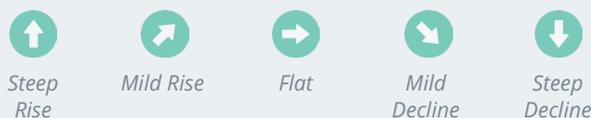
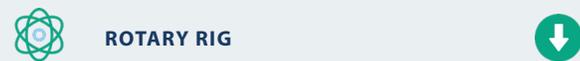
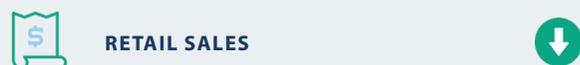


Industry Snapshots

Arrow denotes 12-month moving total/average direction.



Macroeconomic Outlook

April 2020 was a historically bad month for the US economy. We saw unprecedented decline in monthly US Industrial Production and US Total Retail Sales. However, the latter months of the second quarter are showing improvement. These small green shoots bode well for the US economy's expected transition to a recovery trend in the second half of the year.

May data for Production and Retail Sales showed post-WWII record rises relative to the respective April figures. US Crude Oil Futures Prices also rose a record \$16.65, nearly doubling over the course of May. Furthermore, the stock market has generally risen off late-March lows, buoyed by the above developments as well as the massive fiscal and monetary stimulus. Nascent rise in leading indicators such as the US ISM PMI (Purchasing Managers Index) and the JP Morgan Global Purchasing Managers Index monthly rates-of-change gives further reason for cautious optimism regarding the future recovery trend.

"Barring a secondary wave of COVID-19 shutdowns, the recovery will begin sooner rather than later"

All of the above is not to say we are completely out of the woods; we are not. More datapoints are needed to confirm the tentative reversals exhibited in some of the May datapoints. Regardless, the US economy faces a long road to full recovery. We expect quarterly US Real Gross Domestic Product (GDP) to trend below its pre-black swan heights until around mid-2021 and annual US Industrial Production to be below pre-black swans levels through at least 2022. Nevertheless, and barring a secondary wave of COVID-19 shutdowns, the recovery will begin sooner rather than later, and the stimulus-fueled rise will be relatively robust. This means that businesses that tend to move in tandem with the US economy will need to move expediently to prepare for the next business cycle rising trend.

Ask yourself what you wish you had done differently at the bottom of the 2015-16 cycle, the 2008-09 Great Recession cycle, or, if your firm was around, the 2001-02 or early-1990s cycles. While the drivers of recessions may differ, the fact that the US economy will ultimately recover and rise remains the same. Don't fall victim to the pessimism of the moment and fail to position yourself for the future macroeconomic growth trend.

Make Your Move

If your cash flow projections indicate a tight squeeze, consider borrowing to cushion your balance sheet. If cash flow is not a problem, borrowing could help you finance a high-ROI project or acquisition to propel your company ahead once the economy regains momentum.

Investor Update

The S&P 500 trend status improvement in recent months makes it one of the leading indicators that is exhibiting a positive signal in support of our outlook for recovery ahead for the US economy.

ITR Economics Long-Term View

2020

DECLINE

2021

RECOVERY AND RISE

2022

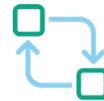
GROWTH

Industry Analysis



RETAIL SALES

- Monthly US Total Retail Sales increased 23.1% from April to May, but were 7.7% below the May 2019 level
- Expect decline in annual Total Retail Sales to persist through at least 2020 as high unemployment hinders consumer spending
- Expected deflation in consumer prices will contribute to lower Retail Sales spending into at least late 2020



WHOLESALE TRADE

- Annual US Total Wholesale Trade in May was down 1.7% from last year
- The monthly datapoints for both the Durable and Nondurable Goods components were down roughly 20% in April compared to their respective April 2019 levels
- Our system of leading indicators suggests annual total Wholesale Trade will contract into at least late this year



AUTO PRODUCTION

- Monthly North America Light Vehicle Production fell an unprecedented 99.2% from March to April
- Annual Production is likely to decline through at least the remainder of 2020
- Relatively low interest rates may spur some consumers to buy as shutdowns ease; US Light Vehicle Retail Sales in May rose 55.0% from the previous month



