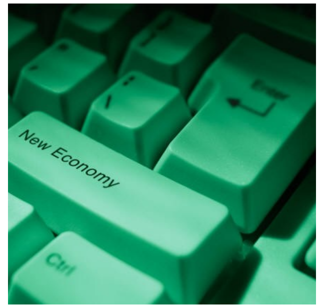
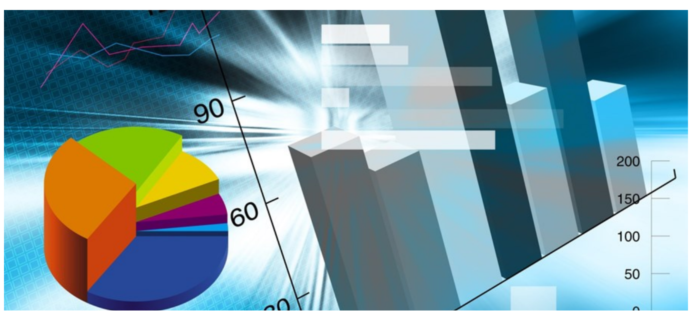




Industrial Supply Association

September 2021

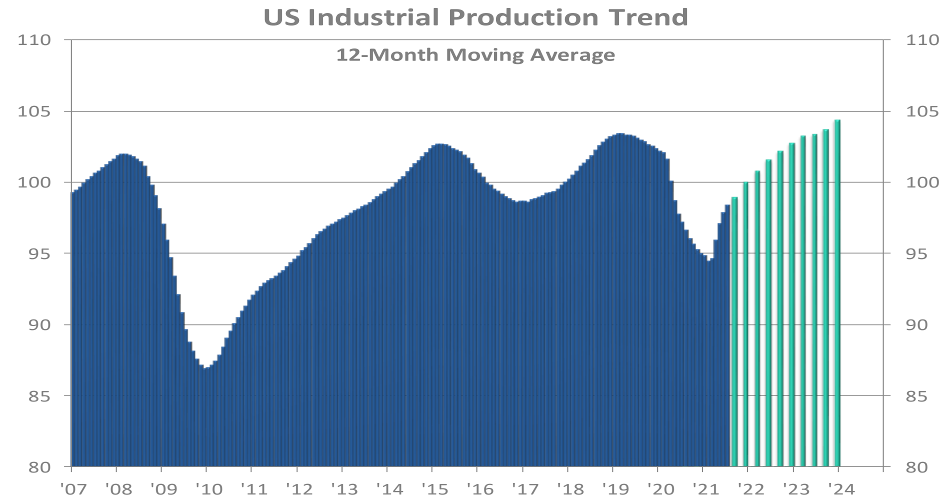
Forecast Report

ITR ECONOMICS

Table of Contents

[Click Here for a Brief Explanation of How to Read This Report]

overview



Sharply rising activity has been the prevailing trend in the US macroeconomy since the middle of 2020. US Industrial Production is in an accelerating growth trend, and US Real Gross Domestic Product (GDP) rose by a near-record 12.2% from the second quarter of 2020 to the second quarter of 2021. However, the vast majority of the key leading indicators we track are now in declining trends, signaling slowing growth on the horizon. Our outlook calls for slowing US Real GDP growth during the second half of this year, throughout 2022, and into the middle of 2023. We expect slowing growth in US Industrial Production during the majority of 2022–23. With fall budgeting season upon us, ensure you are not expecting the rates of rise experienced in 2021 to occur in 2022–23, if your business moves closely with Real GDP or Industrial Production.

Next year's slowing growth reflects the mathematical reality that the US economy simply cannot maintain its current pace of rise; it is not a sign of a weakened consumer. Indeed, the US consumer is strong. In aggregate, consumers have accumulated significant savings and wealth during the pandemic due to a host of factors, including stimulus payments, enhanced unemployment benefits, rising wages, a tight labor market, and rising asset prices. In addition, consumers spent the first portion of the pandemic paying down debts; annual US Total Household Credit Card Debt is at a three-and-a-half-year low. The result is a consumer able to tap into both savings and potentially loans to drive economic growth in the coming years.

Consumer strength is particularly evident in the recent data for US Total Retail Sales. Annual US Total Retail Sales are at a record high, up double digits from the year-ago level and accelerating in their ascent. The increase is not just due to inflation; it is also attributable to increased activity. The recent wave of COVID-19 cases driven by the spread of the Delta variant may lead to a pullback in travel and hospitality-related consumer activity, but the overall consumer sector is and will continue to be healthy.

Despite favorable demand-side conditions, supply-side issues remain an impediment to macroeconomic growth. Supply chain issues are resulting in shortages of certain goods, putting upside pressure on prices. This is particularly evident in sectors like the automotive industry. The market for automobiles has seen higher prices in recent months as semiconductor shortages throttle auto production. In general, the supply chain issues are likely to persist in the near term, but less-robust demand in 2022 as economic growth slows will help the supply chain untangle at least somewhat next year. Accordingly, inflation will also ease as 2022 progresses.

