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Reports
ITR Economics

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Economic Overview

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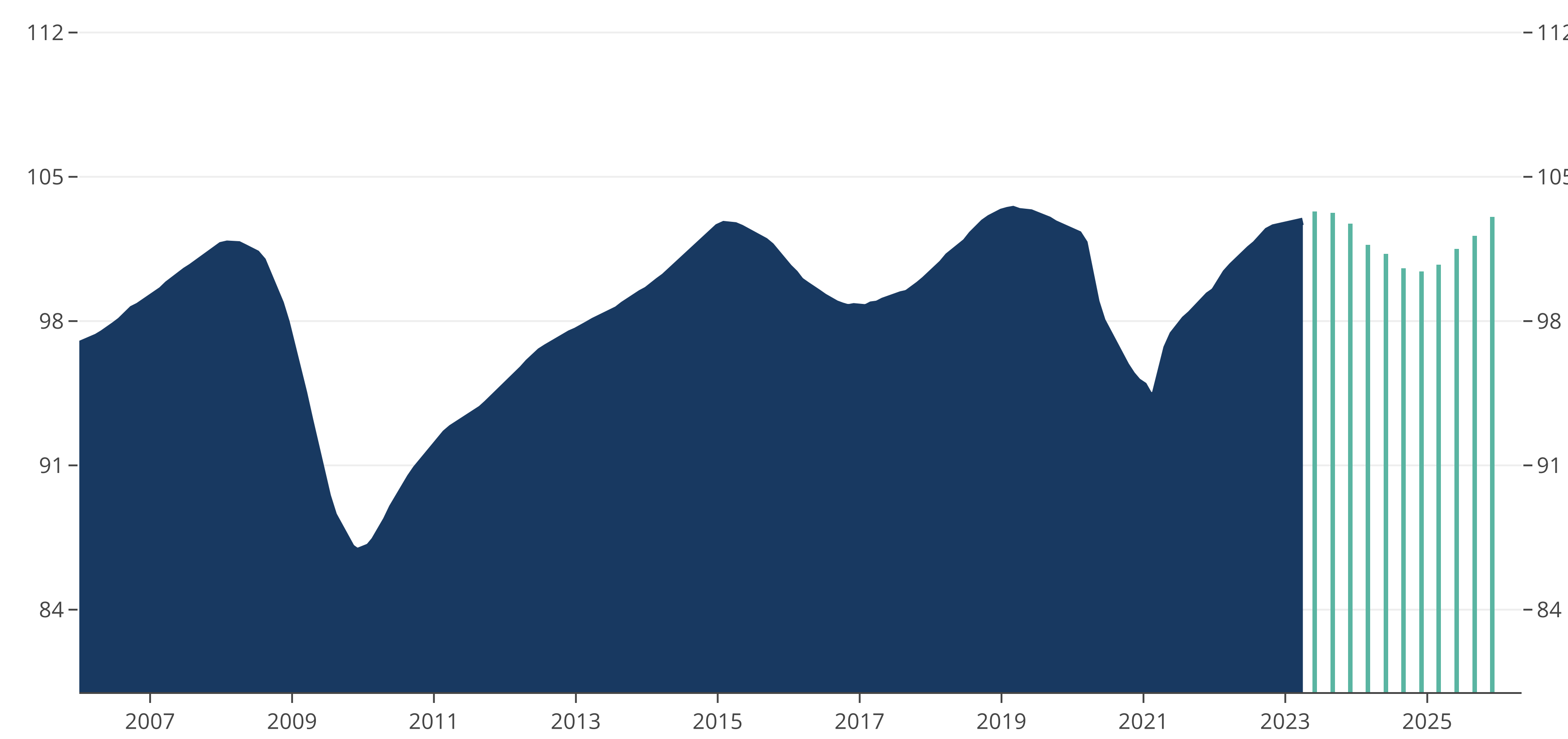
Where We Are: Nearing or in Year-Over-Year Decline

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 pre-pandemic 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.

US Industrial Production Index
Annual Average (12MMA)



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™ 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.

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).

IMEC 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%	C	0.1%	-2.3%	2.7%
5	US Nondefense Capital Goods New Orders (excluding aircraft)	4.7%	C	0.3%	-3.3%	3.8%
6	US Machinery New Orders	3.5%	C	0.2%	-3.0%	4.7%
7	US Food Production Index	1.2%	C	0.8%	-0.1%	0.9%
8	US Medical Equipment and Supplies Production Index	7.7%	C	1.2%	-0.9%	3.5%

**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.*

Recovery (A) **Accelerating Growth (B)** **Slowing Growth (C)** **Recession (D)**

