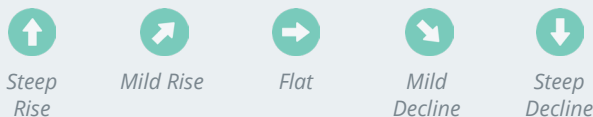
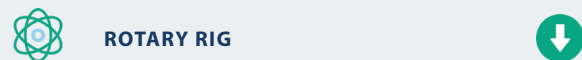
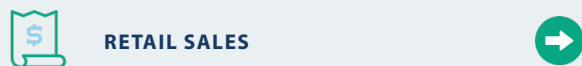


## Industry Snapshots

Arrow denotes 12-month moving total/average direction.



## Macroeconomic Outlook

As 2021 looms ahead, plenty of signals are emerging from the US economy to give cause for optimism. Our dashboard of leading indicators suggests that, barring widespread shutdowns, the US industrial sector will transition to a business cycle rising trend in the coming months. We also expect a more inflationary environment in 2021 as recovering industrial activity yields higher demand for inputs. The distribution of a COVID-19 vaccine will likely aid in the burgeoning recovery.

Further cause for optimism stems from US Nondefense Capital Goods New Orders (excluding aircraft); quarterly New Orders are already up 7.8% compared to the same time period in 2019. We expect business-to-business spending to generally rise through at least 2021. Within the B2B sector, US Computers and Electronics New Orders and US Nondefense Communications Equipment New Orders are driving recent positivity as employees and firms procure equipment to facilitate remote work and investment related to the 5G rollout occurs. In contrast, the US Machinery New Orders segment of the B2B world is having a more sluggish recovery, with quarterly New Orders 0.6% below the year-ago level. Those tied to this sector may still experience some weakness heading into 2021, but that weakness will give way to strength as 2021 progresses.

*“The consumer will drive the US economic recovery forward in 2021”*

On the consumer side, quarterly US Total Retail Sales are up 5.3% year over year. However, this very favorable number belies some recent weakening; Retail Sales for the month of November were down 1.3% from the prior month. This is only the fourth instance of October-to-November decline in the last 20 years, and it suggests we could be in for some very near-term struggles on the retail side of the economy. That being said, low US Credit Card Delinquency Rates, very high savings rates, and US Disposable Personal Income above the pre-pandemic level show that the US consumer is in a fundamentally solid position; the consumer will drive the US economic recovery forward in 2021 as a COVID-19 vaccine facilitates increased activity.

Consumer strength is already readily apparent in the single-family housing market. Third-quarter US New Homes Sold were up 47.0% relative to the third quarter of 2019. This is the most robust rate of rise since the early 1980s. Historically low mortgage rates and low home inventories will likely drive rise in US Single-Unit Housing Starts during at least the first half of 2021.

With these positive signals in mind, consider your capacity needs for 2021; take advantage of low interest rates to invest in the equipment and technology necessary to accommodate a robust rising trend. Ensure your raw materials suppliers are geographically diversified in order to minimize disruptions and capacity constraints in the coming year.

## Make Your Move

We expect the US industrial sector to transition to a business cycle rising trend in the coming months. Be on good terms with a banker to ensure you have enough cash to (1) sustain any near-term economic volatility associated with potential shutdowns while (2) still investing in your business in preparation for the business cycle rise ahead.

## Investor Update

The S&P 500 reached a record high in November. Dovish Federal Reserve policies augur for more general rise ahead. It is unlikely that rise will persist uninterrupted, but this does not necessarily constitute a threat to our projected economic recovery. Current technical signals support remaining in the market.