Another issue confronting many US firms is the difficulty of finding and retaining workers in the tight national labor market. Annual US Private Sector Employment is currently 4.8% below the pre-pandemic peak, but not for lack of job openings or opportunities. Many workers are reluctant to reenter the workforce due to the pandemic or difficulties finding childcare. This is causing pain for many businesses as they struggle to find qualified workers and find themselves having to compete with other firms while also contending with a narrower labor pool. It's tempting to think these labor issues may be alleviated somewhat by the general return of in-person schooling in most parts of the US and the end of enhanced unemployment benefits in September. However, the major driver of labor market tightness – demographics – predates the pandemic and will take many years to resolve. We urge businesses to take steps such as ensuring a top-notch workplace culture to attract and retain workers in what will be a persistently tight labor market in the coming years.

Slowing growth is not something to fear, but it is something to plan for. If you take steps to prepare your business for the lower growth rates of 2022–23, in both the overall economy and most markets, you will find yourself ahead of the competition.

Terminology & Methodology

Data Trends:

Monthly Moving Total (MMT) vs Monthly Moving Average (MMA):

Totals are used when it makes sense to add the data together, as with units sold or total dollars spent. Averages are used when the data cannot be compounded, such as with an index, percent, price level, or interest rates.

3MMT/A and 12MMT/A:

A 3-month or 12-month moving total/average is the total/average of the monthly data for the most recent 3 and 12 months, respectively. The 3MMT/A illustrates the seasonal changes inherent to the data series. The 12MMT/A removes seasonal variation in order to derive the underlying cyclical trend. It is also referred to as the annual total or annual average.

Rates-of-Change:

A rate-of-change figure is the ratio comparing a data series during a specified time period to the same period one year ago. **Rates-of-change** are expressed in terms of the **annual percent change in a 12MMT/A, 3MMT/A, and actual monthly data.**

Rates-of-change reveal whether activity levels are rising or falling compared to last year. A rate-of-change trend illustrates and measures cyclical change and trends in the data.

ITR Economics' three commonly used rates-of-change are the **1/12**, **3/12**, and **12/12**, which represent the year-over-year percent change of a single month, 3MMT/A, and 12MMT/A (respectively).

A rate-of-change above 0 indicates the data is higher than one year prior, while a rate-of-change below 0 indicates the data is below one year earlier.

Business Cycle:

The data trends and rates-of-change identify positions in the business cycle. Those positions are:

Accelerating Growth (B): 12/12 is rising and is above zero; the data trend is accelerating in its ascent and is above the year-ago level. This is the second positive phase of the business cycle.

Recovery (A): 12/12 is rising but is below zero; the data trend is below the year-ago level and is either heading toward a low or is in the early stages of rise. This is the first positive phase of the business cycle.

Slowing Growth (C): 12/12 is declining but remains above zero; the data trend ascent is slowing or has stopped its rise, but it is still above the year-ago level. This is the first negative phase of the business cycle.

Recession (D): 12/12 is declining and is below zero; the data trend is below the year-ago level and the rate of decline is increasing. This is the second and final negative phase of the business cycle.

Business Cycle

Page Number	Industry	Current 12/12	Phase	2021	2022	2023
4	US Industrial Production Index	1.2%	B	5.3%	2.8%	1.6%
5	US Civilian Aircraft Equipment Production Index	2.1%	B	17.6%	15.1%	-2.9%
6	US Automobile Production Index	-1.0%	A	-7.3%	30.3%	7.2%
7	US Private Nonresidential Construction	-9.8%	A	-2.6%	6.9%	6.3%
8	US Primary Metals Production Index	3.3%	B	10.9%	5.0%	0.6%
9	US Real Gross Domestic Product*	12.2%	B	4.1%	2.2%	2.0%

*Quotes the quarterly growth rate (4Q21 relative to 4Q20 for 2021, for example).

