

SINGLE-USE PULSE 2021

A WEBINAR SERIES EXPLORING

THE BUSINESS OF SUTS

THURSDAY,
MARCH 11

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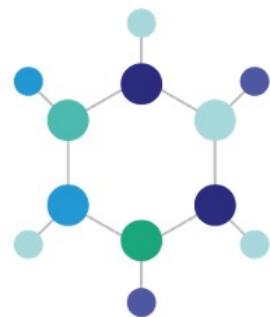
ECONOMIC RECOVERY AND PLASTICS INDUSTRY PROSPECTS



PERC PINEDA, PHD
CHIEF ECONOMIST
PLASTICS INDUSTRY ASSOCIATION



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Bio-Process Systems Alliance
Advancing Single-Use Worldwide



Flexible Vinyl Alliance



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The AdvantaPURE logo features the word "AdvantaPURE" in a green, serif font, with "NEWAGE INDUSTRIES" in a smaller, sans-serif font below it.The Broadley James logo features the name "Broadley James" in a blue, serif font, with a registered trademark symbol (®) to the right of "Broadley".The bürkert logo features the name "bürkert" in a blue, sans-serif font, with "FLUID CONTROL SYSTEMS" in a smaller, sans-serif font below it.The CPC logo features the letters "CPC" in a blue, sans-serif font, with a stylized blue arc to the left of the letters.The cytiva logo features a green circular icon with a white dot inside, followed by the word "cytiva" in a black, sans-serif font.The Entegris logo features a red circular icon with a white dot inside, followed by the word "Entegris" in a black, sans-serif font.The Millipore Sigma logo features the words "Millipore Sigma" in a blue, sans-serif font.The Nordson MEDICAL logo features the word "Nordson" in a blue, sans-serif font, with "MEDICAL" in a smaller, sans-serif font below it.The PALL Biotech logo features the word "PALL" in a blue, sans-serif font, with "Biotech" in a smaller, sans-serif font to the right of the word.The PENDOTECH logo features the word "PENDOTECH" in a blue, sans-serif font, with "Adding Value To Your Process" in a smaller, sans-serif font below it.The RENOLIT logo features a black square icon with a white dot inside, followed by the word "RENOLIT" in a black, sans-serif font, and "Reli on it." in a smaller, sans-serif font below it.The SAINT-GOBAIN logo features a stylized graphic of a building or structure in blue and red, followed by the words "SAINT-GOBAIN" in a blue, sans-serif font.The SaniSure logo features a green circular icon with a white dot inside, followed by the word "SaniSure" in a black, sans-serif font, and "Be sure." in a smaller, sans-serif font below it.The SARTORIUS logo features the word "SARTORIUS" in a black, sans-serif font.The ThermoFisher SCIENTIFIC logo features the words "ThermoFisher" in a red, sans-serif font, with "SCIENTIFIC" in a smaller, sans-serif font below it.

Economic Recovery and Plastics Industry Prospects

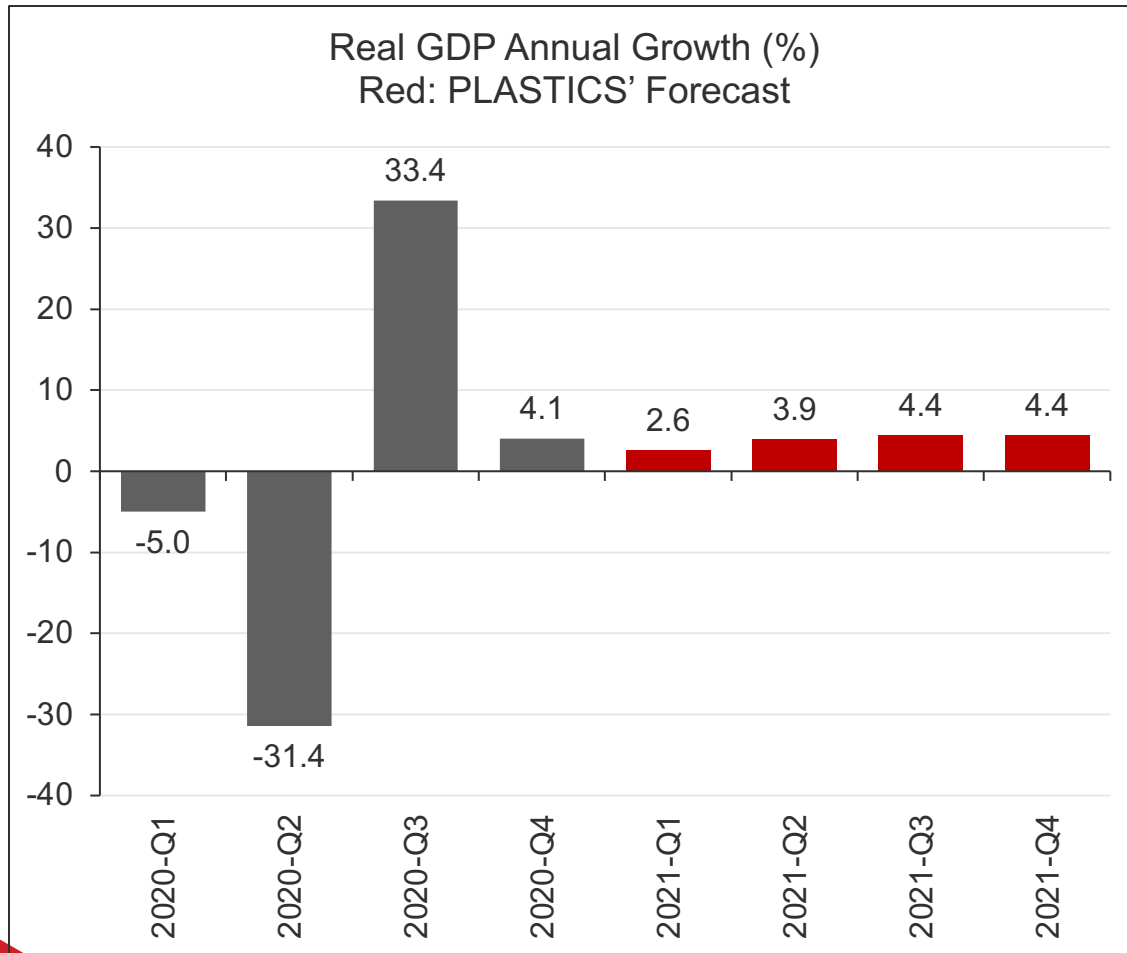
Perc Pineda, PhD
Chief Economist

Global Economic Outlook

	2020	2021	2022		2020	2021	2022
World Output (%)	-3.5	5.5	4.2	Emerging Market and Developing Economies	-2.4	6.3	5.0
Advanced Economies	-4.9	4.3	3.1	Emerging and Developing Asia	-1.1	8.3	5.9
United States	-3.4	5.1	2.5	China	-2.3	8.1	5.6
Euro Area	-7.2	4.2	3.6	India*	-8.0	11.5	6.8
Germany	-5.4	3.5	3.1	ASEAN-5	-3.7	5.2	6.0
France	-9.0	5.5	4.1	Emerging and Developing Europe	-2.8	4.0	3.9
Italy	-9.2	3.0	3.6	Russia	-3.6	3.0	3.9
Spain	-11.1	5.9	4.7	Latin America and the Caribbean	-7.4	4.1	2.9
Japan	-5.1	3.1	2.4	Brazil	-4.5	3.6	2.6
United Kingdom	-10.0	4.5	5.0	Mexico	-8.5	4.3	2.5
Canada	-5.5	3.6	4.1	Middle East and Central Asia	-3.2	3.0	4.2
Other Advanced Economies	-2.5	3.6	3.1	Saudi Arabia	-3.9	2.6	4.0
				Sub-Saharan Africa	-2.6	3.2	3.9
				Nigeria	-3.2	1.5	2.5
				South Africa	-7.5	2.8	1.4