US Industrial Production Index

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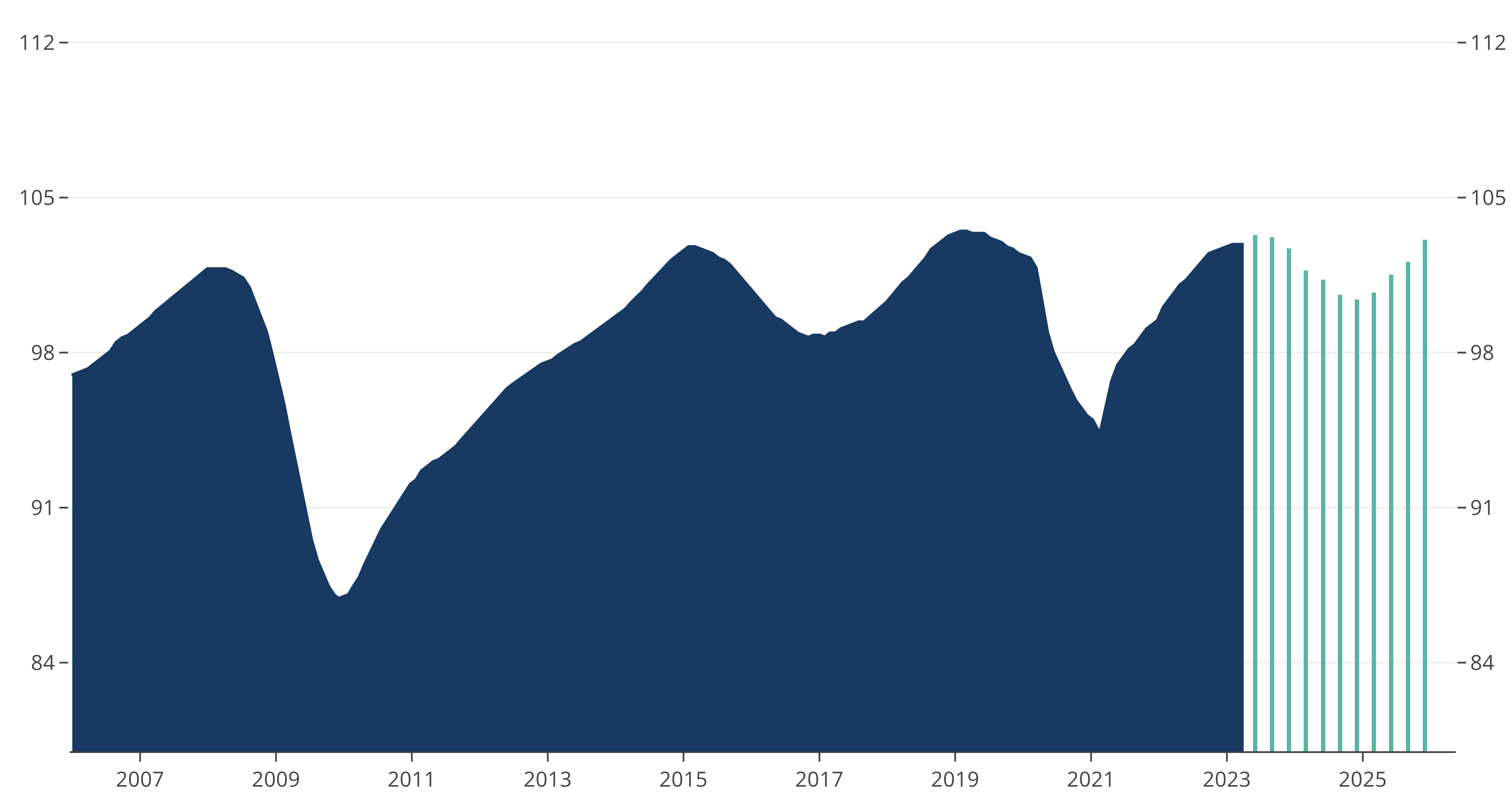
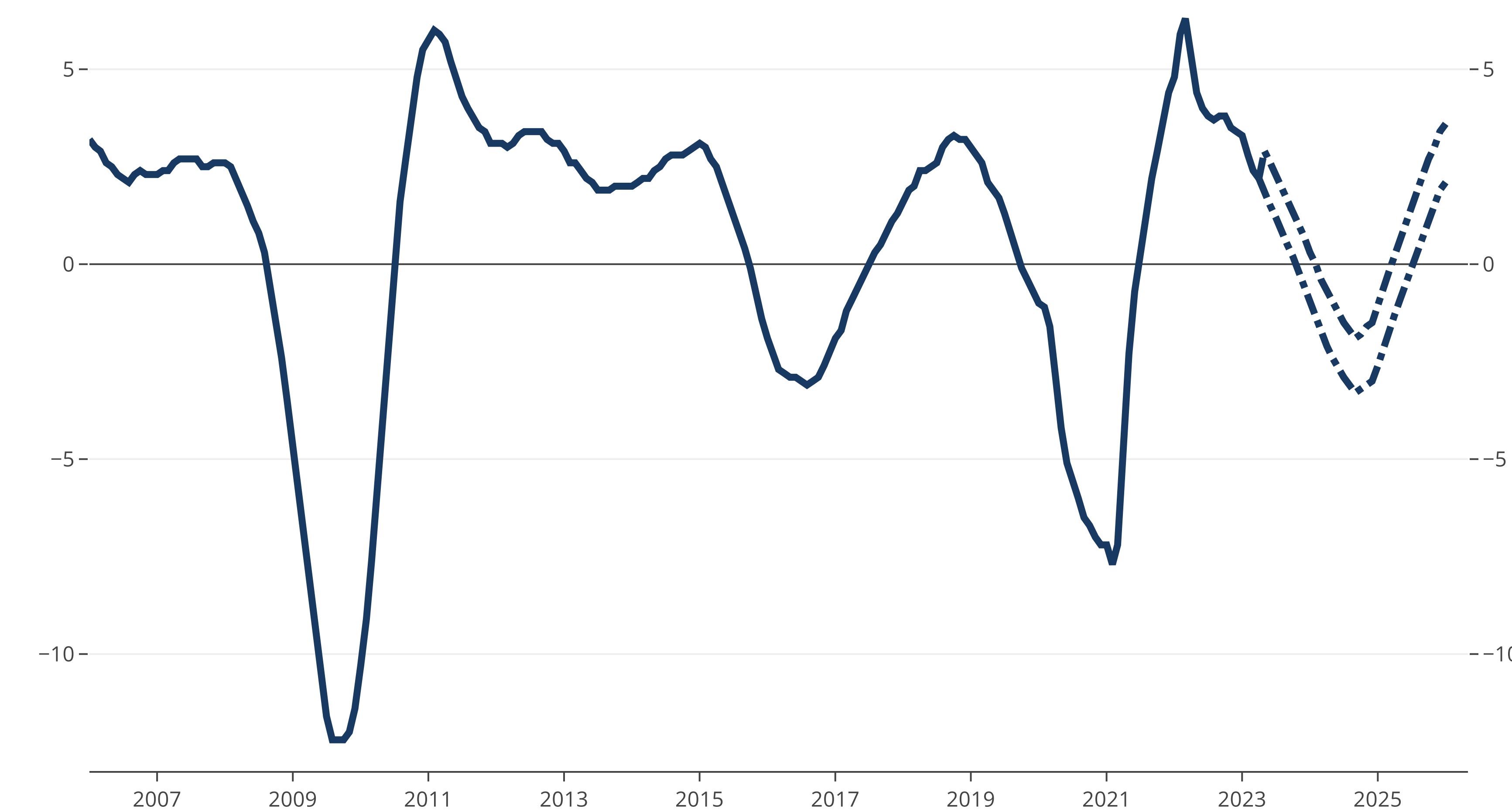
Annual Production to Decline by Late 2023 Through 2024 as Numerous Headwinds Persist

Annual Average (12MMA)



Annual Growth Rate (12/12)



Current Phase

Phase C
Slowing Growth

Current Indicator Amplitude

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

Industry Outlook

Year	*Annual Growth Rate*
2023	0.1%
2024	-2.3%
2025	2.7%

Outlook & Supporting Evidence

- US Industrial Production in the 12 months through April was 2.2% above the same period last year. We expect annual Production to rise mildly in the near term, then decline from the end of this year through 2024. Rise will characterize 2025.
- We have seen mild upward movement in some leading indicators. While we are monitoring these movements, we do not believe they are foreshadowing sustained business cycle rise. Headwinds to the economy are numerous, including the still-inverted Treasury yield curve, still-elevated interest rates, and decline in the housing market - which leads the US economy.
- We are closely monitoring Federal Reserve actions and the potential risks they could pose to our outlook. Our outlook assumes that monetary policy will be more dovish as this year progresses. Should interest rates be lifted, or if there are not rate cuts by around the end of this year, the forecasted recession could be deeper or longer-lasting than expected.
- Historical Production data was revised downward about 1% for roughly the last two years by the Federal Reserve Board. We adjusted our annual average forecast accordingly; the annual growth rate outlook is unchanged.

