ravenous appetite for goods - particularly discretionary or financed items - has tempered as inflation has cut into their purchasing power. Prices typically have some degree of "stickiness," meaning we are unlikely to see prices revert to prepandemic levels on the whole, but some decline is likely. Wages, meanwhile, are a cost that is likely to continue to rise given the demographically driven shortage of labor. Producers with relatively limited pricing power should be prepared for margin compression. If possible, set yourself apart from your competition by leveraging your competitive advantages. Look for efficiency gains to bolster your margins. It will be beneficial to keep more cash on hand, both to shore up your financial position and position yourself to take advantage of deals at the bottom of the cycle, which will occur around late 2024 for most markets.

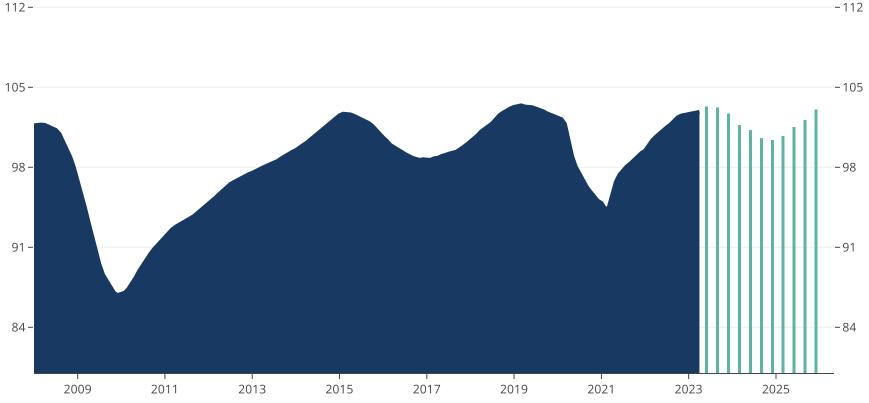
Evidence for What Lies Ahead

The US Treasury yield curve remains inverted, a status that typically precedes macroeconomic weakness. Additionally, the inflation-adjusted M2 Money Supply is declining, banks are tightening their lending standards, and interest rates remain elevated. These trends indicate fewer real dollars to support spending. Consumer financial metrics are worsening, though nowhere near as shaky as in the months preceding the Great Recession. Savings balances have not kept up with inflation, and savings rates are well below normal. Credit delinquency rates, while low relative to historical trends, are rising. These signals suggest that economic challenges are mounting, supporting our outlook for a recession during 2024. Our forecasts include the assumption that the Federal Reserve will shift toward more dovish monetary policy as this year progresses. If the Fed continues to pursue hawkish policy, the anticipated recession could be longer-lasting or more severe than forecasted.

Tentative Green Shoots

Housing affordability constraints have eased slightly in recent months due to lower new home prices, slightly lower interest rates, and rising real earnings. While affordability metrics are still a long way off from historical norms, the slight improvement bodes well for upcoming recovery in residential construction, which typically leads the macroeconomy. We will be watching for US Single-Unit Housing Starts to show signs of recovery later this year. However, interest rates, which are subject to Federal Reserve policy, are a significant factor, and the Fed has thus far prioritized combatting inflation at the risk of depressing economic activity. The ITR Leading Indicator^M has ticked up and could signal an earlier economic low than the late-2024 timing we are calling for. However, we are skeptical about the viability of this upside movement due to the combination of downside pressures we have outlined above. Consequently, we are in a wait-and-see position on this nascent leading indicator implication at this time. Other indicators, such as the ITR Equity Optimizer Leading Indicator™, ITR Retail Sales Leading Indicator[™], and US Total Industry Capacity Utilization rate-of-change, are still declining.





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.



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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	2.2%	С	0.1%	-2.3%	2.7%	
5	US Civilian Aircraft Equipment Production Index	6.5%	С	7.4%	5.7%	-0.8%	
6	US Automobile Production Index	24.3%	С	3.6%	-5.5%	5.7%	
7	US Private Nonresidential Construction	17.1%	В	12.8%	-2.0%	0.1%	
8	US Primary Metals Production Index	-2.2%	D	-3.7%	-3.6%	2.9%	
9	US Real Gross Domestic Product (Quarterly Growth Rate)	1.6%	С	0.9%	-0.3%	2.5%	

*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.