A RECOVERY

B ACCELERATING GROWTH

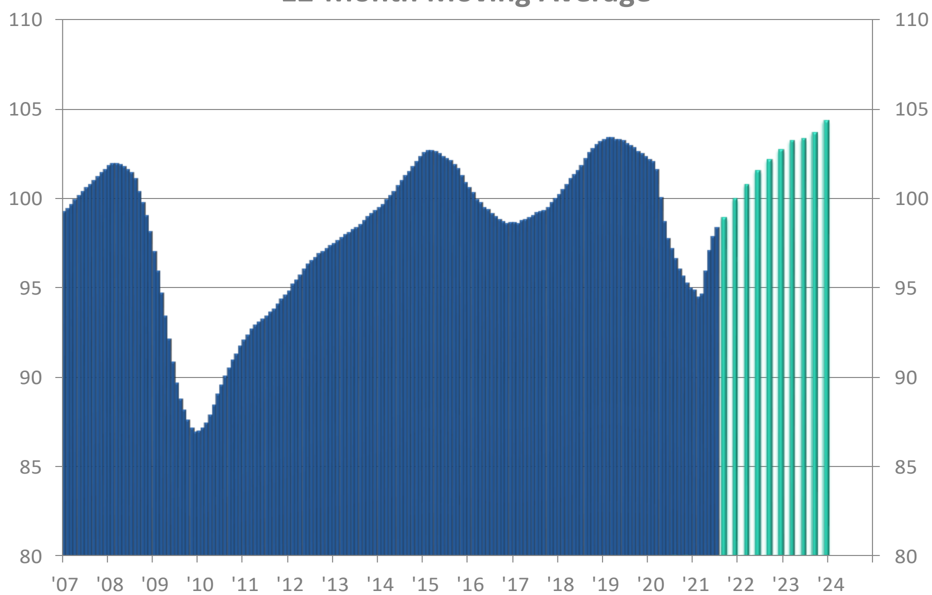
C SLOWING GROWTH

D RECESSION

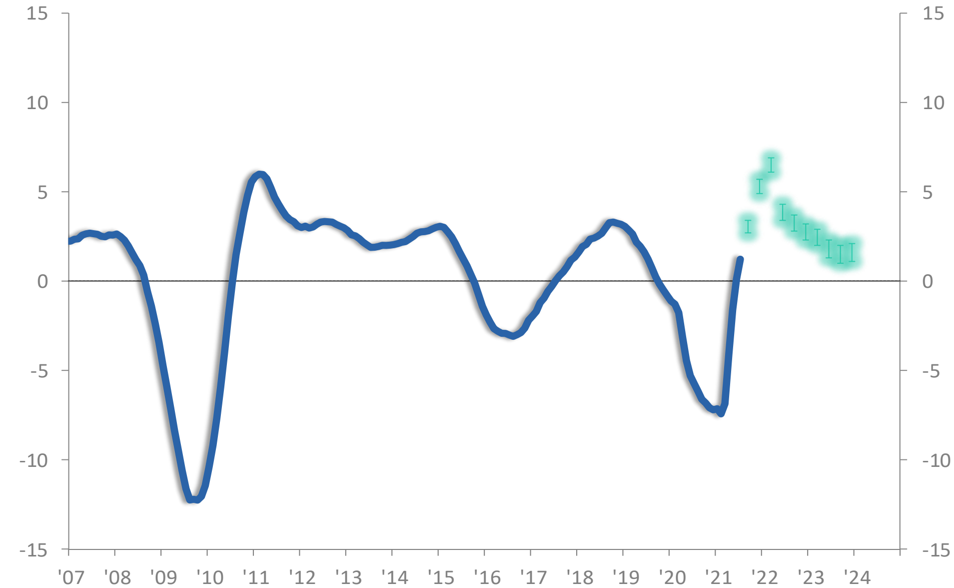
US Industrial Production Index

Leading Indicators Suggest Growth-Rate Peak in Early 2022; Upcoming Phase C to Last Into Late 2023

12-Month Moving Average



Year-over-Year Growth Rate



Industry Outlook

US Industrial Production Index

2017 = 100

	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
Lower Forecast Range	2.7	4.9	6.1	3.4	2.8	2.3	2.0	1.3	1.0	1.1
Annual Growth Rate (%)	**3.1**	**5.3**	**6.5**	**3.9**	**3.3**	**2.8**	**2.5**	**1.8**	**1.5**	**1.6**
Upper Forecast Range	3.4	5.7	6.9	4.3	3.7	3.2	2.9	2.3	2.0	2.1
Lower Forecast Range	98.6	99.6	100.4	101.1	101.7	102.3	102.8	102.9	103.2	103.9
Annual Production (2017 = 100)	**99.0**	**100.0**	**100.8**	**101.6**	**102.2**	**102.7**	**103.2**	**103.4**	**103.7**	**104.4**
Upper Forecast Range	99.3	100.4	101.2	102.0	102.6	103.2	103.7	103.9	104.2	104.9

Phase & Amplitudes

Phase B

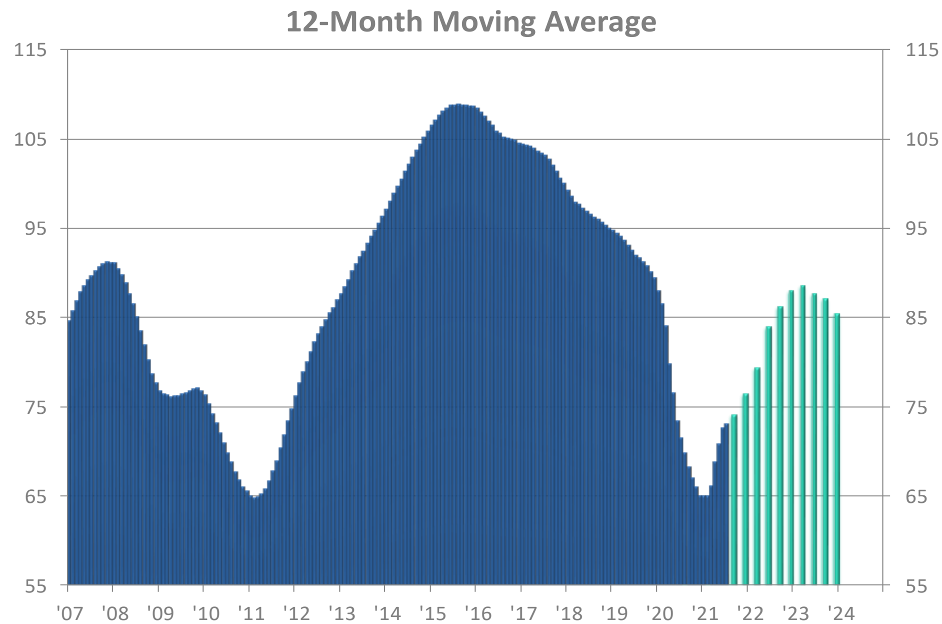
Accelerating Growth

July 2021 Annual Growth Rate (12/12): 1.2%

July 2021 Annual Average (12MMA): 98.4

US Civilian Aircraft Equipment Production Index

Despite Rise, Air Travel Far From Pre-Pandemic Level - Will Be Reflected in Aircraft Demand