US Nondefense Capital Goods New Orders (excluding aircraft)

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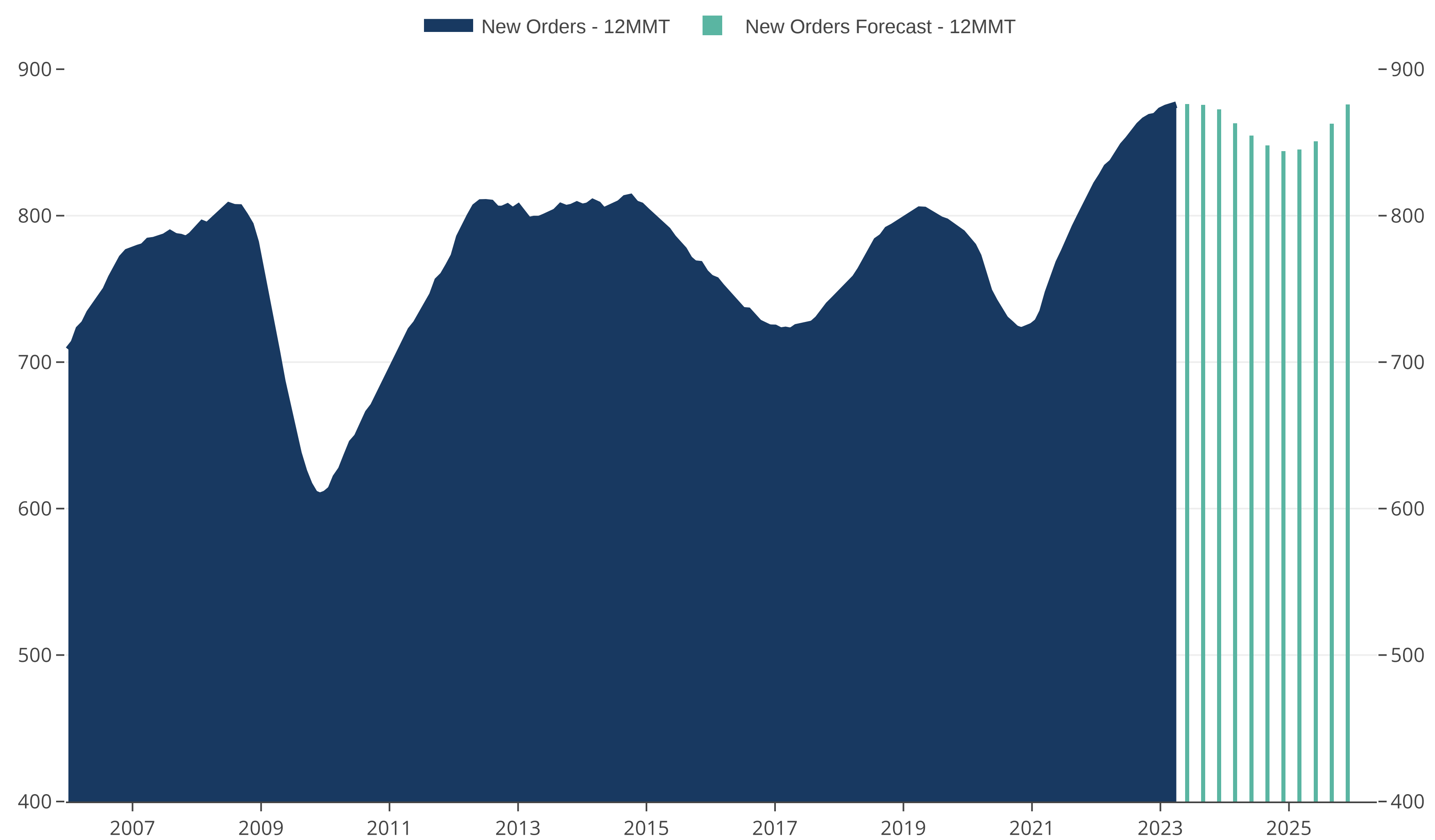
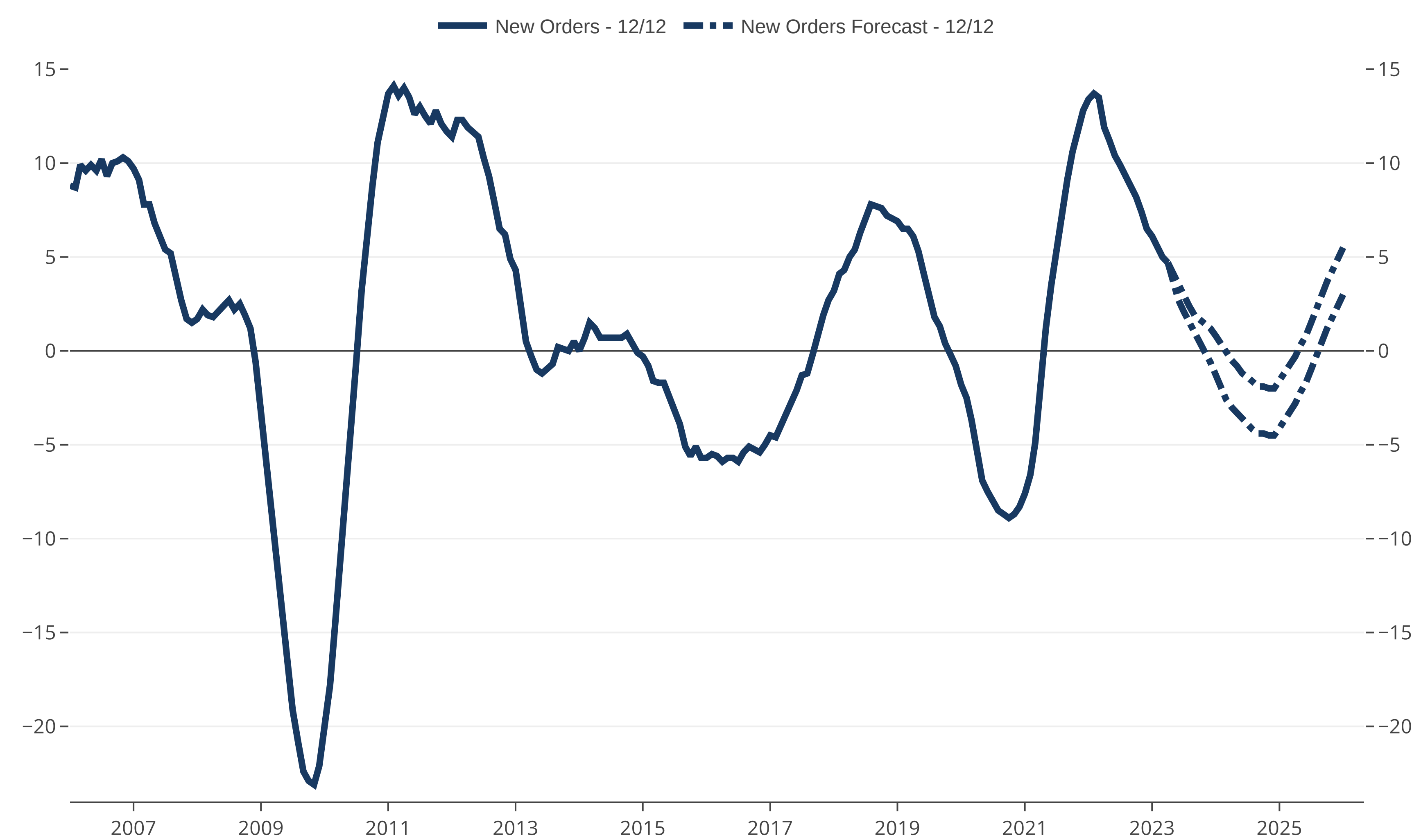
Forecast Revised; New Orders Decline Imminent Given Macro Trends, Interest Rates, and Pricing