U.S. Economic Outlook

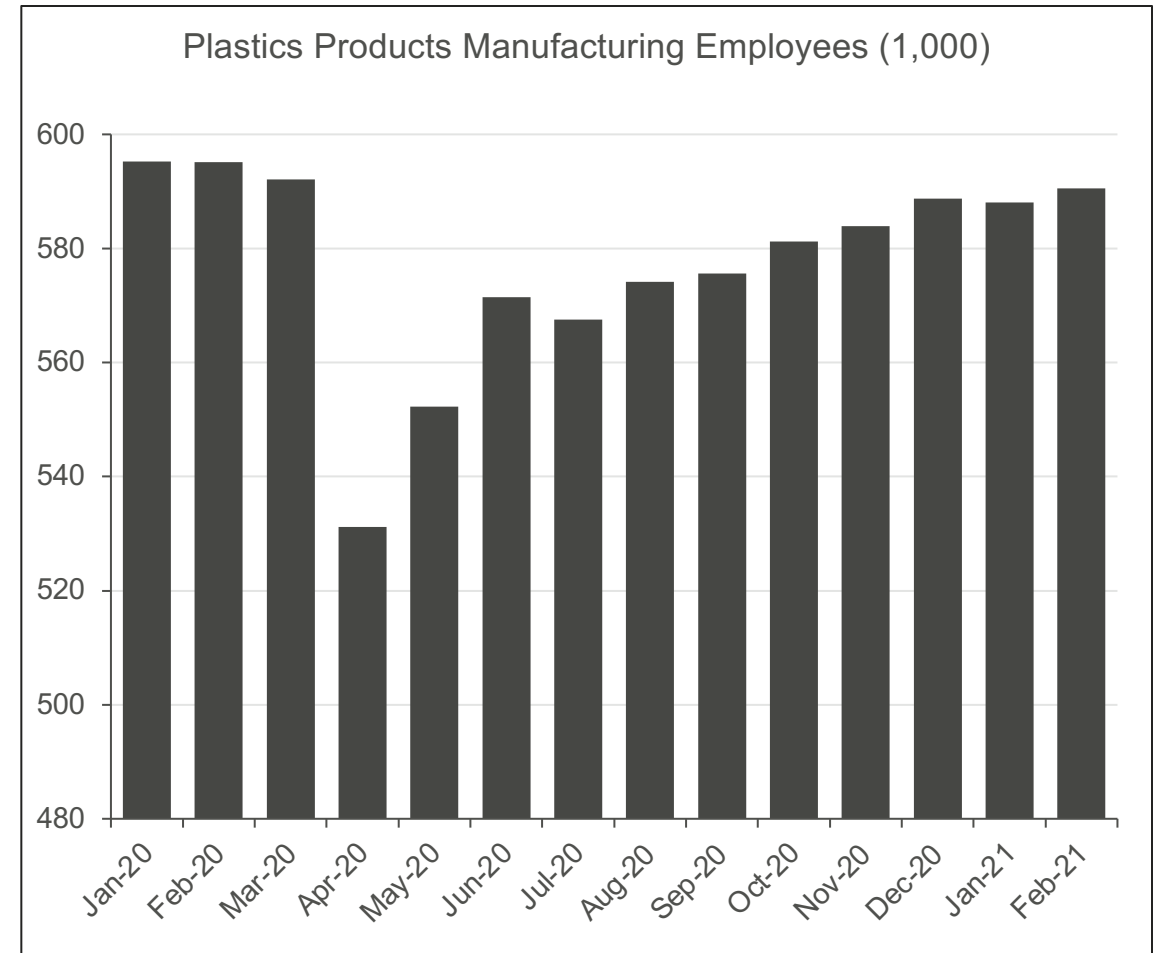
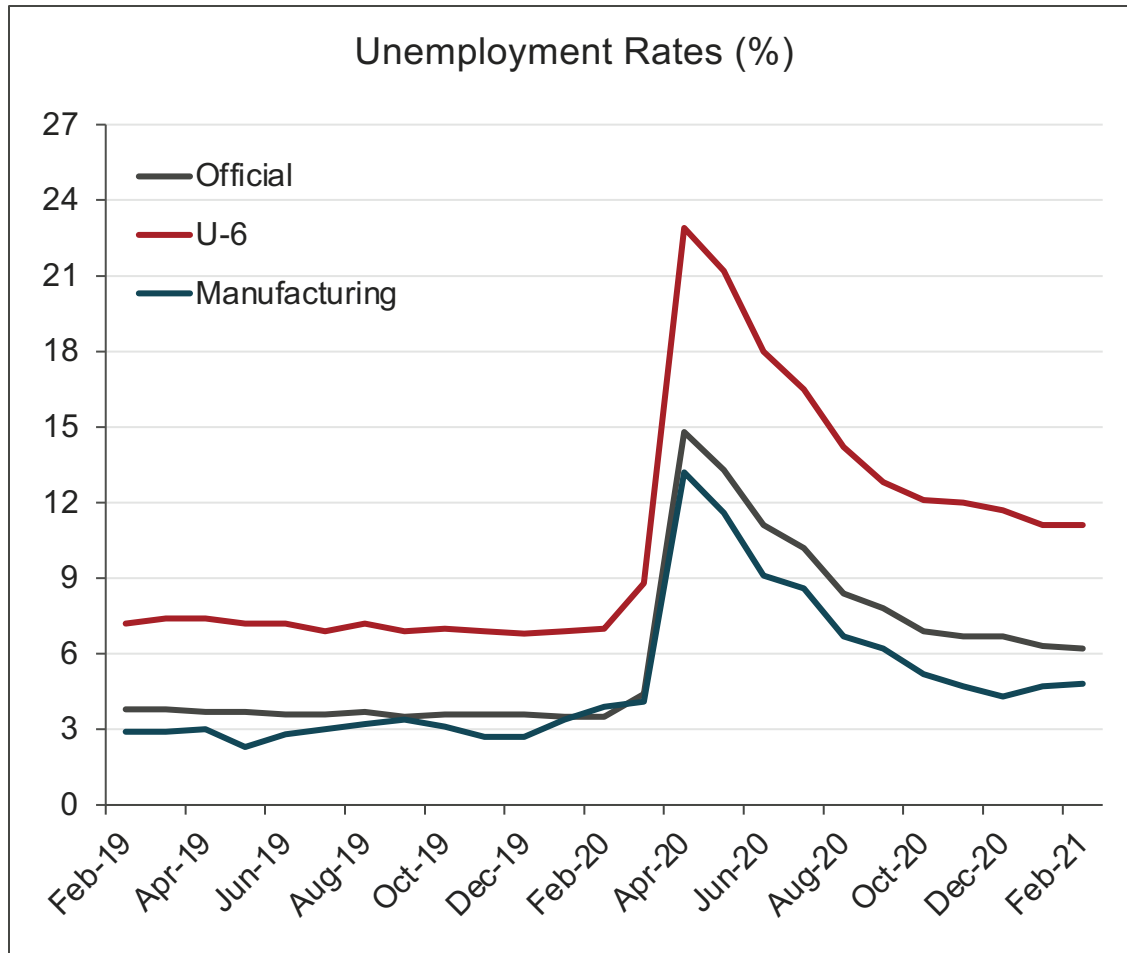


Real GDP Growth Forecast (%)	2021	2022
International Monetary Fund	5.1	2.5
IHS	4.0	3.9
Federal Reserve Bank Board of Governors*	4.2	3.2
Congressional Budget Office	4.6	2.9
Federal Reserve Bank of Philadelphia*	4.5	3.7
PLASTICS	4.1	3.0