## ITR Economics Long-Term View

2020

DECLINE

2021

RECOVERY AND RISE

2022

GROWTH

## Industry Analysis



### RETAIL SALES

- For the three months through November, US Total Retail Sales were 5.3% above the year-ago level
- During that same time, both Retail Sales at Gasoline Stations and Retail Sales of Fuel Dealers were double digits below year-ago levels, as prices of oil-based products are below the year-ago level
- Retail Sales related to socially distant activities – including e-commerce, motorcycles, boats, and building materials – were up double digits year over year



### AUTO PRODUCTION

- North America Light Vehicle Production in the three months through October was virtually flat compared to the same three months of 2019
- Auto manufacturers are catching up with demand; for January through October, US Light Vehicle Retail Sales exceeded Production by about 1.2 million units, versus approximately 250 thousand units during the same time period in 2019
- Expect rise during 2021, but annual Production will be below the 2017 peak through at least 2021



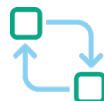
### ROTARY RIG

- The US Rotary Rig Count averaged 282 in the three months through November; quarterly Rigs are tentatively rising off a September low
- Oil Prices have moved up dramatically of late, as COVID-19 vaccine approval and distribution indicates brighter prospects for future oil demand
- Expect general rise in Oil Prices to persist into at least the second half of 2021 as the global economy – and oil demand – recovers



### TOTAL NONRESIDENTIAL CONSTRUCTION

- US Total Nonresidential Construction in the three months through October was 3.7% below the same three months of 2019
- A number of Nonresidential Construction components are expected to be below year-ago levels for at least the majority of 2021; US Private Warehouse Construction is an exception
- Trends in architecture inquiries and billings indexes suggest Nonresidential Construction could be in recession through at least 2021



### WHOLESALE TRADE

- Quarterly US Wholesale Trade is recovering and is 2.2% below the year-ago level
- The Nondurable Goods component of Wholesale Trade is being depressed by the petroleum and chemical products subcomponents; Durable Goods are relatively flat
- Expect both segments to rise during the majority of 2021



### MANUFACTURING

- The US Total Manufacturing Production Index in the three months through November was 4.2% below the year-ago level
- Ongoing rise in the US Manufacturing Capacity Utilization Rate suggests recovery for Manufacturing in early 2021
- High-Technology Production is outperforming the whole, avoiding year-over-year contraction through the shutdowns and stay-at-home orders thanks to demand for items such as semiconductors



### CAPITAL GOODS NEW ORDERS
















- US Nondefense Capital Goods New Orders (excluding aircraft) in the three months through October were 7.8% above the year-ago level
- Bullish trends in computers and communications equipment, which are benefiting from remote connectivity requirements, are diverging from the relatively weaker machinery component
- We raised our outlook; expect annual New Orders to reach record highs beginning in mid-2021





### TOTAL RESIDENTIAL CONSTRUCTION

- US Total Residential Construction in the three months through October was 13.3% above the year-ago level
- Single-family permitting activity bodes well for our expectation for general rise in Single-Unit Housing Starts in 2021
- Conversely, Multi-Unit Housing Starts are declining, with more decline to come in 2021 as builders become conservative given some renters' financial struggles

## Leading Indicator Snapshot

	1Q2021	2Q2021	3Q2021
ITR Leading Indicator™			
ITR Retail Sales Leading Indicator™			
The Conference Board's US Leading Indicator			
US ISM PMI (Purchasing Managers Index)			
US Total Industry Capacity Utilization Rate			

 Denotes that the indicator signals cyclical rise for the economy in the given quarter.

 Denotes that the indicator signals cyclical decline for the economy in the given quarter.

 N/A

### KEY TAKEAWAYS

- Taken together, the leading indicators on this dashboard – along with other indicators we regularly track – suggest US Industrial Production will transition to business cycle rise by the second quarter of 2021
- General rise in the ITR Retail Sales Leading Indicator™ since a tentative May low suggests sustainable business cycle rise in US Total Retail Sales will commence by mid-2021 and persist into at least late that year
- Renewed stimulus efforts pose an upside risk to our outlooks for both Industrial Production and Retail Sales; COVID-19- related shutdowns are a downside risk, although ongoing vaccine distribution may mitigate the need for such measures