Annual Total (12MMT)



Annual Growth Rate (12/12)



Current Phase

Phase C
Slowing Growth

Current Indicator Amplitude

- April 2023 Annual Growth Rate (12/12): 4.7%
- April 2023 Annual Total (12MMT), Billions of USD: $875.8

Industry Outlook

Year	*Annual Growth Rate*
2023	0.3%
2024	-3.3%
2025	3.8%

Outlook & Supporting Evidence

- Annual US Nondefense Capital Goods New Orders (excluding aircraft) totaled $875.6 billion in April, 4.7% above one year ago.
- The US Census Bureau revised historical New Orders data. We revised the outlook to account for the data revision; however, our overall analysis of the economic fundaments in this market is unchanged.
- Annual New Orders will reach a peak in the near term, then decline through 2024. Decline will be due, in part, to elevated interest rates and macroeconomic weakness, which will hinder demand for capital goods. Tighter credit conditions will also contribute to some of this decline in volume.
- New Orders, which are dollar-denominated, will also decline due to the pricing environment. Quarterly US Producer Prices are declining, and we anticipate mild decline to persist in 2024. This will put downward pressure on New Orders. Producers should not count on price increases to drive much – or any – of their top line growth in the coming quarters. As always, trends will vary by your position in the supply chain and your clients' markets. Those closer to raw commodities or lacking in strong competitive advantages are likely to contend with greater downside pressure from pricing.
- Annual New Orders will rise in 2025, due in part to the likelihood of improving credit conditions and easing capacity constraints.