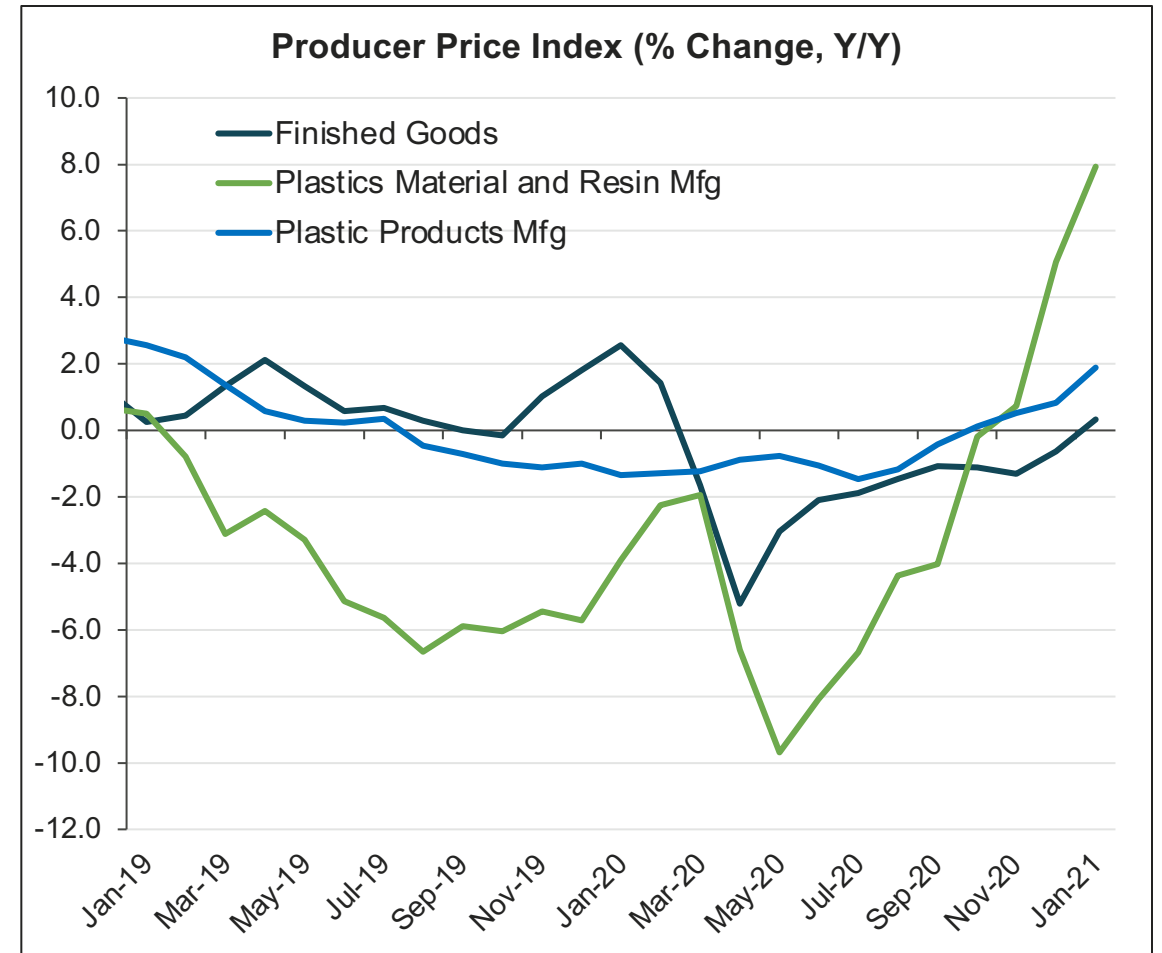
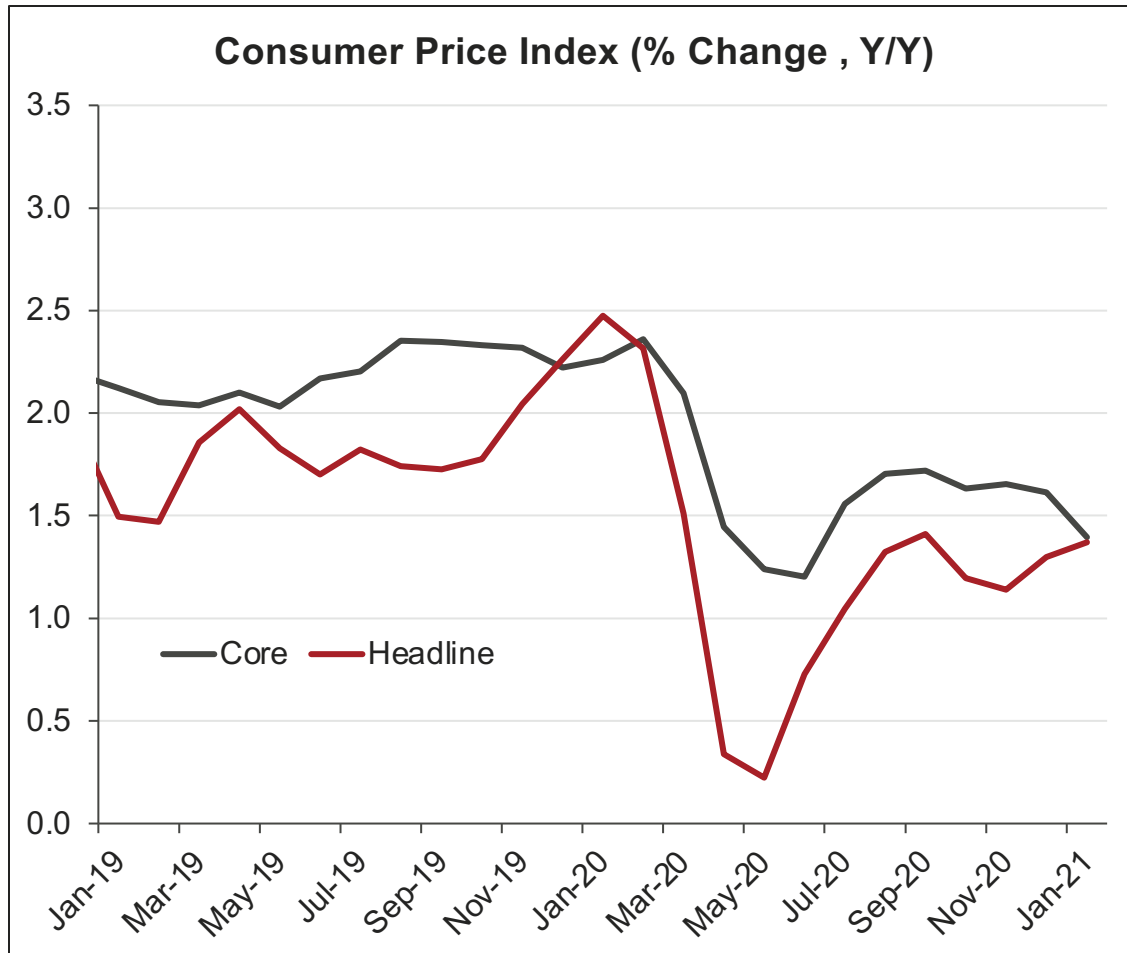
U.S. Labor Market Recovering