## A Closer Look: The US Economy What Went Right in 2020, and What Comes Next?

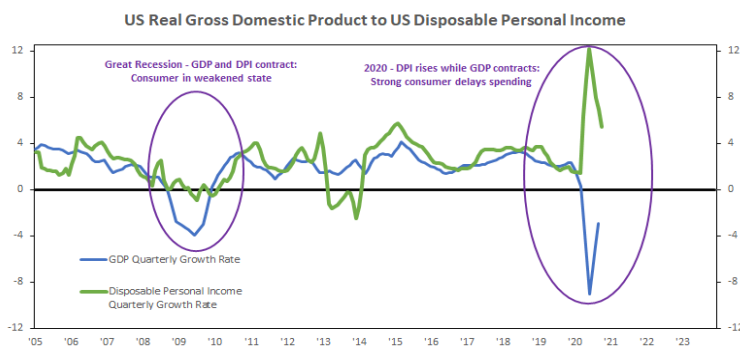
BY: LAUREN SAIDEL-BAKER

*What you need to know: The strength of the US consumer indicates that the recovery will be robust, prepare with urgency*

As we approach the end of an eventful year, many articles will focus on the negatives of the pandemic and the related economic contraction. Given that, I am going to focus instead on an underreported aspect of this year's recession: the silver linings. Despite the recession, what went right in the economy this year?

In many ways, the current recession does not resemble historical recessions. This contraction was driven by a sudden disaster – the pandemic – rather than fundamental economic imbalances or dislocations. In a typical business cycle decline, consumer finances take a hit. Yet in 2020, US Disposable Personal Income (DPI) actually rose. Government stimulus programs, including the one-time \$1,200 payments and the additional \$600 per week in unemployment payments, lifted DPI throughout the summer months. Critically, DPI data came in above the pre-pandemic level through October, even after the expiration of these temporary programs. Consumer savings are also elevated, as lockdown measures prevented households from spending much of the additional income.

Typically, the business cycles for US Gross Domestic Product and DPI are highly correlated, as consumer activity accounts for roughly two thirds of GDP. The following chart shows a sharp divergence at the onset of the pandemic, as GDP contracted but DPI spiked. Expect these trends to realign in 2021 as a healthy consumer, with a historic ability to spend, supports a robust GDP recovery.



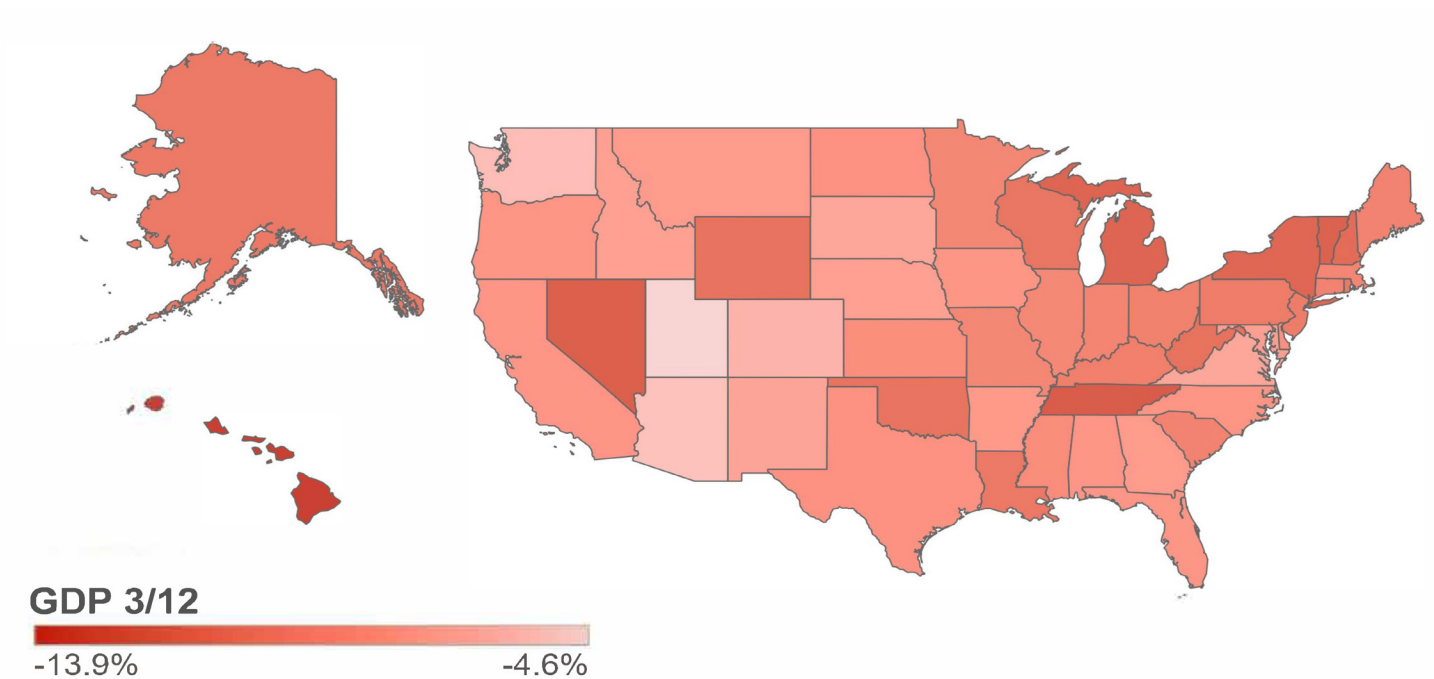
Just as the pandemic-triggered recession of 2020 differed significantly from historical recessions, the recovery will also likely diverge from past examples. The US Unemployment Rate (not seasonally adjusted) is one example: after reaching an all-time high of 14.4% in April, the Unemployment Rate has declined dramatically, already at just 6.4% as of November. The sharp decline represents a much faster reabsorption of unemployed workers into the labor force than historical precedents, including the Great Recession of 2008-09.