Industry Outlook

US Civilian Aircraft Equipment Production Index

2017 = 100

	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
Lower Forecast Range	6.9	16.0	18.6	14.6	14.6	13.4	9.9	2.6	-0.8	-4.8
Annual Growth Rate (%)	**8.4**	**17.6**	**20.2**	**16.2**	**16.3**	**15.1**	**11.6**	**4.4**	**1.1**	**-2.9**
Upper Forecast Range	9.9	19.2	21.8	17.8	18.0	16.8	13.3	6.2	3.0	-1.0
Lower Forecast Range	72.9	75.2	78.0	82.6	84.7	86.5	87.0	86.1	85.4	83.8
Annual Production (2017 = 100)	**74.0**	**76.4**	**79.3**	**84.0**	**86.1**	**87.9**	**88.5**	**87.6**	**87.1**	**85.4**
Upper Forecast Range	75.2	77.6	80.6	85.3	87.6	89.4	90.0	89.2	88.7	87.0

Phase & Amplitudes

Phase B

Accelerating Growth

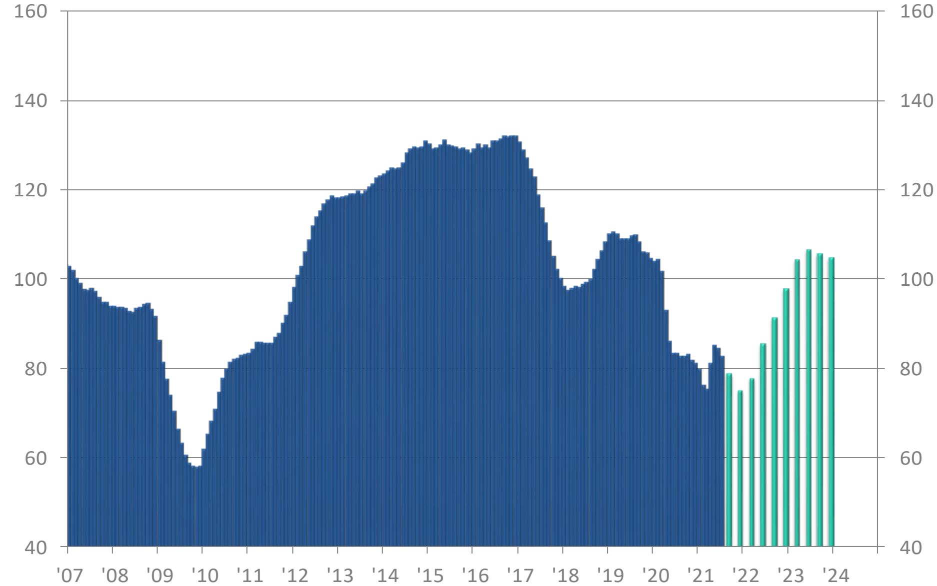
July 2021 Annual Growth Rate (12/12): 2.1%

July 2021 Annual Average (12MMA): 73.0

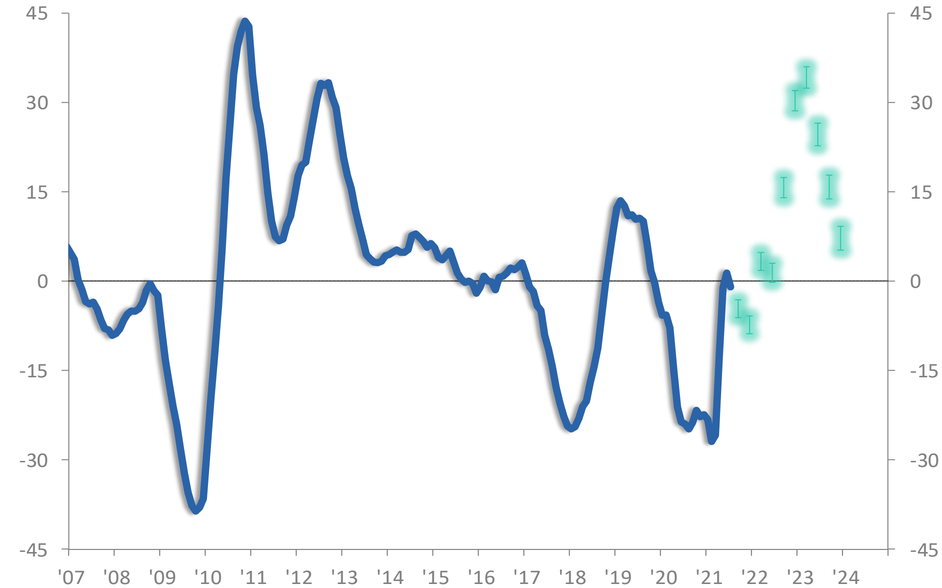
US Automobile Production Index

Near-Term Forecast Downgraded on Supply Chain Woes; 2022 Bounce-back Relative to Weak 2021

12-Month Moving Average



Year-over-Year Growth Rate



Industry Outlook

US Automobile Production Index

2017 = 100

	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
Lower Forecast Range	-6.1	-8.8	1.8	-0.2	14.0	28.6	32.4	22.7	13.8	5.2
Annual Growth Rate (%)	**-4.6**	**-7.3**	**3.3**	**1.4**	**15.7**	**30.3**	**34.2**	**24.6**	**15.8**	**7.2**
Upper Forecast Range	-3.1	-5.8	4.8	3.0	17.4	32.0	36.0	26.5	17.8	9.2
Lower Forecast Range	77.7	74.0	76.6	84.1	89.7	96.2	102.5	104.5	103.6	102.8
Annual Production (2017 = 100)	**78.9**	**75.1**	**77.8**	**85.5**	**91.3**	**97.8**	**104.4**	**106.6**	**105.7**	**104.9**
Upper Forecast Range	80.1	76.2	78.9	86.9	92.8	99.5	106.2	108.6	107.8	107.0