MANUFACTURING

- Monthly US Total Manufacturing Production came in 16.5% below its May 2019 level
- Hard-hit areas include Aircraft and Parts Production (monthly down 34.5% from one year ago), Automobile Production (down 79.5%), and Iron and Steel Products Production (down 36.3%)
- Both the US ISM PMI and the JP Morgan Global PMI monthly rates-of-change have tentatively ticked up, suggesting upward momentum in Manufacturing beginning in the first half of 2021



ROTARY RIG

- The US Rotary Rig Count averaged 562 rigs in the three months through May, down 44.2% compared to the same three months last year
- While Oil Prices have generally risen in recent weeks, the relatively low price point is hindering profitability and investment in the industry
- Below-breakeven Prices will contribute to declining annual average US Oil and Gas Extraction Production for at least the remainder of this year



CAPITAL GOODS NEW ORDERS

- Monthly US Nondefense Capital Goods New Orders (excluding aircraft) declined further in April, coming in 7.8% below April 2019
- While the last three months of Defense New Orders were up 18.1% above last year, the most recent month was 10.5% below the same month last year
- Consider extending credit to stable clients during this time if orders are being delayed or canceled



TOTAL NONRESIDENTIAL CONSTRUCTION

- Annual US Total Nonresidential Construction through April was up 3.2% from last year
- Consider targeting expanding segments such as Warehouse Construction (annual total up 7.8% year over year) and Nonresidential Public Construction (up 7.5%)
- Limit exposure to segments tied to travel or in-person shopping, such as Lodging Construction (April monthly down 11.8% from April 2019) and Multi-Tenant Retail Construction (down 22.0%)



TOTAL RESIDENTIAL CONSTRUCTION

- Annual US Total Residential Construction in April was up 1.6% from last year
- Both the Single-Unit and Multi-Unit components of US Housing Starts are contracting at double-digit rates (monthly data)
- Low mortgage rates and an increase in mortgage applications bode well for the longer-term health of the housing market as shutdowns are lifted

Leading Indicator Snapshot

	3Q2020	4Q2020	1Q2021
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

- The ITR Leading Indicator™, the ITR Retail Sales Leading Indicator™, and the Conference Board's US Leading Indicator declined further, suggesting industrial sector decline in the coming quarters is likely
- The monthly growth rates for the US Total Industry Capacity Utilization Rate and the US ISM PMI (Purchasing Managers Index) ticked up, but more data is needed to confirm sustainable rise
- Tentative rise in the Utilization Rate and the PMI is likely due to easing shutdown restrictions and suggests upward business cycle momentum in the industrial sector beginning around late 2020 or early 2021

A Closer Look: The US Economy

Good News in Three Key Areas

BY: ALAN BEAULIEU

What you need to know: Move forward with confidence as more and more indicators switch to “all systems are go.”

There is a common and reasonable question on people's minds, and that is whether the economy will recover in a manner consistent with ITR's forecast for US Real Gross Domestic Product (GDP). Our forecast calls for GDP (in chained dollars) to stabilize in the third quarter of 2020 and then rise in the last quarter of the year. In real terms, that means we are rapidly approaching the nadir for this recession and are about to enter into the recovery phase of the business cycle. The three key items of good news below affirm our outlook for a better economy in the second half of 2020.

1. The US ISM PMI (Purchasing Managers Index) monthly rate-of-change established a tentative April low with the release of the May data. An April low in this indicator suggests that we are right on target with our projection of an early-2021 business cycle low in US Industrial Production, which is one of our key benchmarks for the US economy.