The unique effects of the pandemic served to accelerate many trends already underway. For example, both consumers and businesses have been gradually shifting more of their spending to online shopping, and ITR Economics has been recommending for years that our clients invest in their e-commerce presence. The shutdown of most in-person shopping options earlier this year hastened the shift to online shopping, a consumer behavior that is likely here to stay. Near-sourcing, another trend that ITR has been highlighting in recent years, is also accelerating in response to pandemic-induced supply chain concerns. As the virus spread around the world earlier this year, shutting down or delaying cross-border trade, many firms suddenly saw increased value in locating raw material sourcing or intermediate manufacturing processes geographically closer to their customer bases. Consider your competitive position amidst these trends and seek out the new opportunities that will result from them.

Another critical aspect of the pandemic's disruption will be the long-term business resiliency gains and cost savings. Throughout the shutdowns and lockdowns, businesses have evolved and found creative solutions to novel problems. The increased adoption of work-from-home policies and virtual meetings may offer efficiency gains, cost savings, or both. Can your firm save on office and travel costs in the future? Will the permanent adoption of these temporary safeguards help you overcome challenges in finding qualified applicants by broadening your pool of potential workers? During a trough in the business cycle, ITR Economics will typically suggest that clients evaluate their process flows and invest in new efficiencies while there is downtime. In the current trough, the directive is more explicit: identify not just process improvements, but also the successful ad-hoc fixes that you should make permanent. In doing so, you will be that much more resilient in the future.

The recession was not a usual, fundamentals-driven business cycle event, and so we expect the economic recovery will be unusually robust. Businesses must therefore be opportunistic and seize on the unique elements currently at play. This cycle, the historical "recovery playbook" will not be enough, and that is good news for firms that are willing to adapt to prosper.

## State-by-State: GDP



- All 50 states and the District of Columbia experienced year-over-year GDP decline in the second quarter (latest data available).
- Some of the steepest declines were in heavily tourism-reliant states, including Hawaii (-13.9%), Nevada (-12.3%), and Vermont (-12.1%).
- States in the northeast, where shutdowns and stay-at-home orders were more aggressive, generally experienced steeper declines than many of the southwestern and southeastern states, which had more relaxed policies at the time.
- US Real Gross Domestic Product rose sharply in the third quarter; expect quarterly GDP to rise throughout 2021, but it is unlikely to reach the 2019 level during that time.