US Machinery New Orders

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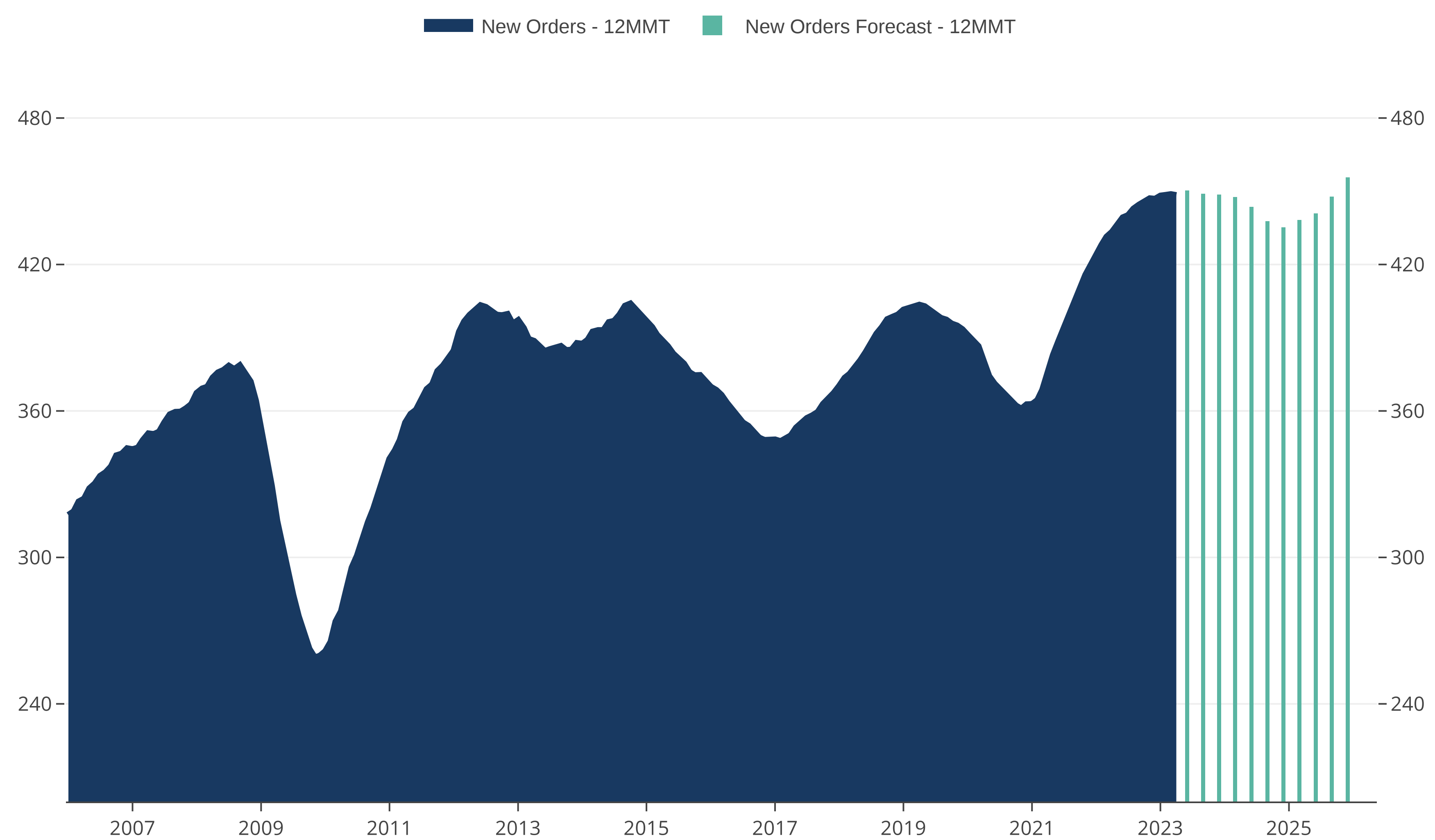
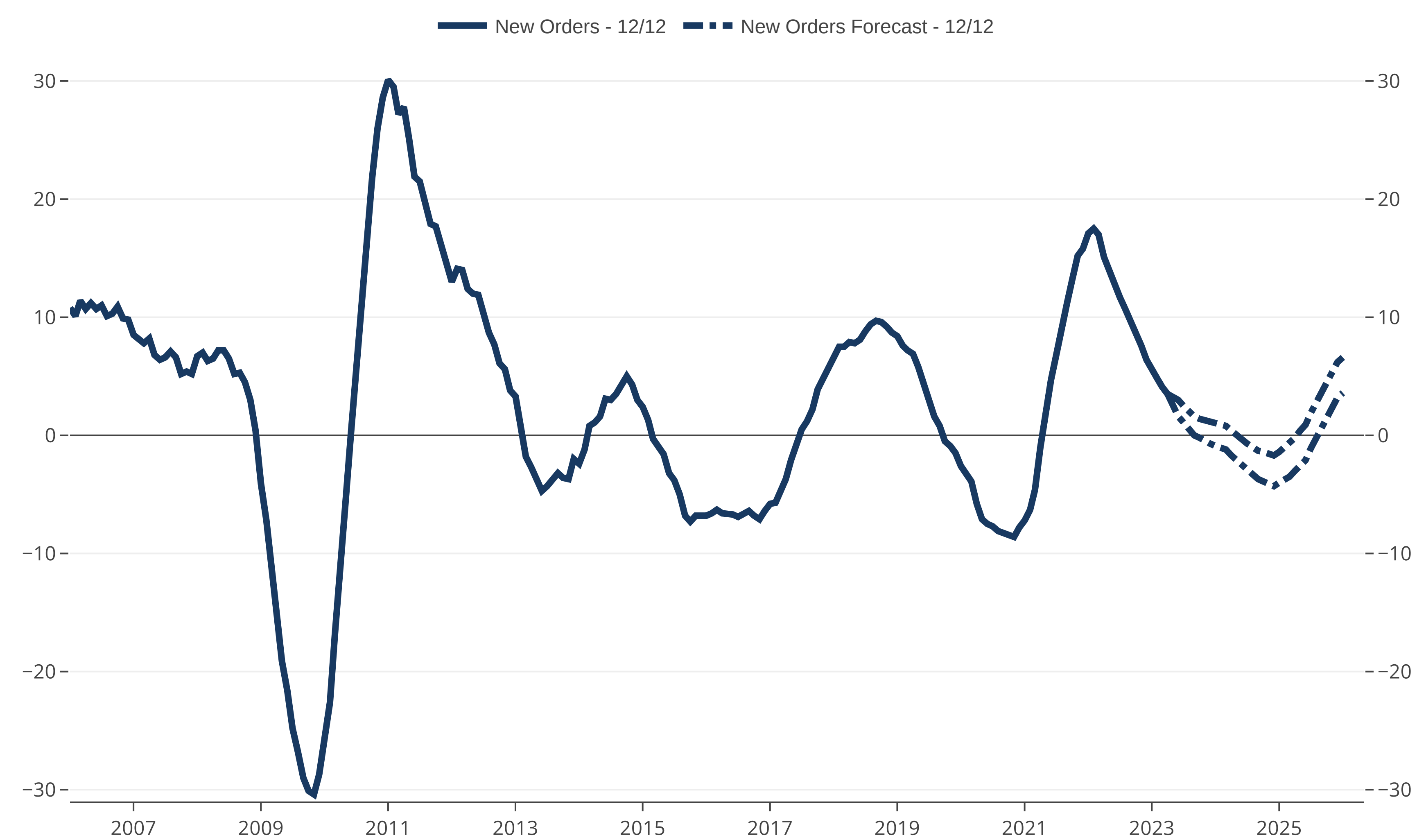
Forecast Revised; Annual New Orders to Plateau in 2023 Then Decline in 2024 as Demand Wanes

Annual Total (12MMT)



Annual Growth Rate (12/12)



Current Phase

Phase C
Slowing Growth

Current Indicator Amplitude

- April 2023 Annual Growth Rate (12/12): 3.5%
- April 2023 Annual Total (12MMT), Billions of USD: $448.3

Industry Outlook

Year	*Annual Growth Rate*
2023	0.2%
2024	-3.0%
2025	4.7%

Outlook & Supporting Evidence

- Annual US Machinery New Orders totaled $448.3 billion in April, 3.5% above the year-ago level. Growth is slowing.
- We revised the forecast following a revision to the historical data from the US Census Bureau. The fundamental drivers of the forecast are unchanged, as is the timing of the cyclical low point.
- Manufacturing backlogs are elevated, signaled by record-high and rising US Total Manufacturing Unfilled Orders. However, inflation-adjusted spending on consumer goods is plateauing and supply chain limitations are resolving, so manufacturers may quickly catch up on their backlogs. Additionally, companies are less likely to invest in machinery when borrowing costs are high and credit conditions are tight. As a result, we expect annual New Orders to plateau in 2023, then decline through the end of 2024.
- Expected deflation will also contribute to decline in dollar-denominated New Orders.
- Annual New Orders will rise in 2025 as the macroeconomy expands, surpassing record highs by the end of that year.