Phase & Amplitudes

Phase A

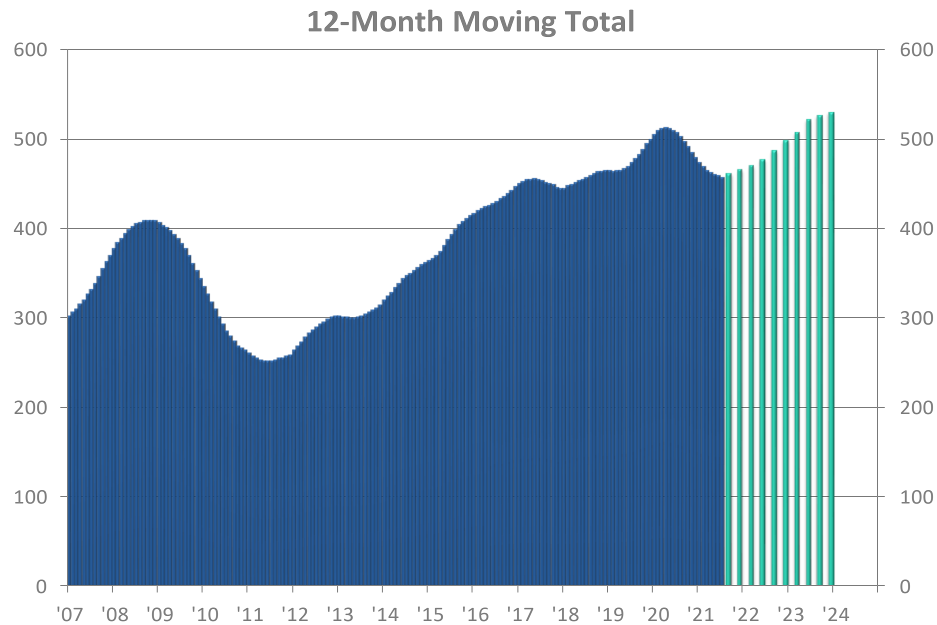
Recovery

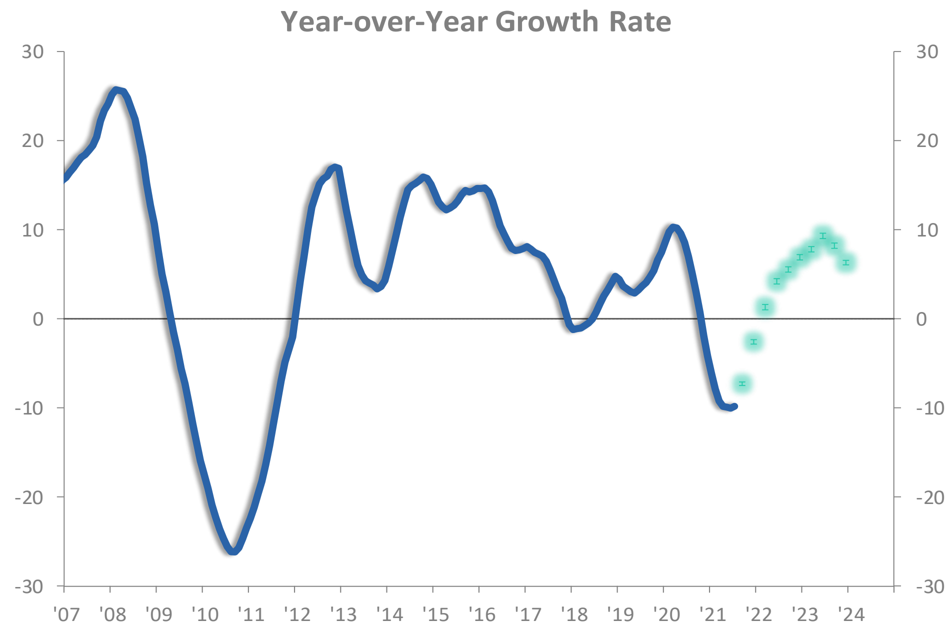
July 2021 Annual Growth Rate (12/12): -1.0%

July 2021 Annual Average (12MMA): 82.6

US Private Nonresidential Construction

Forecast Upgraded as Prices Surge 20% From Last Year; Inflation-Adjusted Data Showing Decline





Industry Outlook

US Private Nonresidential Construction

Billions of dollars

	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
Lower Forecast Range	-8.2	-3.6	0.2	3.1	4.4	5.7	6.5	8.0	6.8	4.8
Annual Growth Rate (%)	**-7.3**	**-2.6**	**1.3**	**4.2**	**5.5**	**6.9**	**7.8**	**9.3**	**8.2**	**6.3**
Upper Forecast Range	-6.4	-1.6	2.4	5.3	6.6	8.1	9.1	10.6	9.6	7.8
Lower Forecast Range	457.2	461.9	465.9	472.0	481.5	492.8	501.2	514.9	519.4	522.2
Annual Construction (Billions of Dollars)	**461.3**	**466.6**	**471.1**	**477.3**	**486.8**	**498.8**	**507.8**	**521.6**	**526.7**	**530.2**
Upper Forecast Range	465.5	471.2	476.2	482.5	492.2	504.7	514.4	528.4	534.1	538.1