## Reader's Forum

### Does the COVID-19 vaccine rollout change your outlooks?

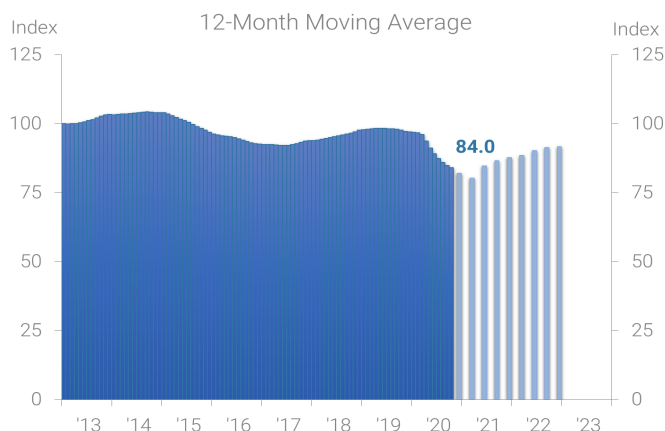
Lauren Stockli, Economist at ITR Economics™, answers:

Thank you for the question. The rollout is encouraging, as it relieves some of the pressure on governors to implement further pandemic restrictions. Frontline and other essential workers, as well as high-risk groups, are priority for the initial distribution, and we will be partway through 2021 before the bulk of the general public has access to the vaccine. This is in line with our expectation that the US economy will perform better in the second half of 2021 than in the first half. As of now, the vaccine rollout is largely developing as we had assumed when we issued our current macroeconomic forecasts. Therefore, no changes are necessary at this time. However, we will monitor news of the pandemic and other variables as we move into early 2021, and we will keep you informed if our outlook changes.

Please send questions to: [questions@itreconomics.com](mailto:questions@itreconomics.com)

## Primary Metals Production Index

Index, 2012 = 100, NSA



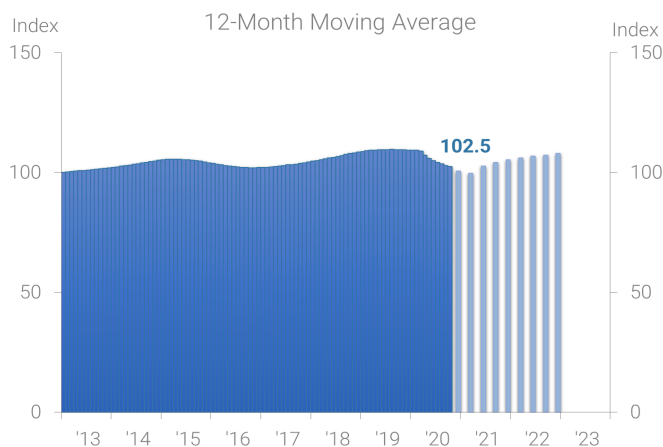
FORECAST	Y-o-Y Growth Rate
2020:	-15.5%
2021:	7.0%
2022:	4.5%

Monthly US Primary Metals Production is recovering off a May 2020 low. Production came in above range in September, and our analysis suggested that this deviation was likely to persist, necessitating a revision to the forecast. We revised our outlook upward by 6.2%, 6.9%, and 6.9% for 2020, 2021, and 2022 respectively. Expect annual Production to decline into early 2021, then rise through at least year-end 2022. By the end of 2022, annual Production will be around 6.8% below the previous peak, established in May 2019.

The US Total Industry Capacity Utilization Rate, a gauge of “slack” in the industrial sector, is rising off an April 2020 low. The Utilization Rate trend suggests that the business cycle decline in Metals Production will likely be short-lived. The global economy is taking early steps toward recovery, and some countries, such as China, are already in business cycle rising trends. Our recently upward-revised outlook for Industrial Production in China, one of the largest consumers of many metals, suggests a trickle-down effect on Metals Production and contributed to the upgraded Metals Production outlook. Ongoing rise in prices for a number of metals – including steel scrap and copper – suggest an earlier-than-anticipated business cycle low in Production; this is an upside risk to our outlook.