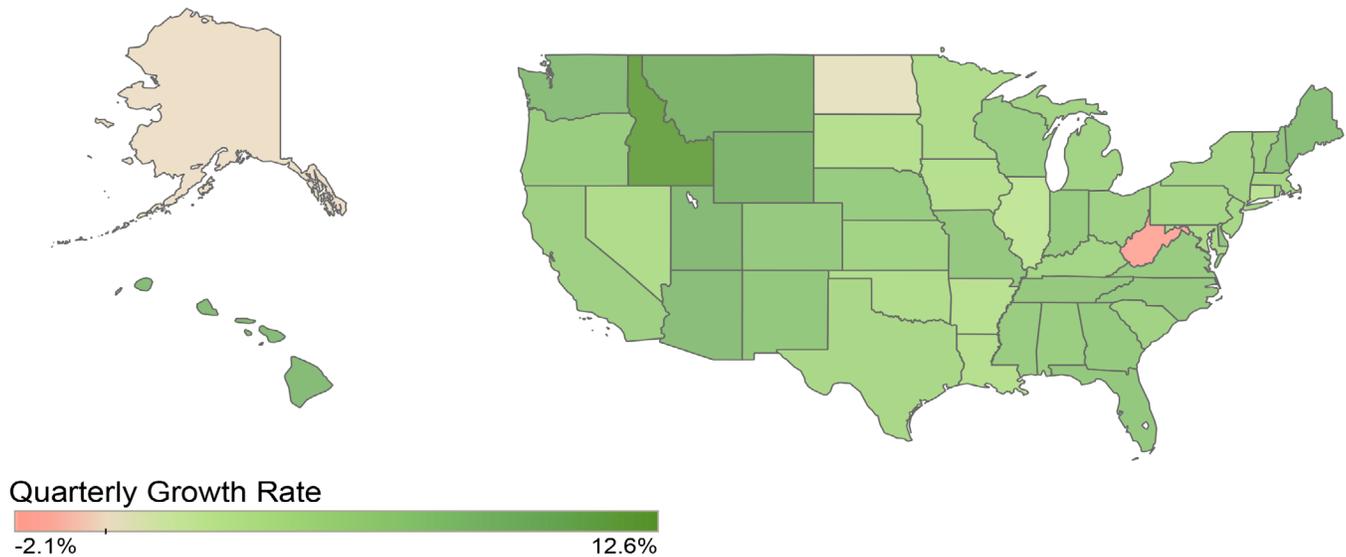
One month doesn't make for a trend, but there is a strong probability that the PMI monthly rate-of-change will move higher when the June data is released next month. The fact that the May rise occurred while US Industrial Production is in a recession is very similar to 1991, 1975, and 2009, which is very helpful in the analysis. Using any of these precedents – or even a typical month-to-month change – suggests more monthly rate-of-change rise is ahead.

2. Monthly US Light Vehicle Retail Sales jumped a record-setting 55% from April to May, posting sales of 1.115 million passenger cars and light-duty trucks. The number of units is not impressive in and of itself, but it is very encouraging in that it is a strong increase from April's dismal posting. We will know more over the next few months, but for now May Light Vehicle Retail Sales can be taken as encouraging input for the economic recovery anticipated for the second half of the year.

3. Monthly US Disposable Personal Income in April came in a record-setting 13.4% above March. This is great news in that it means stimulus checks and other sources of cash allowed Americans to have more cash than would have otherwise been thought possible given the millions who lost their jobs. Retail Sales plummeted in April as stores closed, but individuals are not bereft of cash, and that cash will be a key ingredient in the upcoming economic recovery. Perhaps because of the lack of opportunity to spend the money, US Personal Savings as a Percentage of Disposable Personal Income shot up to 33% as Americans saved a record high \$6.15 billion. By way of comparison, the average savings rate from 2011 to February 2020 was 7.4%, and the average monthly sum saved through the same time period was \$1.04 billion.

Now is the time to let the good news settle into your thinking so that a stronger economy can be part of your planning. Purchase capital goods that will make you more efficient so you can enhance profitability as you move through 2021. Have the inventory, sales force, technicians, and staff you need to keep your clients happy while simultaneously growing your business as competitors hold back out of fear. Move forward with confidence as more and more indicators switch to “all systems are go.”