Accelerating Growth (B)



Slowing Growth (C)

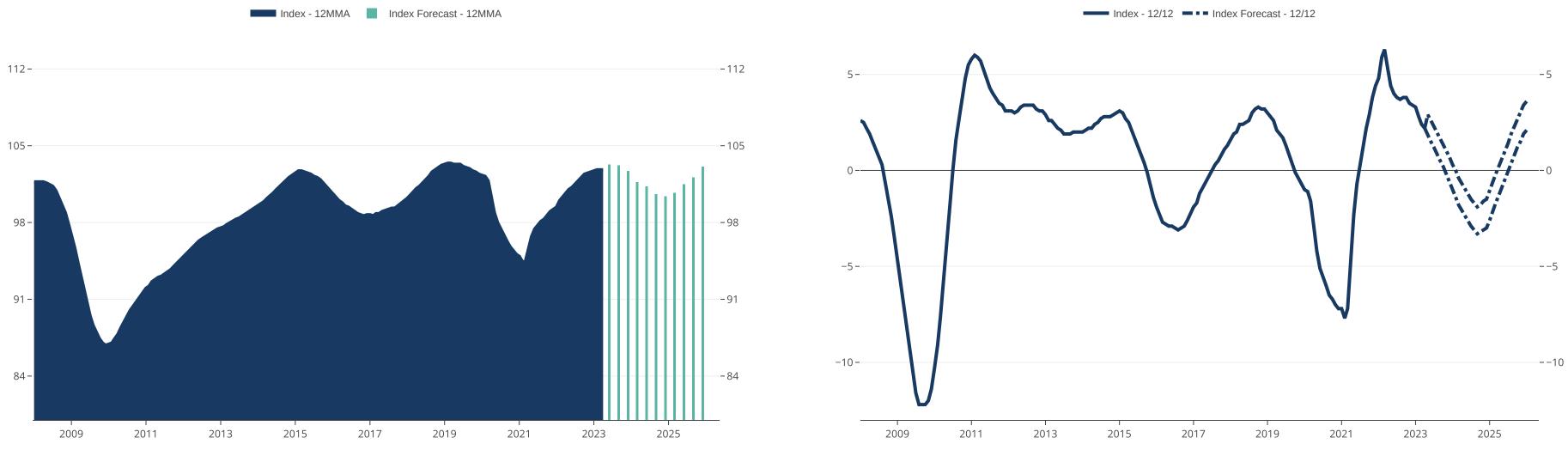




Consulting US Industrial Production Index

Growth-Rate Forecast Unchanged, Annual Average Adjusted Due to Data Revision; Decline Is Upcoming

Annual Average (12MMA)



Phase C Slowing Growth	(Current Phase	
	\bigwedge		

Current Indicator Amplitude

- April 2023 Annual Growth Rate (12/12): 2.2%
- April 2023 Annual Average (12MMA), 2017=100: 102.8

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

2023 2025			2009	2011	2013	2015	2017	2019	2021	2023	2025	
	Jun- 23	Sep- 23	Dec- 23	Maı 24		un- 24	Sep- 24	Dec- 24	Mar- 25	Jun- 25	Sep- 25	Dec- 25
Lower Forecast Range	1.5	0.5	-0.5	-1.8	3 -2	2.7	-3.3	-3.0	-1.7	-0.5	0.8	1.9
Annual Growth Rate (%)	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	2.6	1.7	0.7	-0.4	1 -	1.3	-1.9	-1.5	-0.2	1.0	2.3	3.4
Lower Forecast Range	102.8	102.6	102.1	101	.0 10	0.5	99.8	99.6	100.0	100.7	101.4	102.3
Annual Average Index (2017=100)	103.3	103.2	102.7	101.	.7 10)1.3	100.6	100.4	100.7	101.5	102.1	103.1
Upper Forecast Range	103.9	103.9	103.3	102	.4 10)2.0	101.3	101.2	101.5	102.3	102.9	103.8