Phase & Amplitudes

Phase A

Recovery

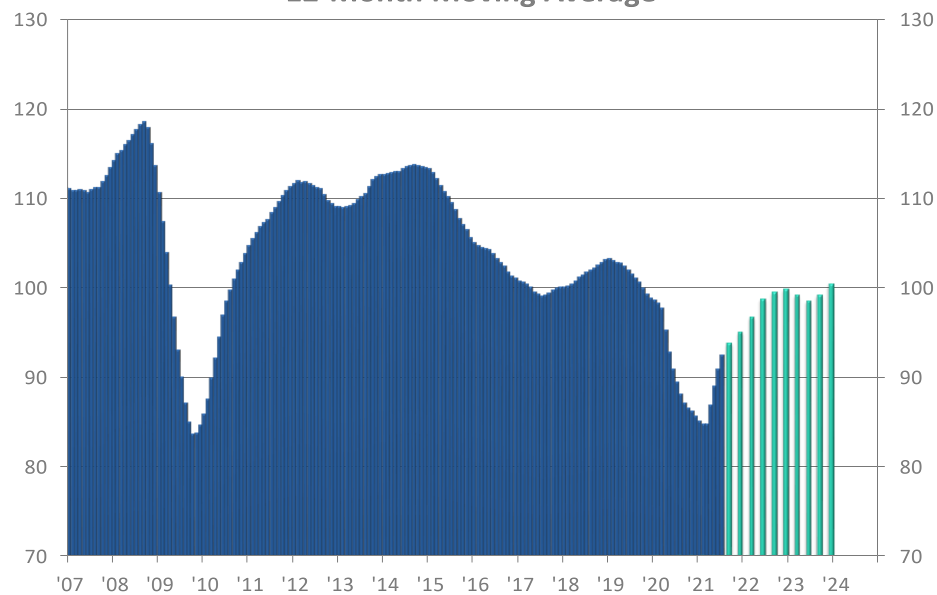
July 2021 Annual Growth Rate (12/12): -9.8%

July 2021 Annual Total (12MMT): $457.2 billion

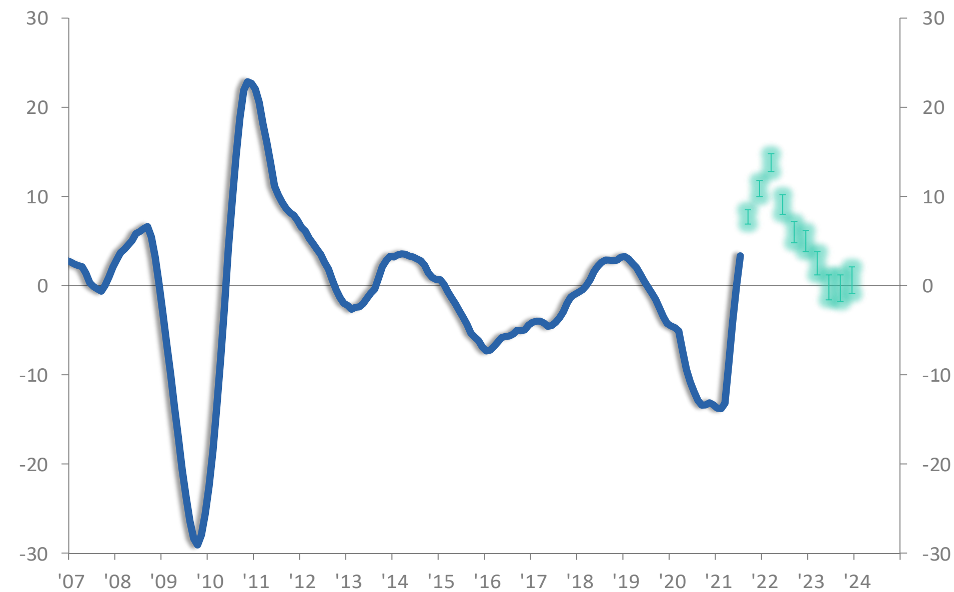
US Primary Metals Production Index

Upcoming Cyclical Decline in Industrial Sector Will Result in Slowing Growth in Production in 2022

12-Month Moving Average



Year-over-Year Growth Rate



US Primary Metals Production Index

2017 = 100

	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
Lower Forecast Range	6.9	10.0	12.8	8.0	4.8	3.8	1.2	-1.6	-1.8	-0.9
Annual Growth Rate (%)	**7.7**	**10.9**	**13.8**	**9.1**	**6.0**	**5.0**	**2.5**	**-0.2**	**-0.3**	**0.6**
Upper Forecast Range	8.5	11.8	14.8	10.2	7.2	6.2	3.8	1.2	1.2	2.1
Lower Forecast Range	93.1	94.2	95.8	97.6	98.3	98.6	97.9	97.1	97.7	98.9
Annual Production (2017 = 100)	**93.8**	**95.0**	**96.7**	**98.7**	**99.4**	**99.8**	**99.1**	**98.5**	**99.1**	**100.4**
Upper Forecast Range	94.6	95.9	97.7	99.8	100.6	101.0	100.4	99.9	100.6	101.9