## US Industrial Production Index

Index, 2012=100, NSA



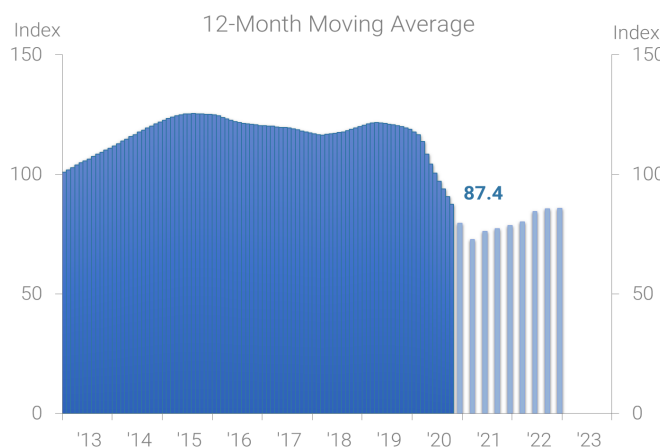
FORECAST	Y-o-Y Growth Rate
2020:	-8.0%
2021:	4.8%
2022:	2.5%

October marked the fourth consecutive month of rise for quarterly US Industrial Production. We expect annual Production to rise by the second quarter of 2021, with rise persisting through at least 2022. Annual Production will not return to record highs during that time; for year-end 2022, annual Production will come in about 1.4% below the August 2019 record level of annual activity.

A wide swath of leading indicators- including utilization rates, purchasing managers indexes, and financial indicators - suggest Production business cycle rise will begin early next year. A return to shutdowns akin to the recent restrictions in the UK poses a downside risk to our outlook, but the approval and ongoing distribution of the Pfizer and Moderna vaccines may begin to mitigate much of that risk moving forward. The magnitude of the fiscal and monetary stimulus measures poses an upside risk to our outlook.

## US Civilian Aircraft Equipment Production Index

Index, 2012 =100, NSA



FORECAST	Y-o-Y Growth Rate
2020:	-33.1%
2021:	-1.1%
2022:	9.1%

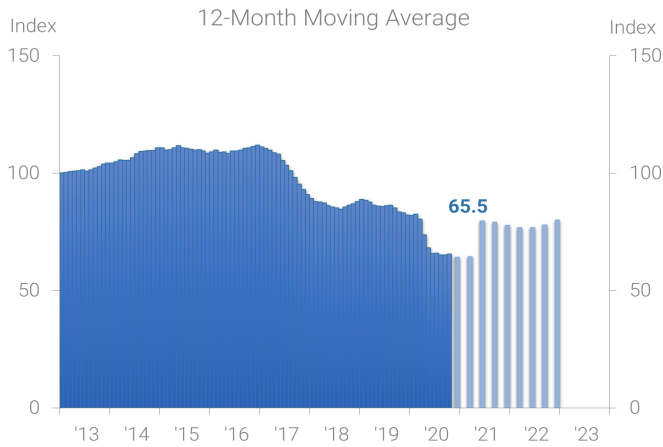
Quarterly US Civilian Aircraft Equipment Production was 33.3% below the year-ago level in October. Data projections and leading indicators align with the unchanged forecast. Expect annual Production to decline into early 2021, with subsequent rise extending through year-end 2022. By the end of 2022, we expect annual Production will be nearly 30% below the prior annual activity high, established in April 2019.

US Nondefense Aircraft and Parts New Orders totaled \$1.6 billion in October, which was only the second month since February in which incoming orders exceeded order cancellations. The Boeing 737 MAX has also been cleared by US and European regulators, which could help Boeing regain business that was lost following the jet's grounding. Positive New Orders and the regulatory clearance are signs of tentative recovery in the aerospace industry and are consistent with our outlook for rise in annual Production beginning in the first half of 2021. Nonetheless, consumers' concerns regarding health and safety, as well as low oil prices, which may dampen demand for new fuel-efficient jets, remain major hurdles for this industry.