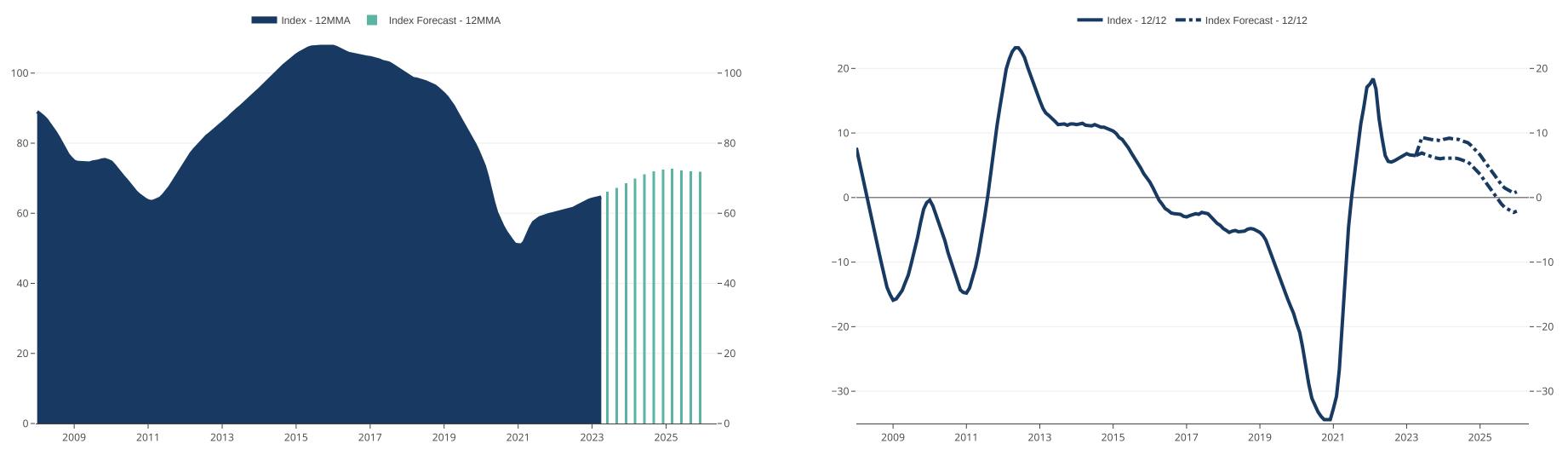
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Consulting US Civilian Aircraft Equipment Production Index



Annual Average (12MMA)



Current Phase	Inc
Phase C Slowing Growth	<i>'<u>ear</u> <u>Al</u> 023</i>
Current Indicator Amplitude	024 025

- April 2023 Annual Growth Rate (12/12): 6.5%
- April 2023 Annual Average (12MMA), 2017=100: 64.6

Industry Outlook									
<u>Year</u>	Annual Growth Rate								
2023	7.4%								
2024	5.7%								
2025	-0.8%								

	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	6.9	6.3	6.0	6.2	6.0	5.5	4.2	2.3	0.1	-1.5	-2.3
Annual Growth Rate (%)	8.1	7.6	7.4	7.7	7.5	7.0	5.7	3.8	1.6	0.0	-0.8
Upper Forecast Range	9.3	8.9	8.8	9.2	9.0	8.5	7.2	5.3	3.1	1.5	0.7
Lower Forecast Range	65.4	66.4	67.6	68.9	70.1	70.9	71.4	71.5	71.1	70.8	70.8
Annual Average Index (2017=100)	66.1	67.2	68.5	69.9	71.1	71.9	72.4	72.6	72.2	71.9	71.8
Upper Forecast Range	66.9	68.0	69.4	70.9	72.1	72.9	73.4	73.6	73.3	72.9	72.9