State-by-State: Housing Prices



- Upward momentum was building in US Median Sales Prices of New Homes prior to the arrival of COVID-19 and the attendant shutdowns
- Monthly Median Sales Prices of New Homes fell 5.2% from March to April; this is likely attributable to a decline in demand consequent to job losses and heightened uncertainty as well as to the difficulty of touring prospective homes in person
- Quarterly Housing Prices through April were below the year-ago level only in Alaska and West Virginia (down 0.1% and 2.1% respectively); May data will likely show more states below last year's level
- The most robust year-over-year gains in Prices are generally clustered in the West and Southeast regions, which share favorable demographic trends

Reader's Forum

I've been reading on the news that some Florida and Texas restaurants have had to close again because COVID-19 cases flared up after reopening. Is this development significant enough to impact your outlook?

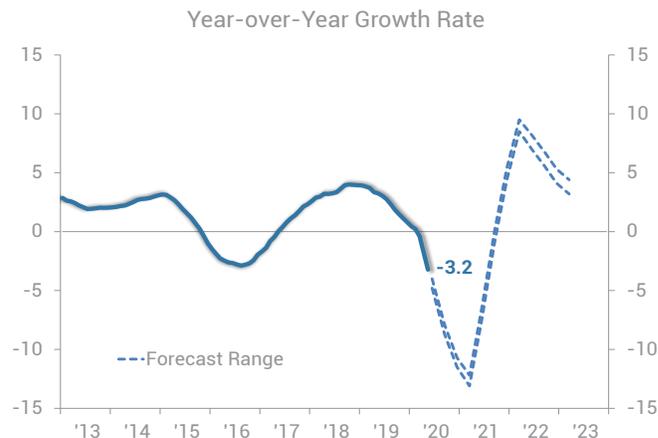
Lauren Stockli, Economist at ITR Economics™, answers:

That is an interesting development; thank you for raising the question. Our long-term outlook assumes that we will continue to see shutdowns and restrictions ease and that there will not be another set of shutdowns during the second the half of the year. While the occurrences in Texas and Florida are not currently at a scale that would change our thinking, we are monitoring the situation carefully. The Florida governor has stated that he will not be rolling back recent reopening measures. However, if other states see similar flare-ups and subsequently tighten restrictions, it may delay the economic recovery, as such actions could shake consumer and business confidence and delay purchasing decisions.

Please send questions to: questions@itreconomics.com

US Industrial Production Index

Index, 2012=100, NSA



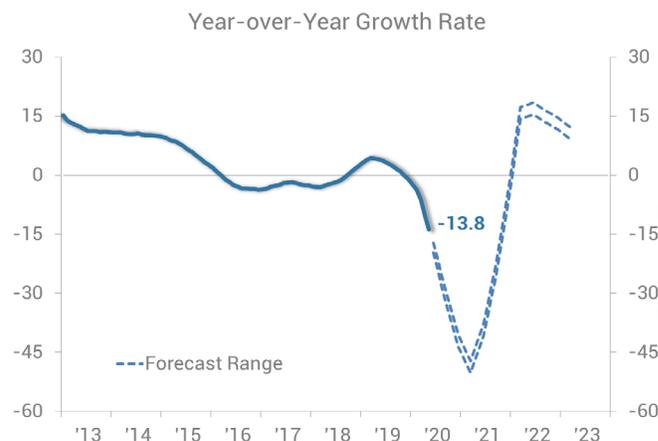
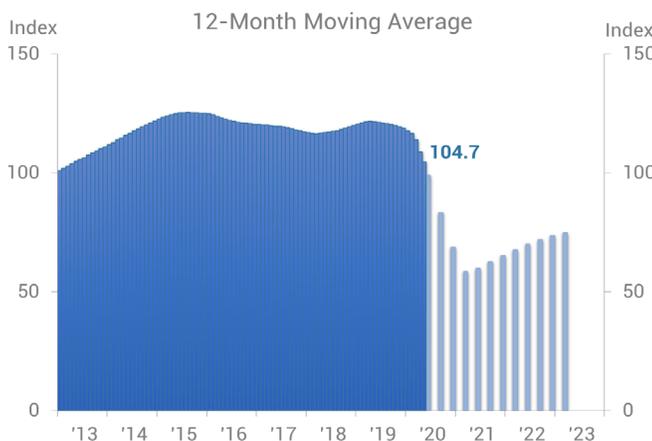
FORECAST	Y-o-Y Growth Rate
2020:	-11.1%
2021:	4.9%
2022:	4.7%

We revised the forecast downward to reflect the latest information regarding the economic impact of the black swans – COVID-19 and the oil supply-demand imbalance. The year-over-year growth rate was lowered by 7.4 percentage points for 2020; it was lifted by 1.7 percentage points for 2021 and 3.3 percentage points for 2022. Annual Production will contract into early 2021 before rising through at least early 2023. A second wave of COVID-19 could result in renewed stay-at-home orders and would pose a downside risk to this outlook.