Source: Bureau of Labor Statistics



Inflation

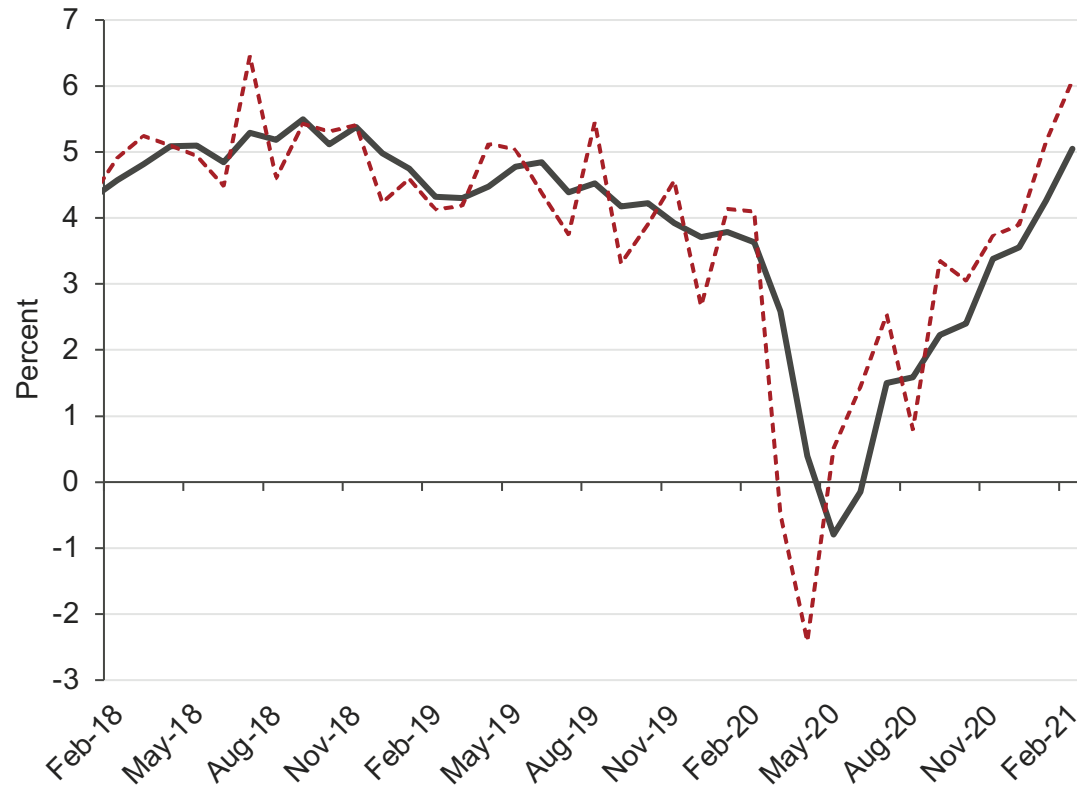


Source: Bureau of Labor Statistics

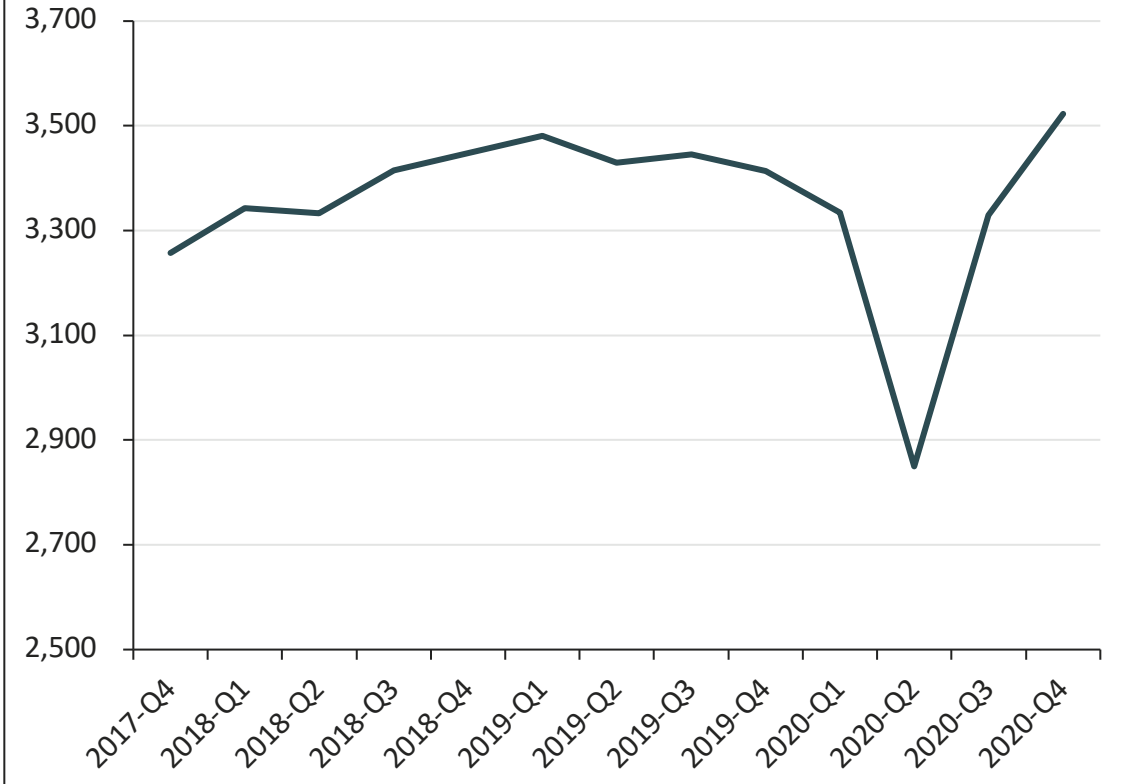


Business Expectation

Sales Revenue Growth Expectations
4-quarters head
(Federal Reserve Bank of Atlanta)



Real Gross Private Domestic Investment
2012 \$, Billion
(Bureau of Economic Analysis)



Current Macroeconomic Outlook



Macroeconomic Quarterly Forecast

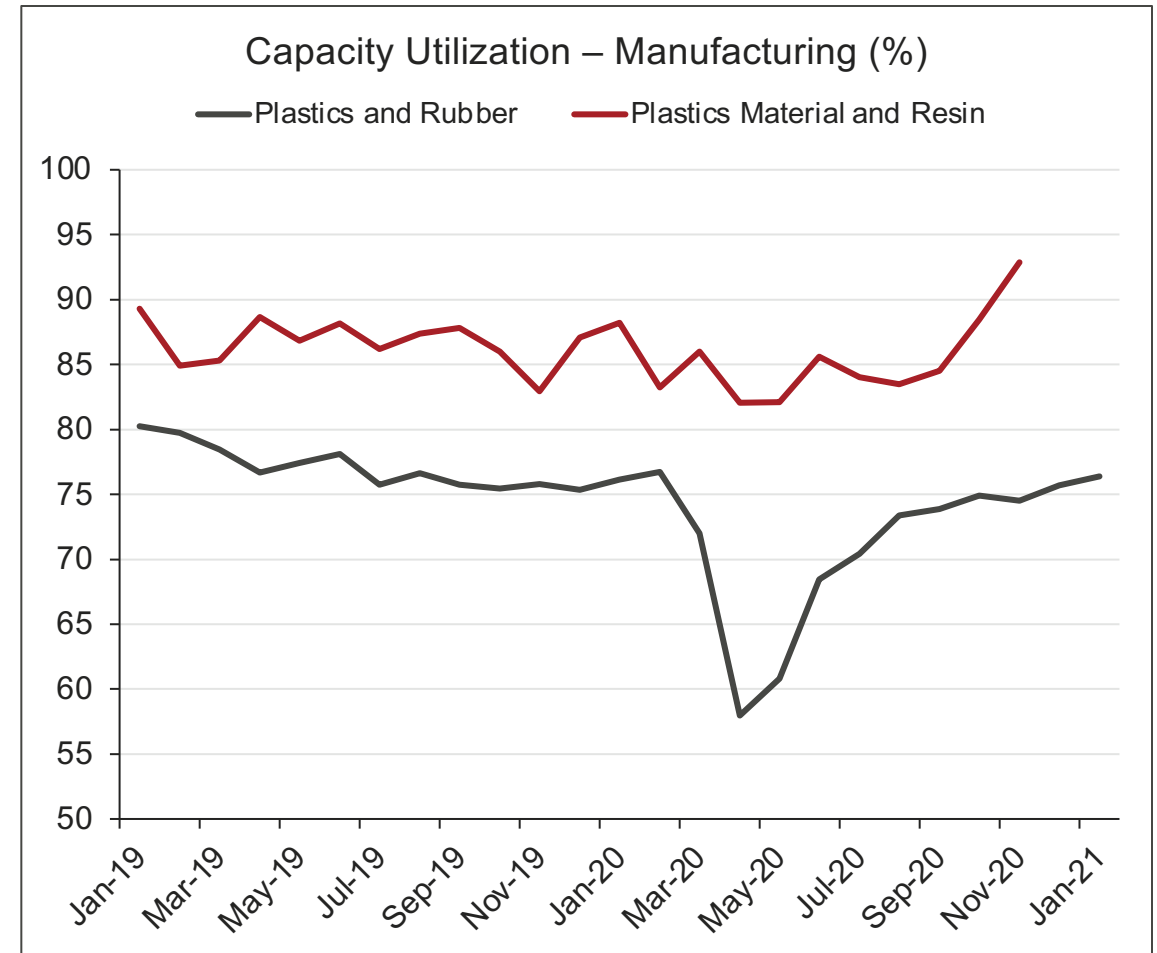
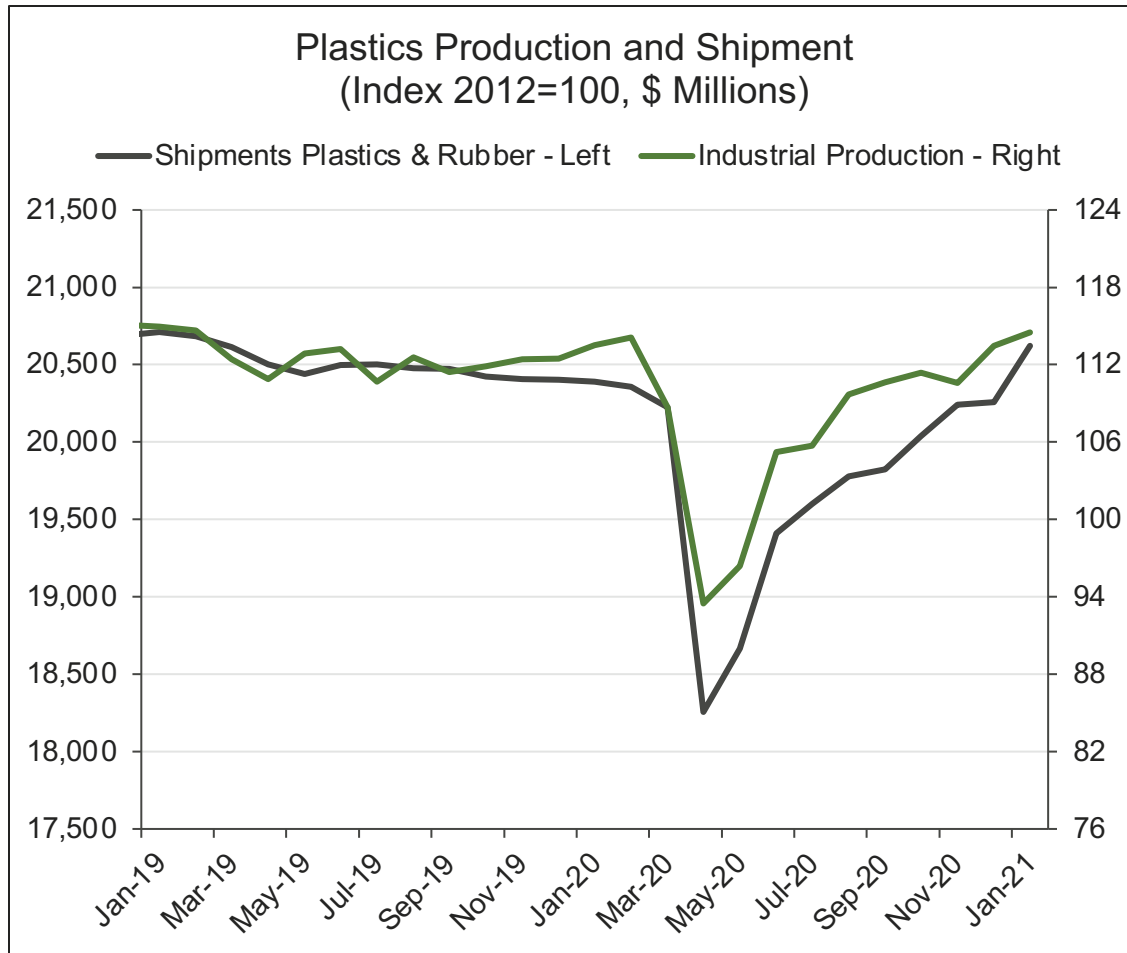
		GDP (%)	Unemployment (%)	CPI Inflation (%)
2019	2020	-3.5	8.1	1.1
	2020-Q1	-5.0	3.8	1.2
	2020-Q2	-31.4	13.0	-3.5
	2020-Q3	33.1	8.8	5.2
	2020-Q4	4.0	6.8	2.2
2020	2021	4.1	6.2	2.0
	2021-Q1	2.6	6.6	1.9
	2021-Q2	3.9	6.3	1.9
	2021-Q3	4.4	6.0	2.1
	2021-Q4	4.4	5.7	2.1