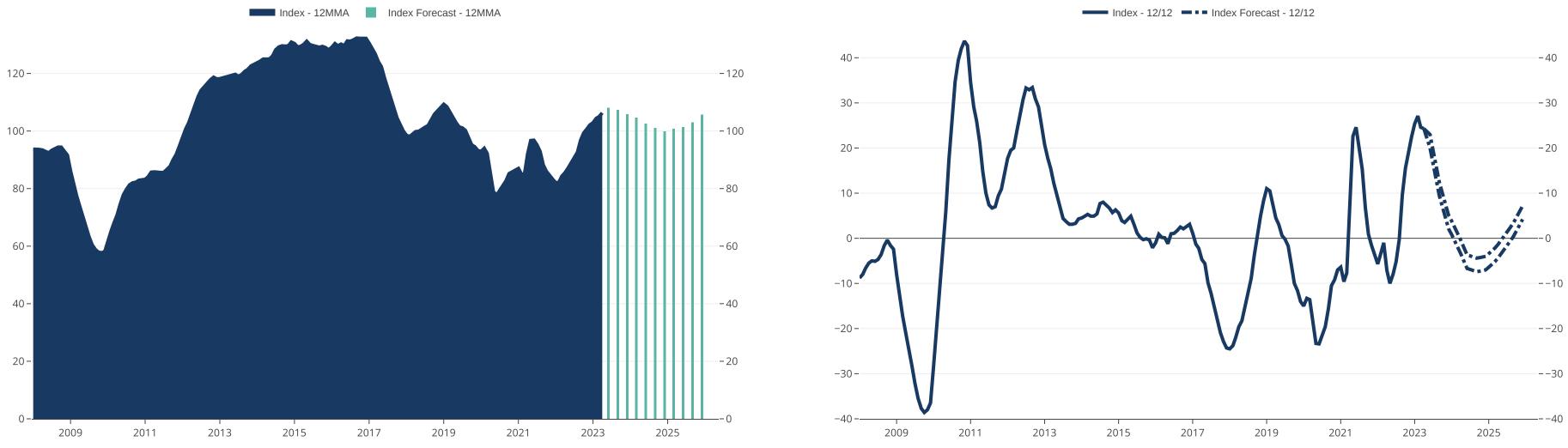


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Consulting **US Automobile Production Index**

Forecast Revised on Data Revision; Production Decline Imminent; High Interest Rates to Deter Demand

Annual Average (12MMA)



Current Phase	Ind
Phase C	<u>Year</u> <u>Ani</u>
Slowing Growth	2023
Current Indicator	2024
Amplitude	2025

- April 2023 Annual Growth Rate (12/12): 24.3%
- April 2023 Annual Average (12MMA), 2017=100: 106.3

Industry Outlook									
<u>Year</u>	<u>Annual Growth Rate</u>								
2023	3.6%								
2024	-5.5%								
2025	5.7%								

2023 2025		-40	2009 2011	2013	2015	2017	2019	2021	2023	2025	
	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	20.0	9.4	2.1	-1.9	-6.7	-7.4	-7.0	-5.2	-2.7	0.4	4.2
Annual Growth Rate (%)	21.5	10.9	3.6	-0.4	-5.2	-5.9	-5.5	-3.7	-1.2	1.9	5.7
Upper Forecast Range	23.0	12.4	5.1	1.1	-3.7	-4.4	-4.0	-2.2	0.3	3.4	7.2
Lower Forecast Range	106.8	105.9	104.2	103.0	100.9	99.4	98.4	99.2	99.7	101.4	104.1
Annual Average Index (2017=100)	108.1	107.3	105.8	104.6	102.5	101.0	99.9	100.7	101.3	102.9	105.6
Upper Forecast Range	109.5	108.8	107.3	106.2	104.1	102.6	101.5	102.3	102.8	104.4	107.1