Phase & Amplitudes

Phase B

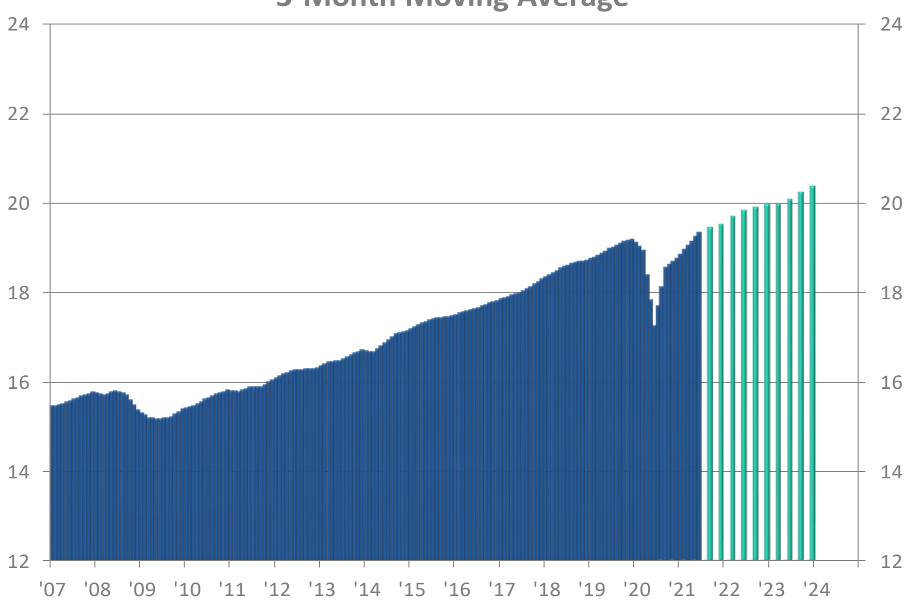
Accelerating Growth

July 2021 Annual Growth Rate (12/12): 3.3%

July 2021 Annual Average (12MMA): 92.4

US Real Gross Domestic Product

GDP Fully Recovered From 2020 Shutdowns; Phase C, Slowing Growth, on the Horizon



Industry Outlook

US Real Gross Domestic Product

Trillions of dollars

	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23
Lower Forecast Range	4.6	3.8	3.2	2.2	2.1	1.9	1.0	1.0	1.3	1.8
Quarterly Growth Rate (%)	**4.8**	**4.1**	**3.5**	**2.5**	**2.4**	**2.2**	**1.3**	**1.3**	**1.6**	**2.0**
Upper Forecast Range	5.0	4.3	3.8	2.8	2.7	2.5	1.6	1.6	1.9	2.3
Lower Forecast Range	19.4	19.5	19.7	19.8	19.9	19.9	19.9	20.0	20.2	20.3
Quarterly GDP (Trillions of Dollars)	**19.5**	**19.5**	**19.7**	**19.8**	**19.9**	**20.0**	**20.0**	**20.1**	**20.2**	**20.4**
Upper Forecast Range	19.5	19.6	19.8	19.9	20.0	20.0	20.0	20.2	20.3	20.4

Phase & Amplitudes

Phase B

Accelerating Growth

June 2021 Quarterly Growth Rate (3/12): 12.2%

June 2021 Quarterly Average (3MMA): $19.4 trillion

INDICATORS

US Leading Indicators

Indicator	Direction		
	4Q21	1Q22	2Q22
ITR Leading Indicator™	🟢	🟢	N/A
ITR Retail Sales Leading Indicator™	🟢	🟢	🟢
US OECD Leading Indicator	🟢	🔴	N/A
US ISM PMI (Purchasing Managers Index)	🟢	🟢	🔴
US Total Capacity Utilization Rate	🟢	N/A	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 industrial sector is expected to reach a business cycle peak early next year, as suggested by the bulk of the key leading indicators we track.
- While the focus of this table is on the US economy, global leading indicators are also moving lower, foreshadowing slowing growth for World Industrial Production next year as well.
- The ITR Retail Sales Leading Indicator™ is rising, which, paired with elevated savings rates, suggests that the US consumer sector is poised to drive the economy higher into at least 2022.

Multiple leading indicators have begun to decline, signaling that the US industrial sector will transition to Phase C, Slowing Growth, in the first half of 2022. Now is the time to start brainstorming new products or potential markets that could buck the slowing growth trend we are expecting to characterize much of 2022-23.

Appendix — Market Definitions

US Industrial Production Index — Index of total industrial production in the United States; includes manufacturing, mining, and utilities. Source: Federal Reserve Board. Index, 2017 = 100, not seasonally adjusted (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: Federal Reserve Board. NAICS Code: 336412,3. Index, 2017 = 100, 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: Federal Reserve Board. NAICS Code: 336111. Index, 2017 = 100, NSA.