Production segments exposed to shutdowns, stay-at-home orders, and low oil pricing showed especially pronounced decline in recent months. Such segments include automobiles, heavy trucking, aircraft, and mining. We expect shutdowns and stay-at-home orders will continue to be lifted moving into the second half of the year. This will result in a rebound in quarterly average US industrial activity late this year. Use the current downtime to make the necessary changes to prepare for the next rising trend.

US Civilian Aircraft Equipment Production Index

Index, 2012 =100, NSA



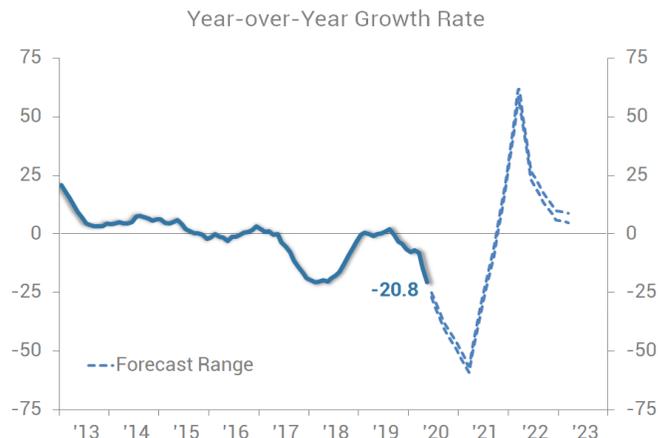
FORECAST	Y-o-Y Growth Rate
2020:	-42.1%
2021:	-5.4%
2022:	13.1%

The annual Production forecast was revised downward to account for the double black swan events. The forecast year-over-year growth rate was revised downward by 23.8 percentage points for 2020. We revised 2021 upward by 3.0 percentage points. The 2022 year-over-year growth rate was lifted 2.3 percentage points. Annual Production will decline into early 2021 before rising through at least early 2023. We do not expect annual Production to return to pre-COVID-19 levels during that time.

Business and tourism air travel remained low through May. It will take a COVID-19 vaccine (or containment), higher oil prices, and renewed activity in the global economy before Production gains momentum. A major risk to this forecast is the potential for a major airline to go under, which would significantly reduce Production moving forward. Ensure your business has sufficient cash on hand to weather mid-1990s levels of Production.

US Automobile Production Index

Index, 2012 =100, NSA



FORECAST	Y-o-Y Growth Rate
2020:	-47.7%
2021:	22.0%
2022:	8.0%

We revised the forecast downward. Production data through May showed worse-than-expected impacts from the shutdowns. Monthly Production nearly ground to a complete halt in April; the May figure was higher but still dismal, down 79.5% from May 2019. We lowered the year-over-year growth rate for 2020 by 39.9 percentage points. 2021 and 2022 were raised by 15.7 and 9.3 percentage points, respectively. Annual Production will decline into early 2021. Subsequent rise will extend into at least early 2023, but Production will not reach pre-COVID-19 levels during that time.

While we downgraded our outlook for the industrial sector, income and savings rate data suggests that consumers may take advantage of low interest rates and purchase automobiles once shutdowns are lifted. However, high unemployment has likely impacted financial stability for some, and they will consequently put off such purchases. Furthermore, workers may put less wear and tear on their vehicles in the longer term, as working-from-home practices introduced via the shutdowns grow more prevalent in normal circumstances. These factors will help keep Production below pre-COVID-19 levels for at least the duration of the forecast.