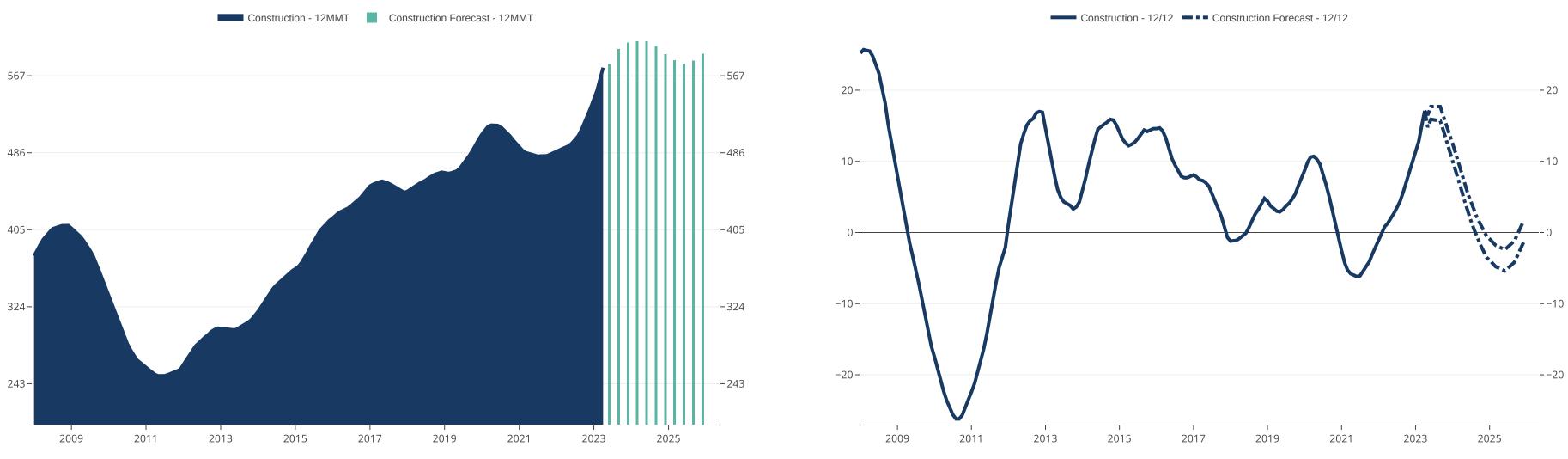


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Consulting **US Private Nonresidential Construction**

Tightening Credit Standards and Softening Economic Activity to Discourage Building

Annual Total (12MMT)



(Current Phase	
\bigwedge	Phase B Accelerating Growth	

Current Indicator Amplitude

- April 2023 Annual Growth Rate (12/12): 17.1%
- April 2023 Annual Total (12MMT), Billions of \$: 575.5

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

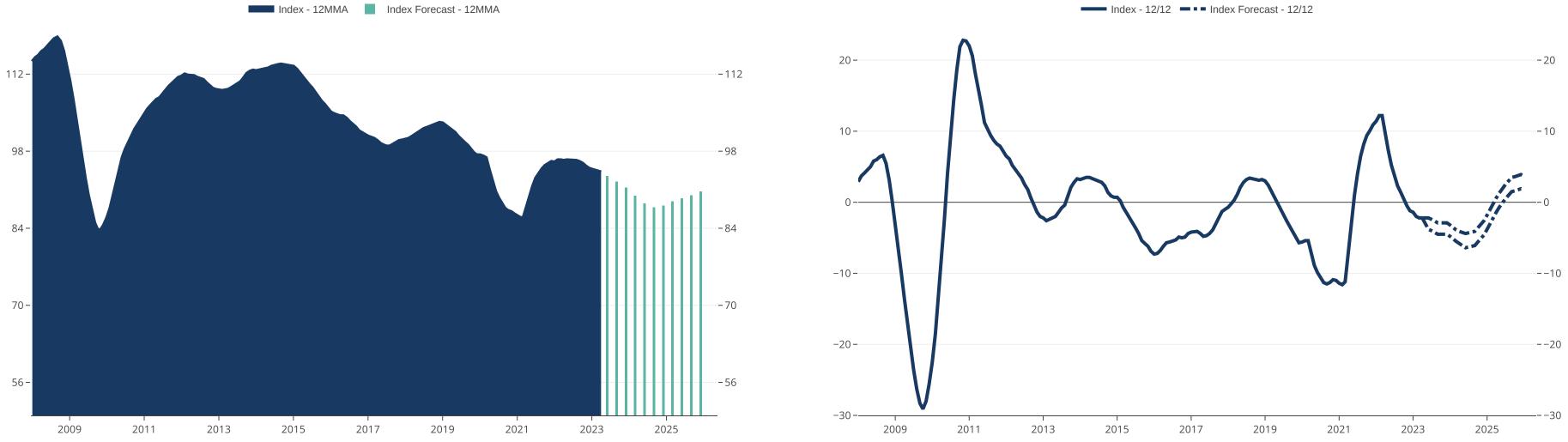
2023 2025		2	2009 2011	2013	2015	2017	2019	2021	2023	2025	
	Jun- 23	Sep- 23	Dec- 23	Mar- 24	Jun- 24	Sep- 24	Dec- 24	Mar- 25	Jun- 25	Sep- 25	Dec- 25
Lower Forecast Range	15.9	15.7	11.7	7.3	2.8	-0.8	-3.5	-4.8	-5.4	-4.2	-1.4
Annual Growth Rate (%)	16.8	16.7	12.8	8.5	4.1	0.6	-2.0	-3.3	-3.9	-2.7	0.1
Upper Forecast Range	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	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 \$)	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	583.9	600.4	607.6	609.9	610.7	607.2	598.7	592.4	588.7	591.7	599.1