Source: BEA (Historical Data), PLASTICS & INFORUM (Forecast)





Plastics Production, Shipment, and Capacity Utilization



Source: Board of Governors of the Federal Reserve System

U.S. Plastics Industry Turnaround



MONETARY AND
FISCAL POLICIES



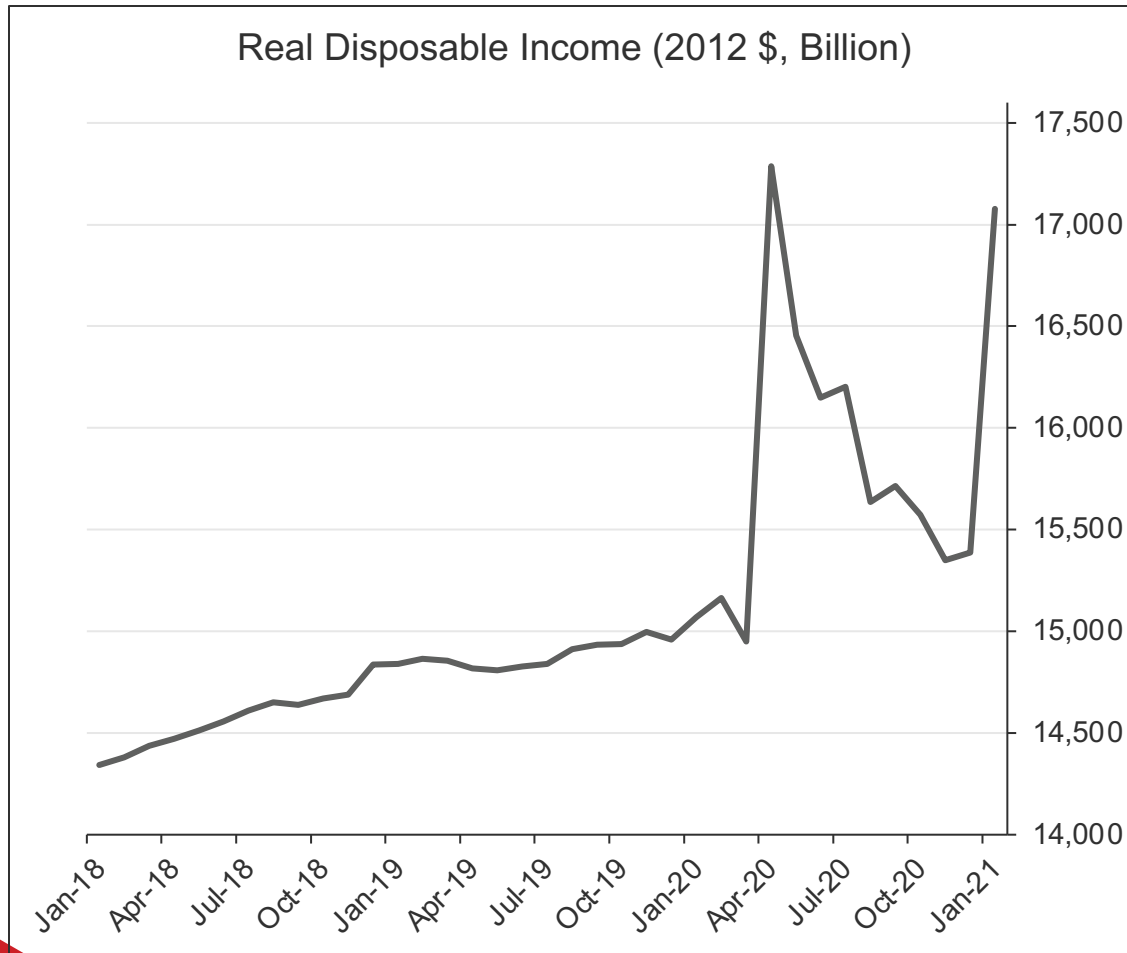
CONSUMER
ESSENTIALS



END-MARKETS
TURNAROUND



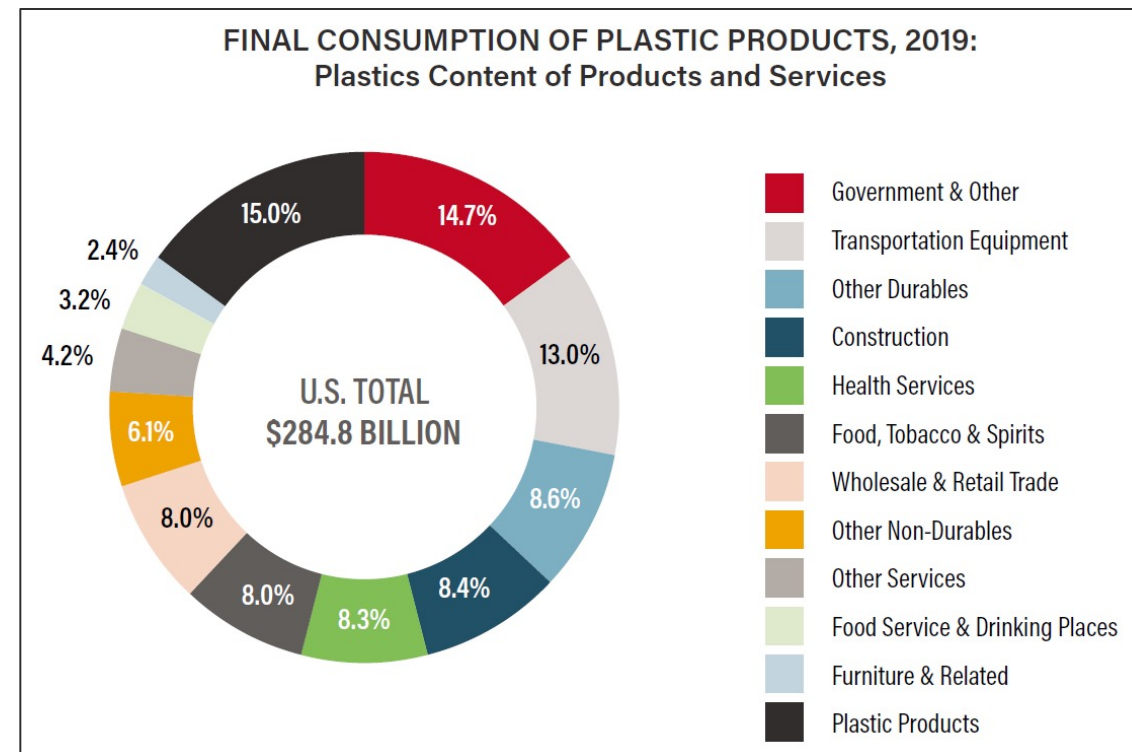
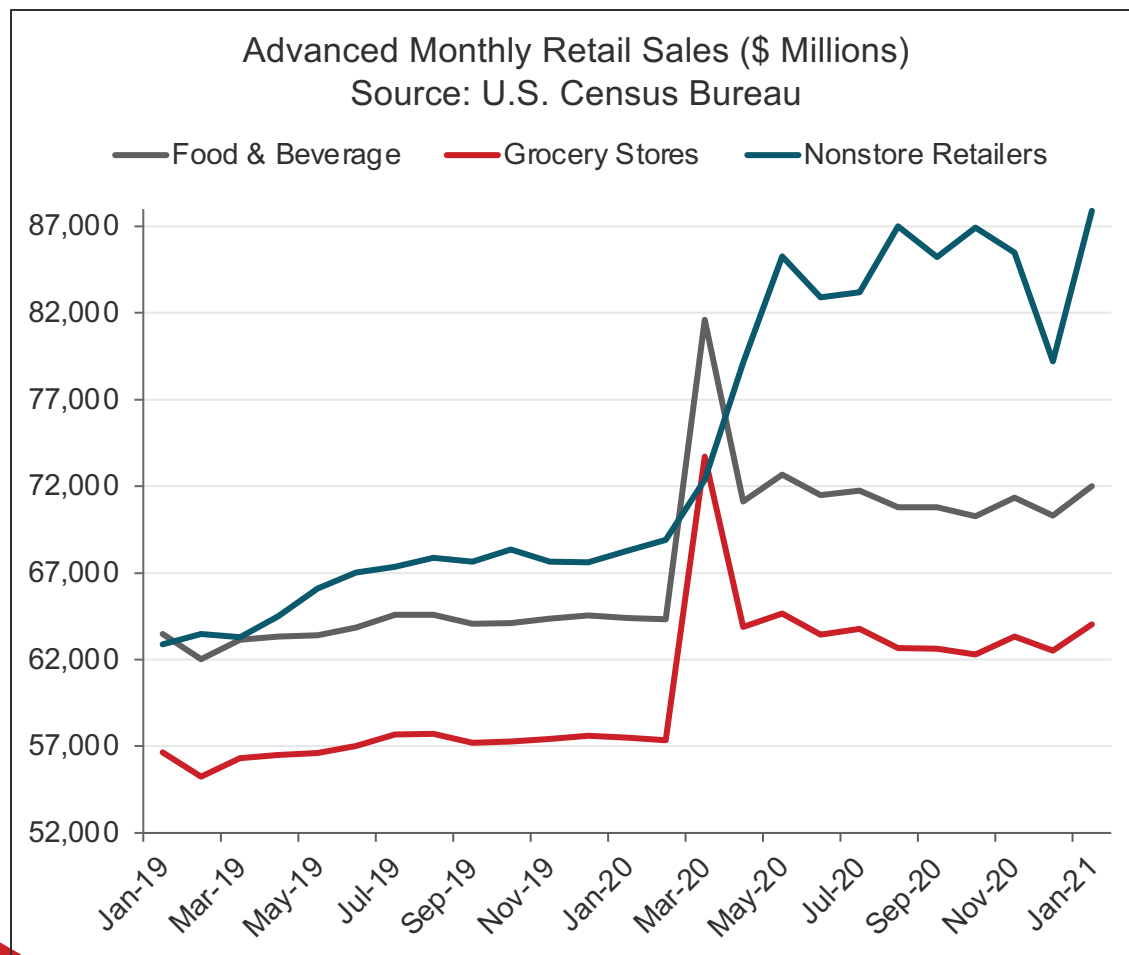
Real Personal Income and Savings