US Private Nonresidential Construction

Measured in Billions of Dollars, NSA



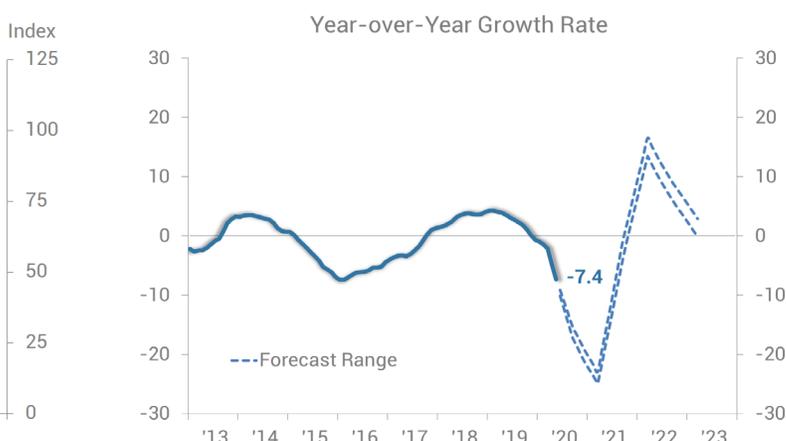
FORECAST	Y-o-Y Growth Rate
2020:	-4.3%
2021:	-13.1%
2022:	9.2%

We revised the forecast to account for new data and information regarding the impact of the double black swans. The year-over-year growth rate was lowered by 0.4 percentage points for 2020 and 5.1 percentage points for 2021; 2022 is unchanged. Annual Construction will transition to a declining trend imminently. Decline will extend into late 2021. Annual Construction will then rise through at least early 2023.

Site shutdowns and labor disruptions in municipalities across the US are hindering rise in Construction. US corporations will be generally weakened by the shutdowns; significant investment in new nonresidential construction through late 2021 is unlikely. If business profitability and confidence return quickly and postponed or suspended contracts are quickly activated, it would pose an upside risk to this outlook. If possible, focus your business on areas tied to this cycle's relative winners, such as Warehouse Construction (tied to e-commerce). Similarly, avoid the relative losers, such as Multi-Retail Construction (linked to in-person shopping) and Lodging Construction (linked to travel).

Primary Metals Production Index

Index, 2012 =100, NSA



FORECAST	Y-o-Y Growth Rate
2020:	-20.4%
2021:	6.3%
2022:	4.5%

We revised the forecast to incorporate updated Production data as well as additional market research. Furthermore, exceptionally severe month-to-month decline in April and May indicated the trough would likely come in lower than forecasted; we adjusted our outlook accordingly. We lowered our expectations for the year-over-year growth rate by 14.3 percentage points for 2020 and pushed 2021 and 2022 up by 5.2 and 1.5 percentage points, respectively. Annual Production will decline into early 2021 before subsequently rising into the second half of 2022. Expect decline to take hold again in late 2022, extending into at least early 2023.

Quarterly US Machinery Production and US Motor Vehicle Metal Stamping Production were down 18.2% and 56.6% in May relative to their respective year-ago levels. Decline in these key end-use markets will reduce demand for Primary Metals Production during 2020. We expect industrial activity and consumer buying habits will pick up appreciably in 2021, which will boost Production next year.

	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23
US Automobile Production Index	-26.0	-39.0	-47.7	-57.6	-30.8	-7.7	22.0	60.1	25.2	15.4	8.0	6.8
US Primary Metals Production Index	-9.6	-16.3	-20.4	-23.9	-13.6	-2.5	6.3	15.0	11.0	7.5	4.5	1.4
US Civilian Aircraft Equipment Production Index	-18.5	-30.7	-42.1	-48.7	-39.5	-24.8	-5.4	15.8	16.9	14.9	13.1	10.6
US Industrial Production Index	-4.4	-8.3	-11.1	-12.7	-6.9	-0.5	4.9	9.0	7.6	6.2	4.7	3.8
US Private Nonresidential Construction	0.2	-0.6	-4.3	-9.6	-13.5	-14.5	-13.1	-7.9	-2.2	4.1	9.2	10.6