Consulting **US Primary Metals Production Index**

Forecast Revised Due to Data Revision; Expect Decline Into Late 2024 as Industrial Sector Wanes

Annual Average (12MMA)



Current Phase	Ind
Phase D	<u>Year</u> <u>Ar</u>
Recession	2023
Current Indicator	2024
Amplitude	2025

- April 2023 Annual Growth Rate (12/12): -2.2%
- April 2023 Annual Average (12MMA), 2017=100: 94.2

Industry Outlook										
<u>Year</u>	Annual Growth Rate									
2023	-3.7%									
2024	-3.6%									
2025	2.9%									

2023 2025		-30	2009 2011	2013	2015	2017	2019	2021	2023	2025	
	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	-3.8	-4.5	-4.5	-5.5	-6.4	-6.1	-4.6	-2.1	0.0	1.5	1.9
Annual Growth Rate (%)	-3.0	-3.7	-3.7	-4.7	-5.4	-5.1	-3.6	-1.1	1.0	2.5	2.9
Upper Forecast Range	-2.2	-2.9	-2.9	-3.9	-4.4	-4.1	-2.6	-0.1	2.0	3.5	3.9
Lower Forecast Range	92.8	91.8	90.6	89.1	87.6	86.9	87.2	88.0	88.5	89.1	89.8
Annual Average Index (2017=100)	93.5	92.5	91.4	89.9	88.5	87.8	88.1	88.9	89.4	90.0	90.7
Upper Forecast Range	94.3	93.3	92.2	90.6	89.4	88.7	89.0	89.8	90.3	90.9	91.5