Source: Bureau of Economic Analysis



Consumer Spending

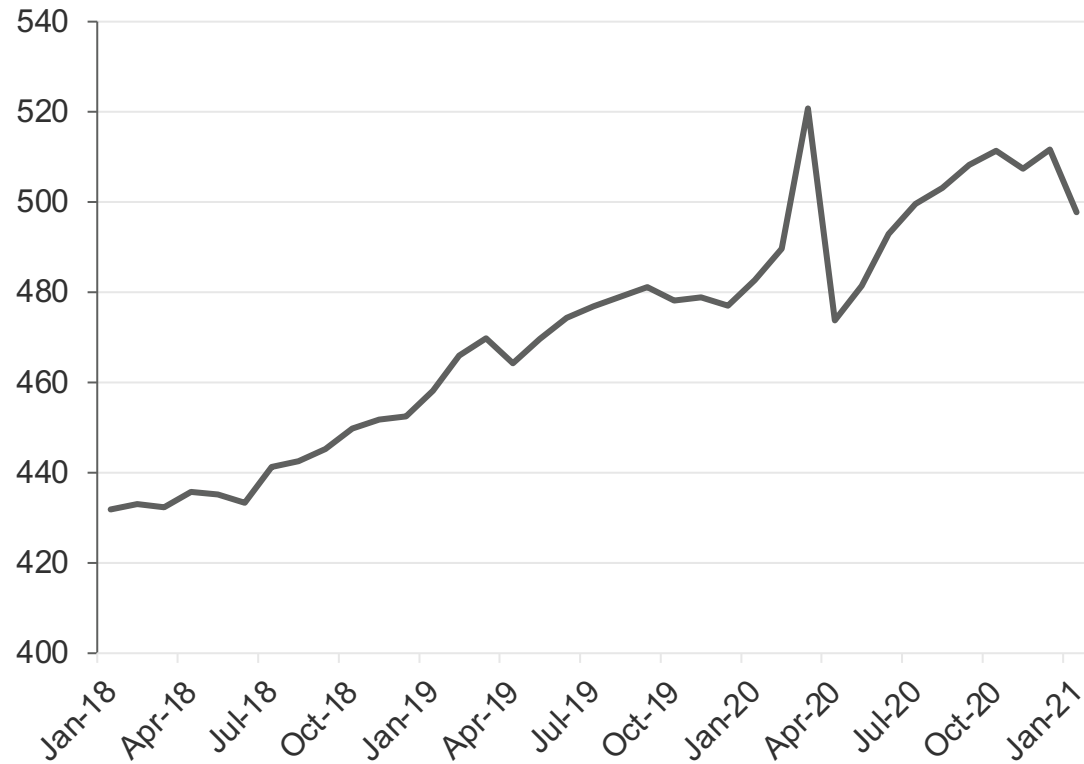


Source: PLASTICS 2020 Size and Impact Report.
www.plasticsindustry.org/data

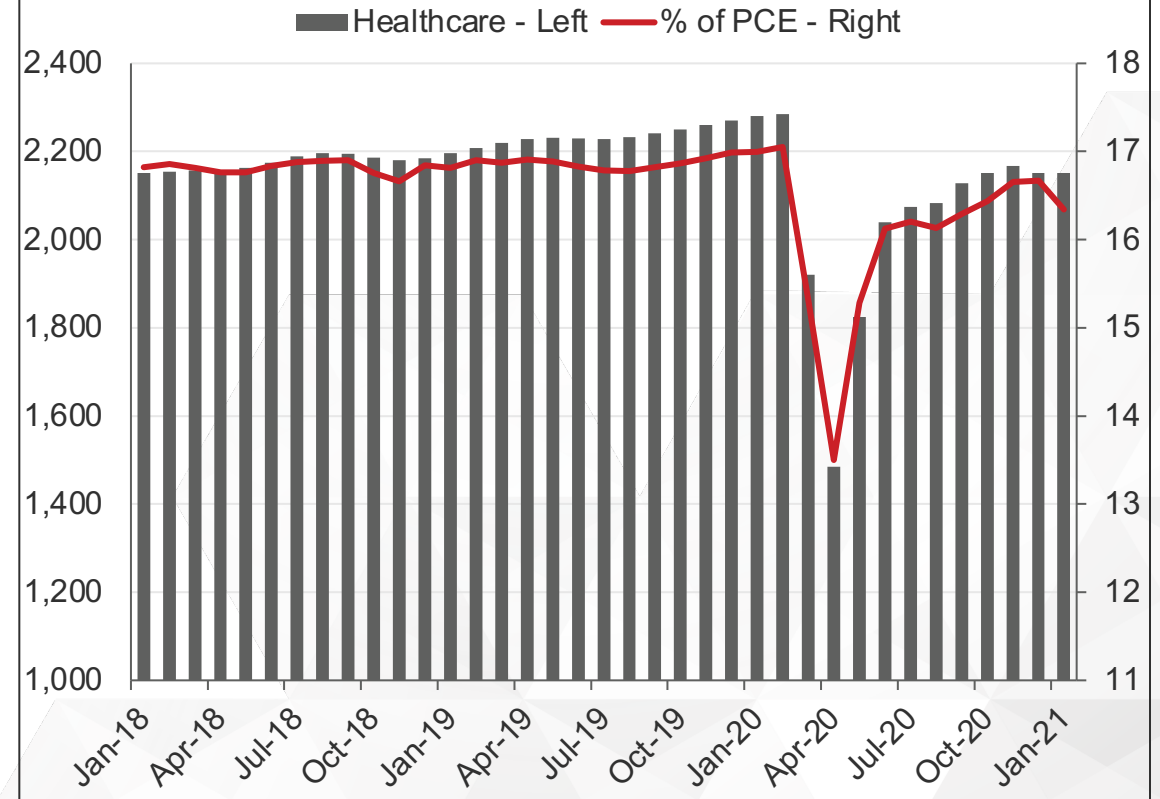


Consumption in Healthcare

Personal Consumption Expenditure:
Pharmaceutical and Other Medical Products
(2012 \$, Billions)



Personal Consumption Expenditures: Healthcare
(2012 \$, Billion)