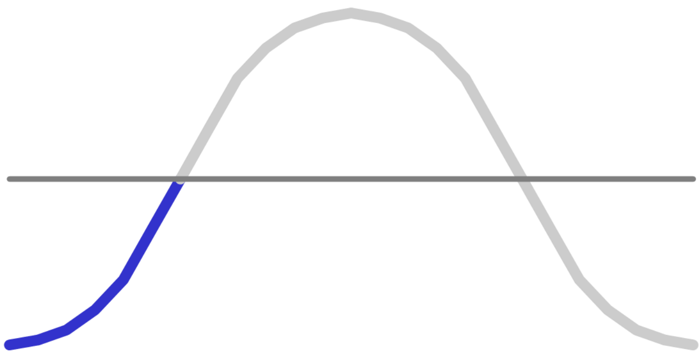
US Private Nonresidential Construction — Private nonresidential construction in the United States. Includes private construction of the following types: office, commercial, automotive, lodging, dining, retail, warehouse, storage facilities, schools, dormitories, sports facilities, galleries, museums, 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 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: Federal Reserve Board. NAICS Code: 331. Index, 2017 = 100, 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

1 Scrupulously evaluate the supply chain

2 Model positive leadership (culture turns to behavior)

3 Start to phase out marginal opportunities (products, processes, people); repair margins

4 Perform due diligence on customers and extend credit

5 Be on good terms with a banker; you will need the cash more now than in any other phase

6 Invest in customer market research; know what they value and market/price accordingly

7 Hire key people and implement company-wide training programs ahead of Phase B

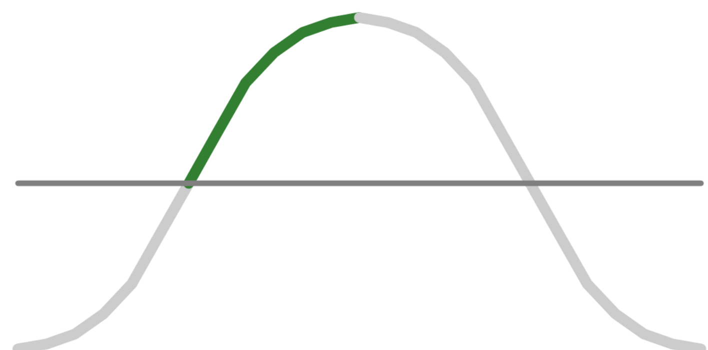
8 Allocate additional resources to sales and marketing

9 Invest in system/process efficiencies

10 Make opportunistic capital and business acquisitions; use pessimism to your advantage

Management Objectives™

Phase

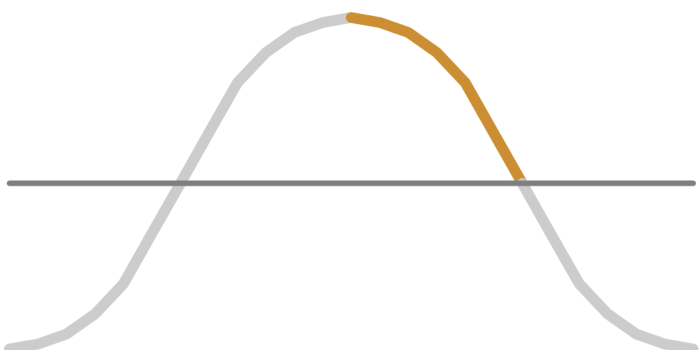


B

1. Ensure quality control keeps pace with increasing volume
2. Invest in workforce development: hiring, training, retention
3. Ensure you have the right price escalator; space out price increases
4. Maximize your profit margins through differentiation; stand out from the crowd and set yourself apart
5. Use improved cash flow to strategically position the business to beat the business cycle
6. Expand credit to customers
7. Improve corporate governance (rent a CFO; establish a board of advisors or board of directors)
8. Communicate competitive advantages; build the brand
9. Query users for what they want and what is important to them
10. Sell the business in a climate of maximum goodwill

Management Objectives™

Phase



C

1 Know if your markets are headed for a soft landing or a hard landing

2 Cash is king; beware of unwarranted optimism

3 Stay on top of aging receivables

4 Revisit capital expenditure plans

5 Lose the losers: if established business segments are not profitable during this phase, eliminate them

6 Use competitive pricing to manage your backlog through the coming slowdown

7 Avoid committing yourself to long-term expenses at the top of the price cycle, but lock in revenue

8 Go entrepreneurial and/or counter-cyclical

9 Evaluate your vendors for financial strength; if needed, look for additional vendors as a safety net

10 If the cycle looks recessionary, cross-train key people to prepare for workforce attrition/reduction

Management Objectives™

1 Implement aggressive cost-cutting measures

2 Offer alternative products with a lower cost basis

3 Perform due diligence on acquisitions while valuations are falling

4 Reduce advertising as consumers become more price conscious

5 Enter or renegotiate long-term leases

6 Negotiate labor contracts

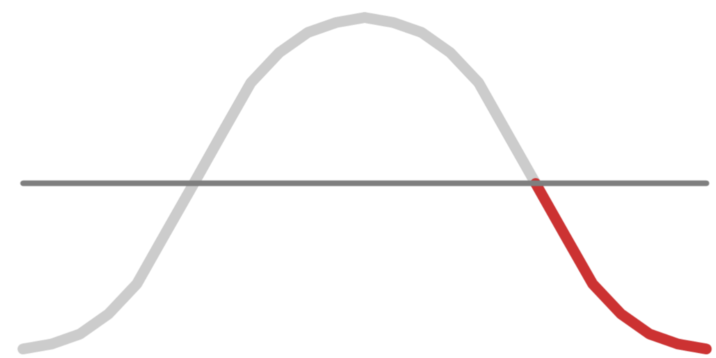
7 Consider capital equipment needs for the next cycle

8 Tighten credit policies

9 Develop programs for advertising, training, and marketing to implement in Phase A

10 Lead with optimism, remembering that Phase D is temporary

Phase



D