US Food Production Index

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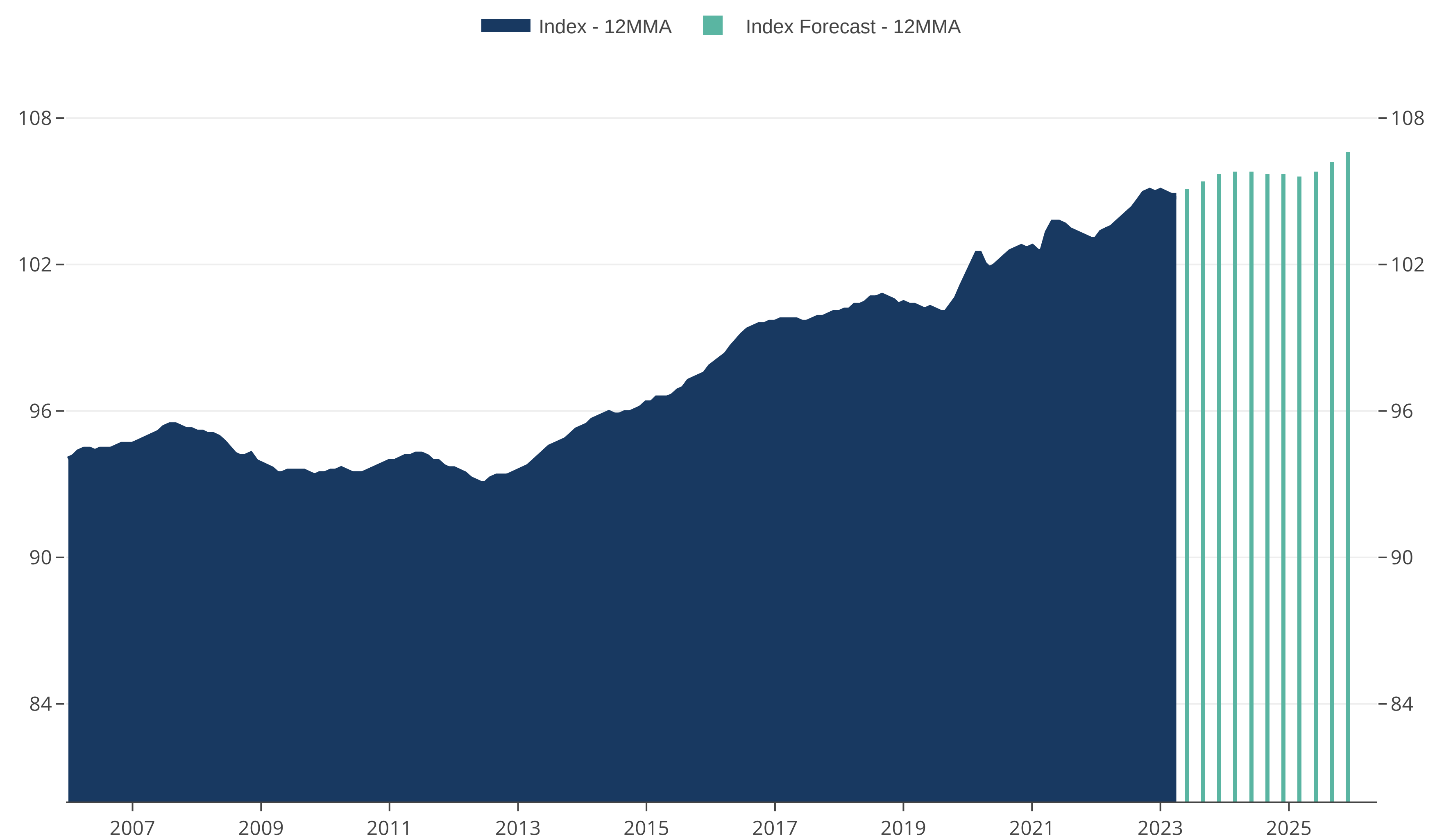
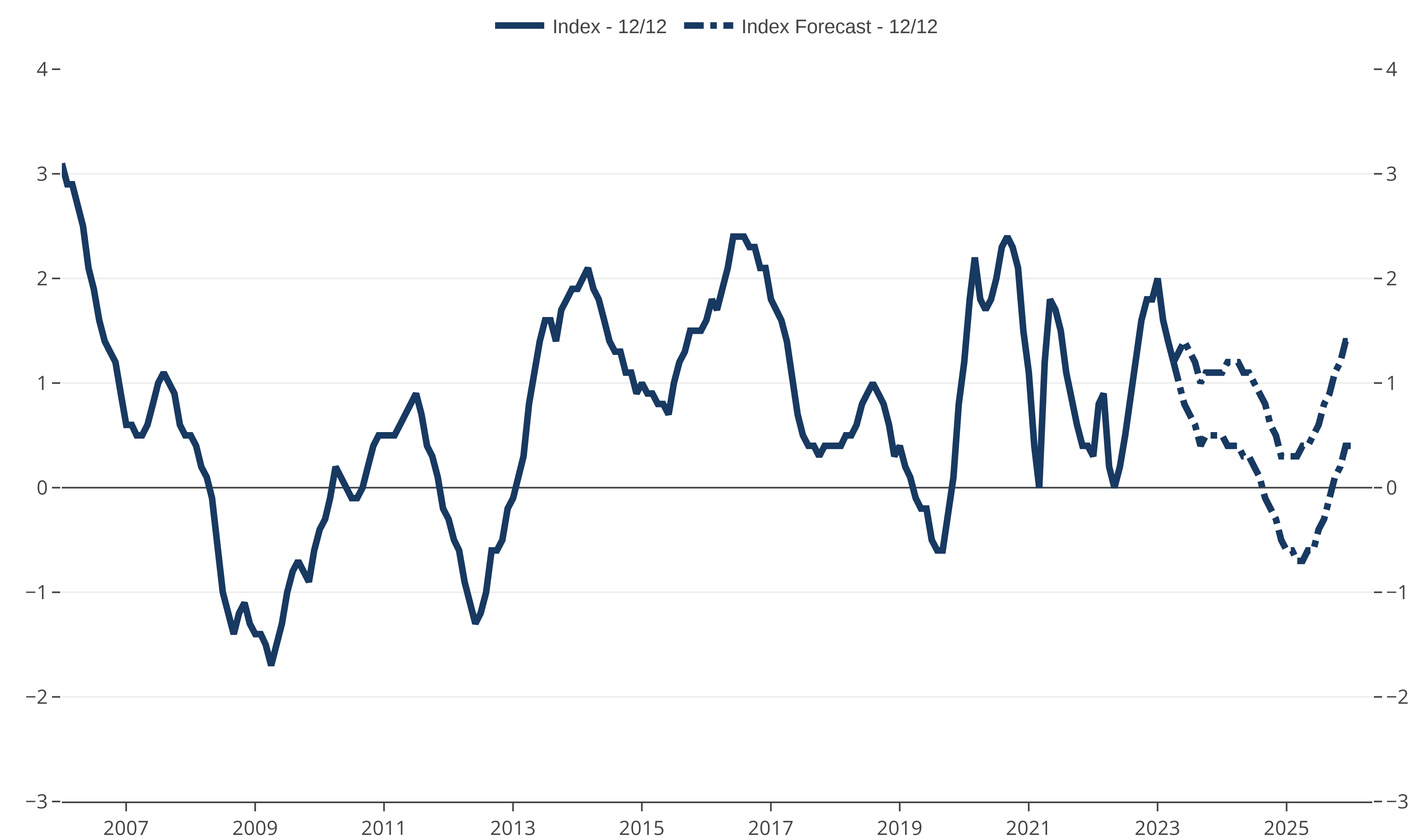
Forecast Revised on Data Revision; Production to Plateau From Mid-2024 to Early 2025