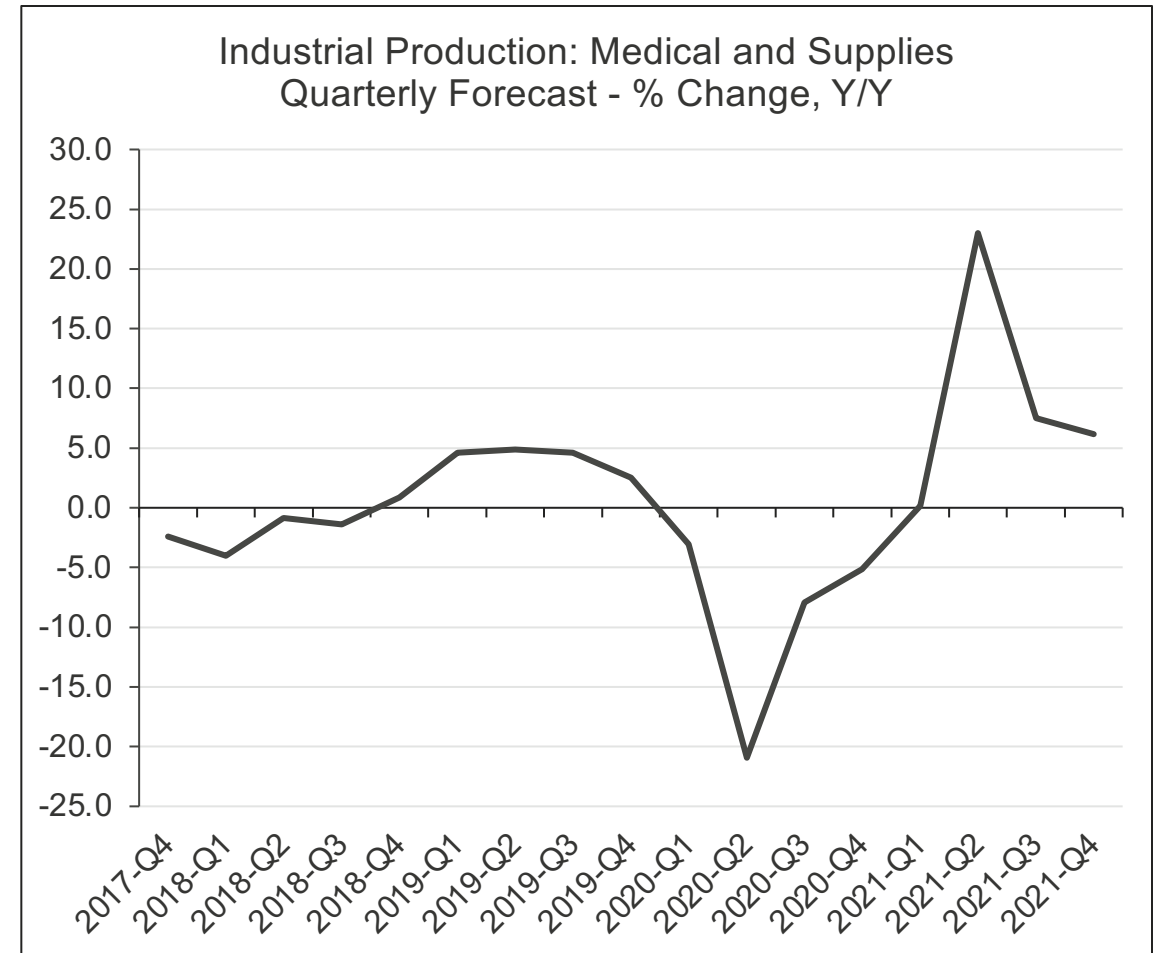
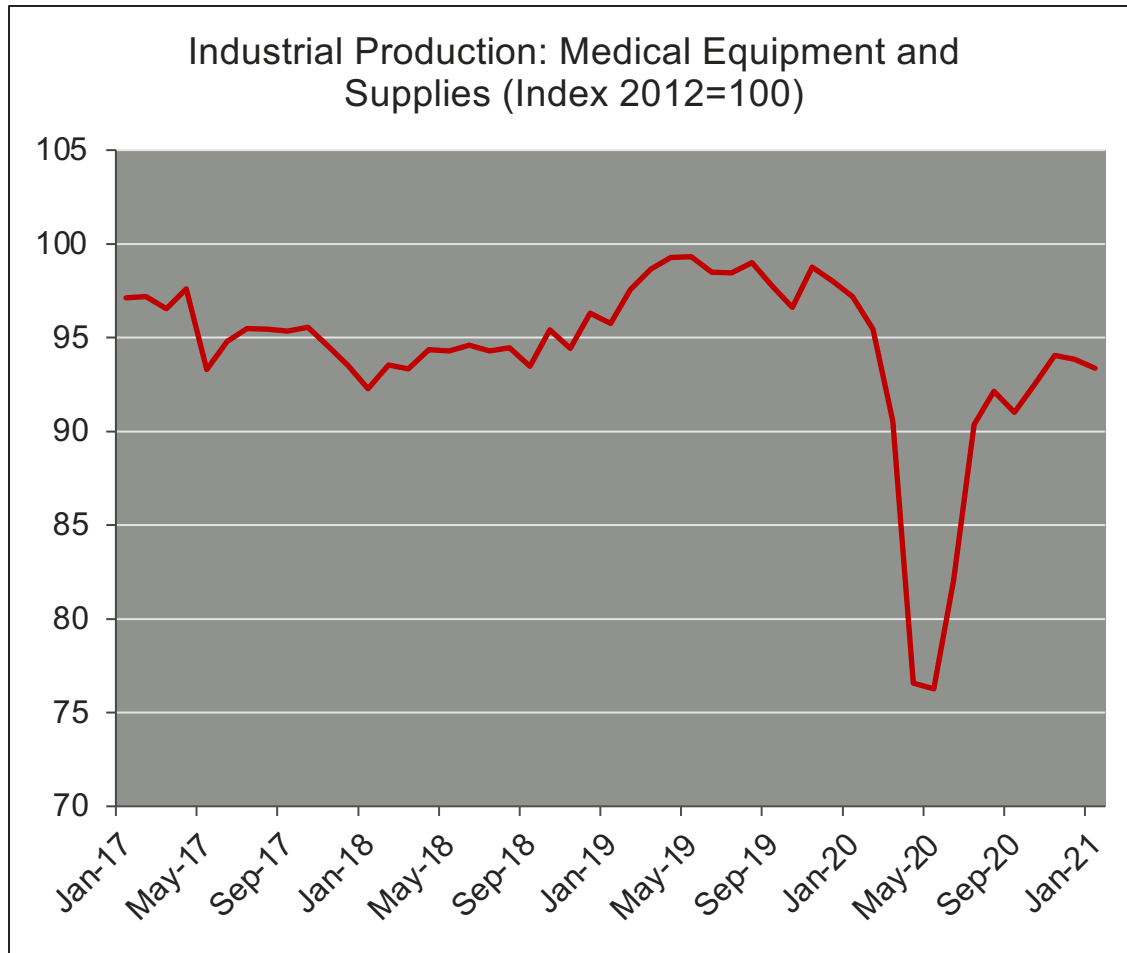