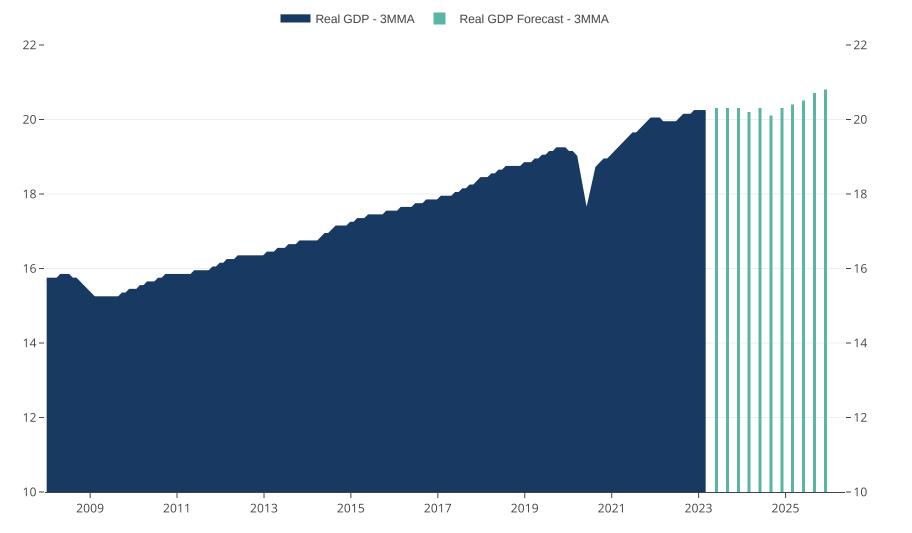


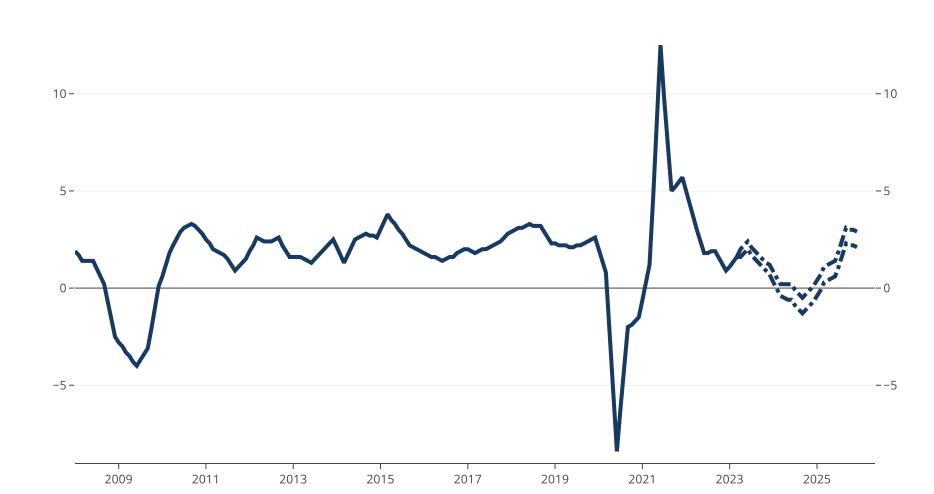
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Consulting US Real Gross Domestic Product

GDP to Be Relatively Flat, Then Decline for a Portion of 2024; 2025 Forecast Adjusted Slightly

Quarterly Average (3MMA)







Current Indicator Amplitude

- March 2023 Quarterly Growth Rate (3/12): 1.6%
- March 2023 Quarterly Average (3MMA), Trillions of Chained 2012 \$: 20.2

Industry Outlook									
<u>Year</u>	<u>Quarterly Growth Rate</u>								
2023	0.9%								
2024	-0.3%								
2025	2.5%								

	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	2.0	1.3	0.7	-0.4	-0.6	-1.3	-0.7	0.3	0.6	2.3	2.1
Quarterly Growth Rate (%)	2.2	1.5	0.9	-0.1	-0.2	-0.9	-0.3	0.7	1.0	2.7	2.5
Upper Forecast Range	2.4	1.7	1.2	0.2	0.2	-0.5	0.1	1.1	1.4	3.1	2.9
Lower Forecast Range	20.3	20.3	20.3	20.2	20.2	20.1	20.2	20.3	20.4	20.6	20.7
Quarterly Average Real GDP (Trillions of Chained 2012 \$)	20.3	20.3	20.3	20.2	20.3	20.1	20.3	20.4	20.5	20.7	20.8
Upper Forecast Range	20.4	20.4	20.4	20.3	20.4	20.2	20.4	20.4	20.6	20.8	20.9



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Quarterly Growth Rate (3/12)





US Leading Indicators



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 indicators are either generally declining (US Total Industry Capacity Utilization rate-of-change) or have flattened of late (ITR Leading Indicator[™] and US ISM PMI rate-of-change) at negative amplitudes; this is consistent with our forecast for decline in the US industrial sector, which will develop in the second half of 2023.

• Ongoing decline in the ITR Retail Sales Leading Indicator™ suggests that the consumer sector of the US economy will face mounting headwinds moving into 2024.

•The US OECD Leading Indicator rate-of-change rose for a fifth consecutive month in April, but the strength of the rise has been anemic to date. We are monitoring this indicator closely to see if the rise picks up pace – which could suggest an upside risk to our outlook – or if the trend simply flatlines or reverses direction. Ongoing decline in the raw monthly data suggests that the weak rise in the rate-of-change is not yet indicative of a recovery for the general economy.

Take steps to prepare for upcoming contraction, though the magnitude will vary by industry and geographic region. Revisit your capital expenditure plans; however, investments to improve efficiencies or reduce labor dependence may still be advisable. Have cash on hand to smooth out your finances. Keep in mind that lending criteria is likely to be stricter as we move along the back side of the business cycle.





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).



Consulting

Management Objectives[™]

Phase A



Recovery

- 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

Phase B



Accelerating Growth

- 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

Phase C



Slowing Growth

- 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



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Phase D



Recession

- 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