Annual Average (12MMA)



Annual Growth Rate (12/12)



Current Phase

Phase C
Slowing Growth

Current Indicator Amplitude

- April 2023 Annual Growth Rate (12/12): 1.2%
- April 2023 Annual Average (12MMA), 2017=100: 104.8

Industry Outlook

Year	*Annual Growth Rate*
2023	0.8%
2024	-0.1%
2025	0.9%

Outlook & Supporting Evidence

- Annual US Food Production moved lower in recent months but is still 1.2% higher than the year-ago level. Production is in a general Phase C, Slowing Growth, trend.
- We revised the Production forecast due to a revision to historical data by the US Federal Reserve Board. We expect mild annual Production rise into the middle of 2024. Annual Production will then plateau into early 2025. While we are expecting a recession for the macroeconomy in 2024, this industry will likely be sheltered from decline, as Production demand is generally inelastic relative to many other segments of the economy. However, consumers' food purchasing trends may shift during this time in the form of cooking at home more often than eating at restaurants or switching to lower cost products and stores.
- Segments of Production are trending differently. For instance, annual US Bakeries and Tortilla Production is below year-ago levels, while annual US Other Food Products Production, which includes snack foods, coffee, and tea, is near record highs.

US Medical Equipment and Supplies Production Index

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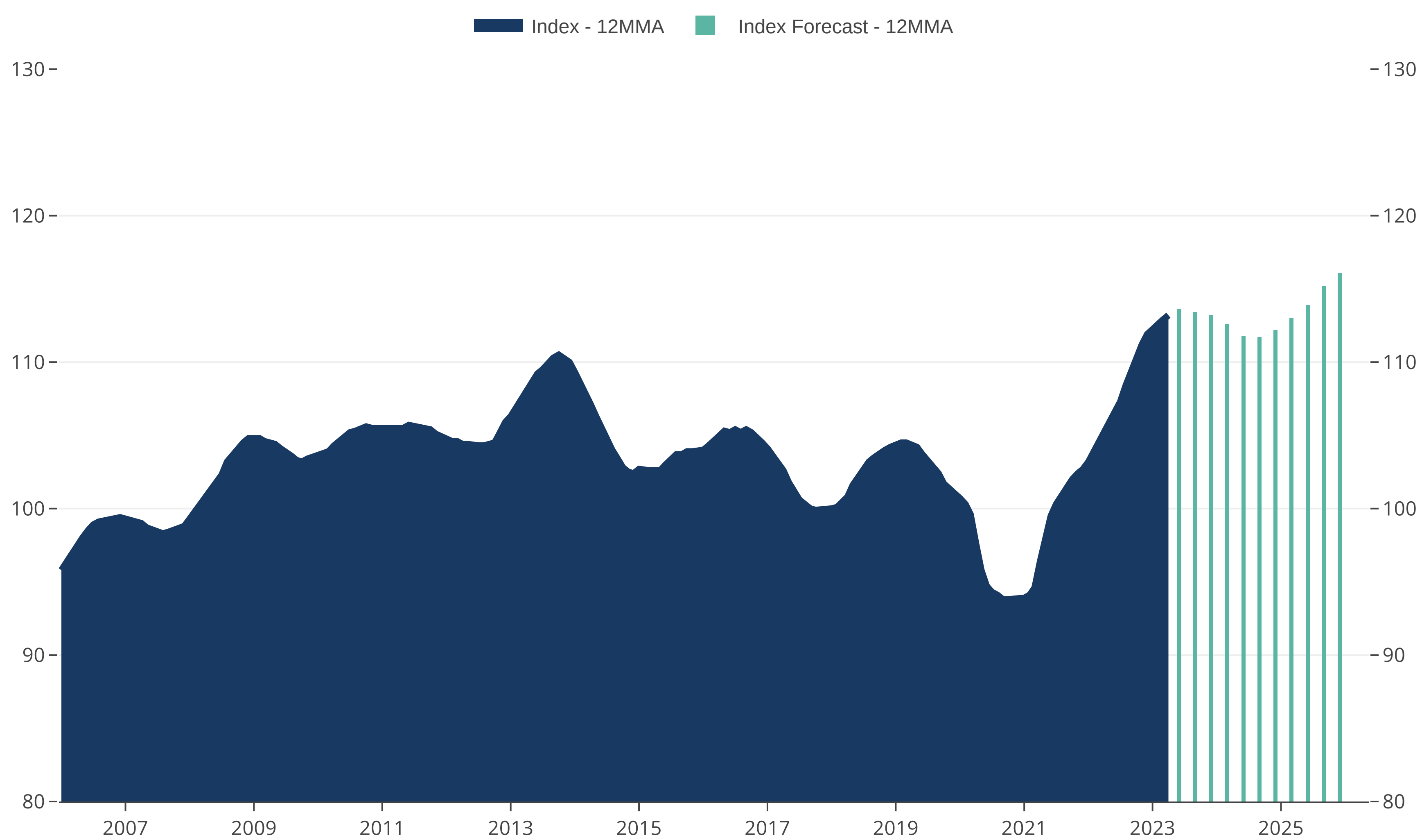
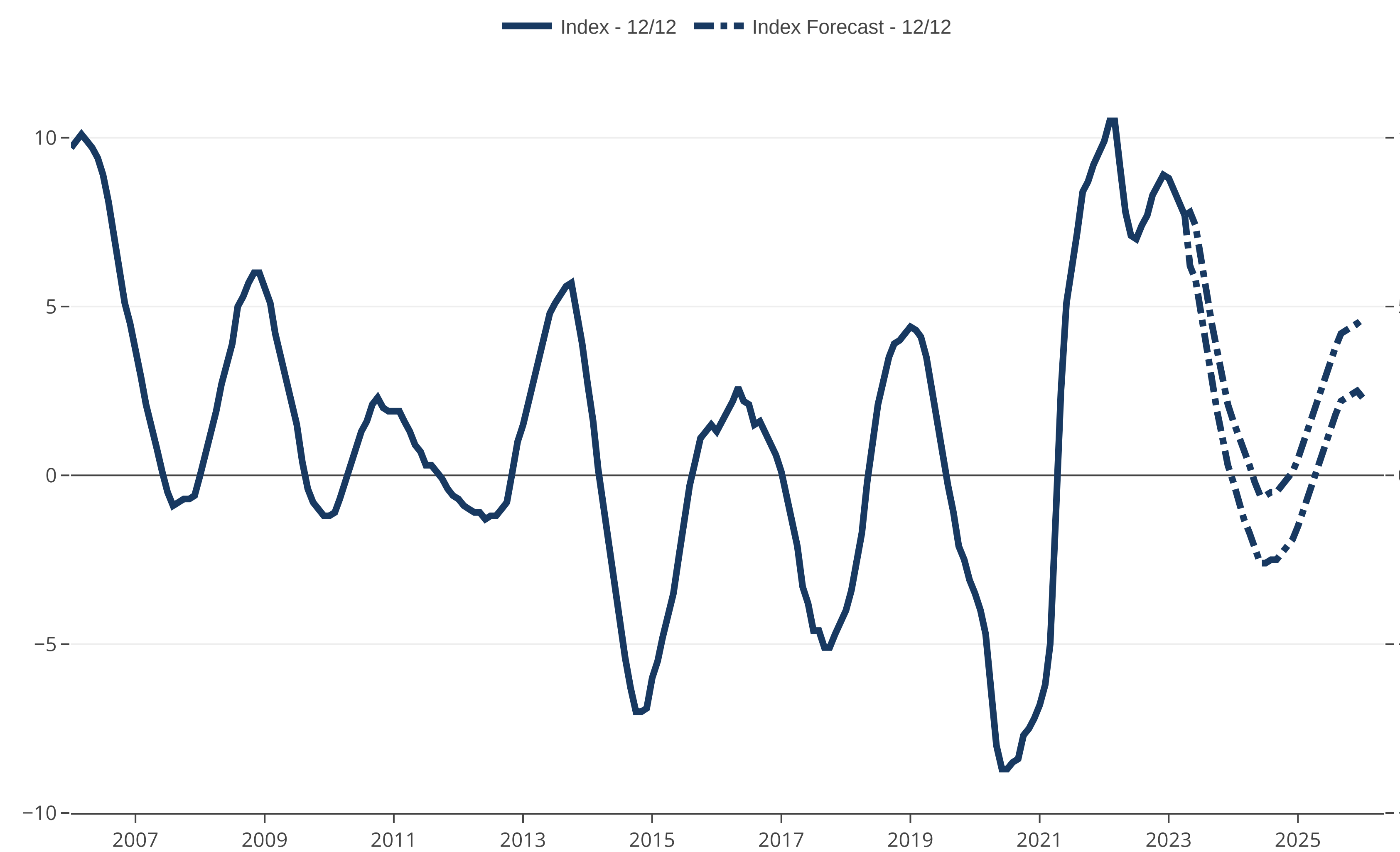
Annual Production to Decline in Near Term as Signaled by Waning Revenue; Expect Rise in 2025