## US Automobile Production Index

Index, 2012 =100, NSA



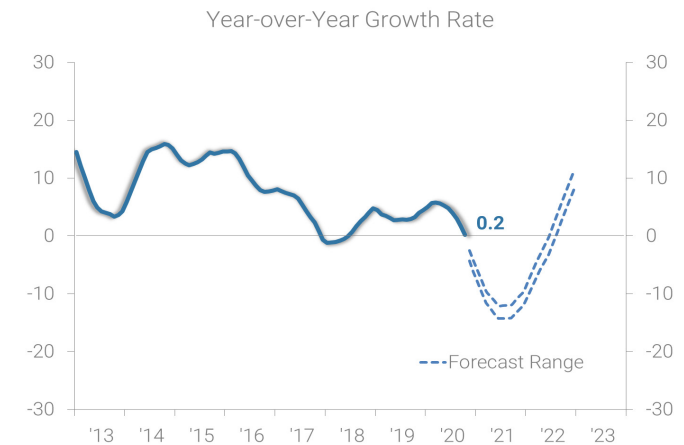
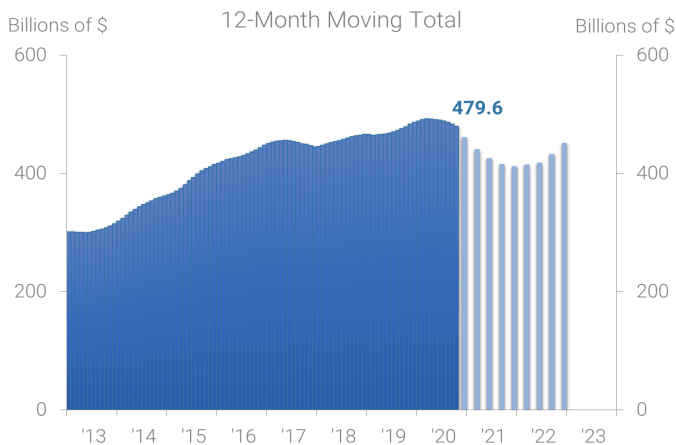
FORECAST	Y-o-Y Growth Rate
2020:	-21.8%
2021:	21.1%
2022:	3.0%

US Automobile Production in September and October exceeded year-ago levels and came in above the forecast range. Production reached a cyclical low about two quarters earlier than anticipated, as the consumer stayed relatively strong during the pandemic. As a result of these factors, we revised the Production forecast upward through 2022. Annual Production is expected to be relatively flat in the near term before spiking in the second quarter of 2021. Production will then oscillate just below the pre-pandemic level into at least 2022; we expect the issuance of long-term loans and subprime loans will continue to make trading up into new vehicles difficult for a subset of buyers who owe more than their cars are worth.

Low interest rates pose an upside risk to our outlook, as more affordable financing options could lead to stronger consumer demand for vehicles. This is counterbalanced by persistent work-from-home policies, which, with their potential to dampen demand for commuter vehicles, pose a downside risk to our longer-term outlook.

## US Private Nonresidential Construction

Measured in Billions of Dollars, NSA



FORECAST	Y-o-Y Growth Rate
2020:	-5.3%
2021:	-10.8%
2022:	9.6%

US Private Nonresidential Construction during the three months through July totaled \$120.0 billion, 3.3% below the same three months one year earlier. We adjusted the forecast slightly following the release of additional post-shutdown data. The timing of the upcoming business cycle low, expected to occur in the second half of 2021, is unchanged. Expect annual Construction to decline through 2021. Growth is probable throughout 2022.

Construction typically lags the economy by about one year due to the time it takes for changes in the economy to trickle down to spending on long-term construction projects. Accordingly, the economic challenges of 2020 will likely primarily manifest in 2021 for the nonresidential construction sector. Focus on areas tied to remodeling or repurposing nonresidential construction spaces, such as converting areas in malls to e-commerce fulfillment centers or helping manufacturers adjust their physical spaces to ensure social distancing.