Annual Average (12MMA)



Annual Growth Rate (12/12)



Current Phase

Phase C
Slowing Growth

Current Indicator Amplitude

- April 2023 Annual Growth Rate (12/12): 7.7%
- April 2023 Annual Average (12MMA), 2017=100: 113.2

Industry Outlook

Year	*Annual Growth Rate*
2023	1.2%
2024	-0.9%
2025	3.5%

Outlook & Supporting Evidence

- Annual US Medical Equipment and Supplies Production was 7.7% above the year-ago level in April. Production is slowing in growth but is expected to peak in the near term and then decline into late 2024.
- Medical and Diagnostic Laboratories Services Revenue is declining, hospital margins are thin, and reimbursement rates are declining. These factors signal that companies' funding for medical equipment is likely to soften in the quarters ahead.
- The US is a net importer of medical equipment and supplies, but a shift in preferences towards near-sourcing suggests potential room for long-term growth in domestic medical supplies production. We expect the next rising trend in Production to be in 2025.
- A revision to historical data from the Federal Reserve Board necessitated an adjustment to the Production annual average. The annual growth rate outlook is unchanged.

US Leading Indicators

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Indicator	Direction		
	2Q23	3Q23	4Q23
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 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, though 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 Machinery New Orders

New orders for machinery in the United States. Industries in the machinery manufacturing subsector create end products that utilize mechanical force, for example, the application of gears and levers, to perform work. Some important processes for the manufacture of machinery are forging, stamping, bending, forming, and machining, which are used to shape individual pieces of metal. Processes such as welding and assembling are used to join separate parts together. Although these processes are similar to those used in metal fabricating establishments, machinery manufacturing is different because it typically employs multiple metal forming processes in manufacturing the various parts of the machine. Moreover, complex assembly operations are an inherent part of the production process. Measured in billions of dollars, not seasonally adjusted (NSA). Source: US Census Bureau.

US Medical Equipment and Supplies Production Index

Medical equipment and supplies manufacturing index for the United States. Examples of products made by these establishments are surgical and medical instruments, surgical appliances and supplies, dental equipment and supplies, orthodontic goods, ophthalmic goods, dentures, and orthodontic appliances. Source: Federal Reserve Board. NAICS Code: 3391. Index, 2017 = 100, not seasonally adjusted (NSA).

US Nondefense Capital Goods New Orders (excluding aircraft)

New orders for nondefense capital goods, excluding aircraft, in the United States. Includes farm machinery and equipment, construction machinery, mining machinery, nondefense small arms and ordnance, industrial machinery, commercial and service industry equipment, other general purpose machinery, photographic equipment, metalworking machinery, turbine and generator manufacturing, power transmission equipment, pumps and compressors, material handling equipment, electronic computers, computer storage devices and peripheral equipment, communications equipment, nondefense search and navigation equipment, electrometrical equipment, electrical equipment, heavy duty truck manufacturing, railroad rolling stock, nondefense ship and boat building, office and institutional furniture, and medical equipment and supplies. Source: US Census Bureau. Measured in billions of dollars, not seasonally adjusted (NSA).

US Food Production Index

Industries in the US Food Manufacturing subsector transform livestock and agricultural products into products for intermediate or final consumption. The industry groups are distinguished by the raw materials (generally of animal or vegetable origin) processed into food products. The food products manufactured in these establishments are typically sold to wholesalers or retailers for distribution to consumers. Source: Federal Reserve Board. NAICS Code: 311. Index, 2017 = 100, not seasonally adjusted (NSA).

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

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