Source: Bureau of Economic Analysis





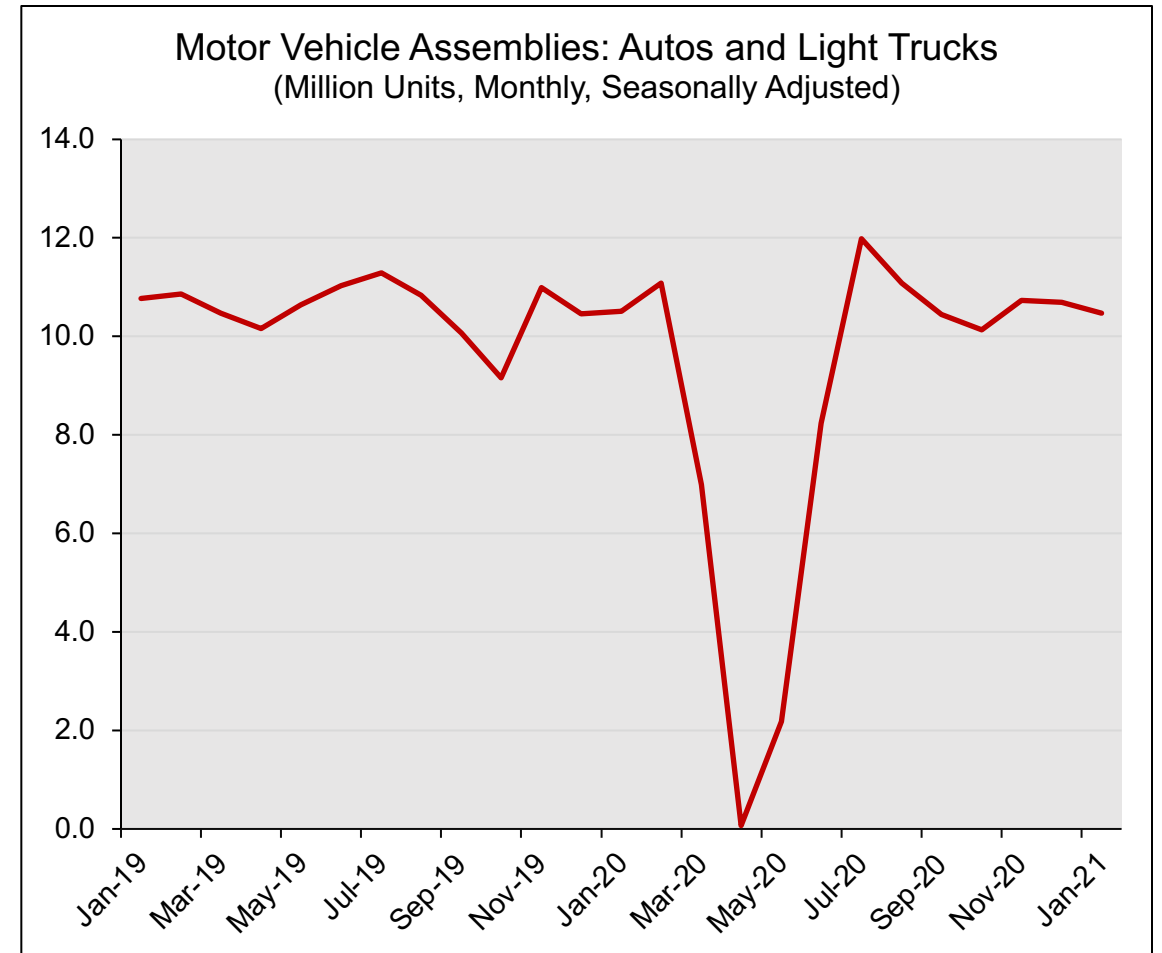
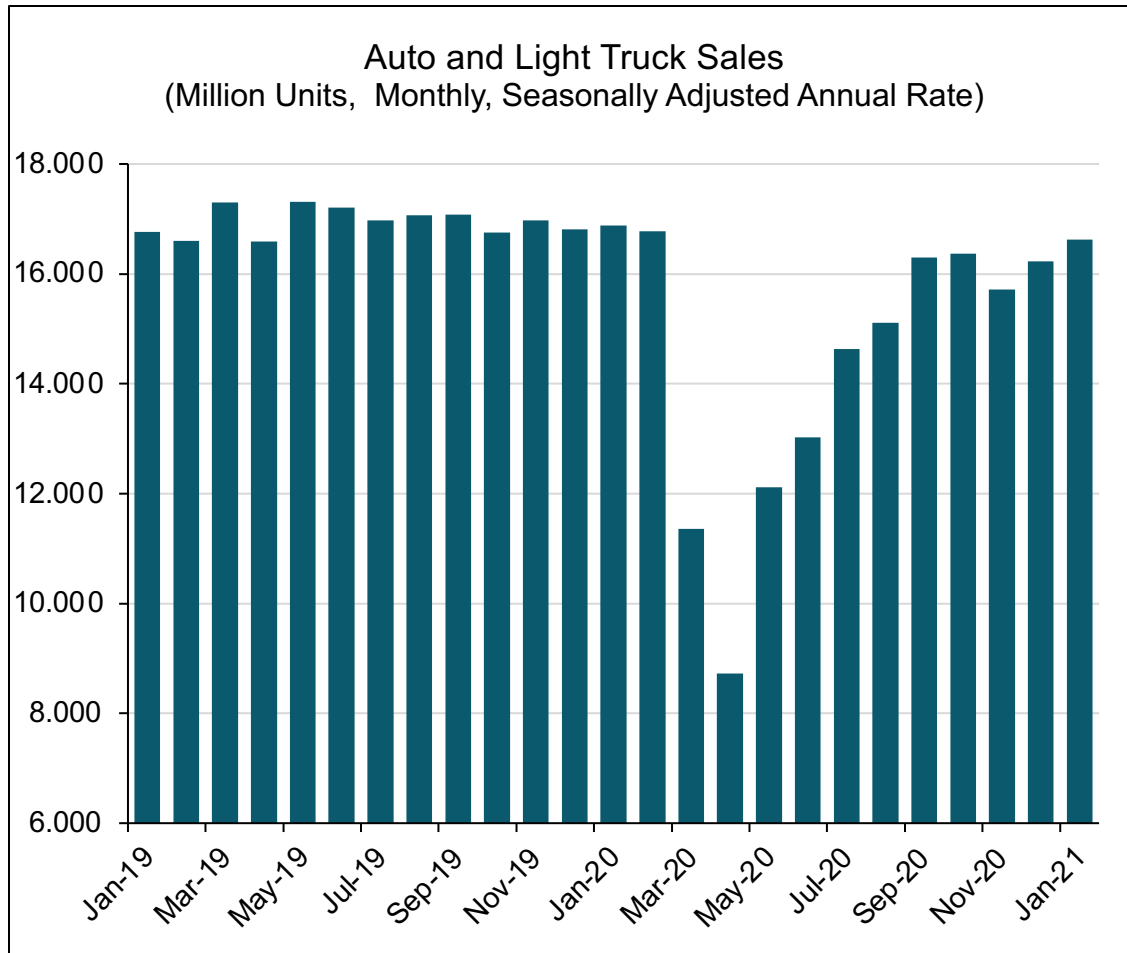
Medical Equipment and Supplies



Source: Board of Governors of the Federal Reserve System



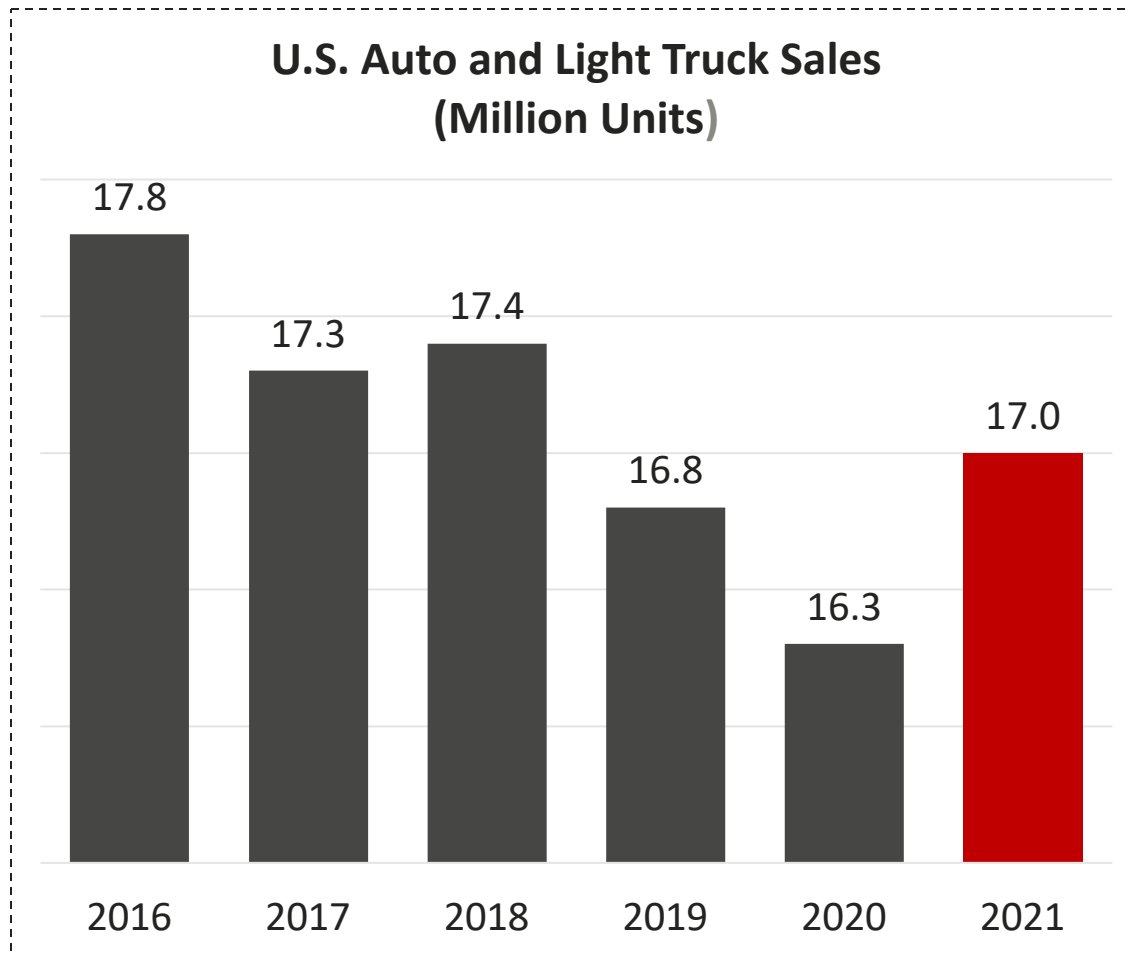
Transportation



Source: Board of Governors of the Federal Reserve System



Stable Auto and Light Truck Demand in 2021



Electric vehicles: growing not dominating



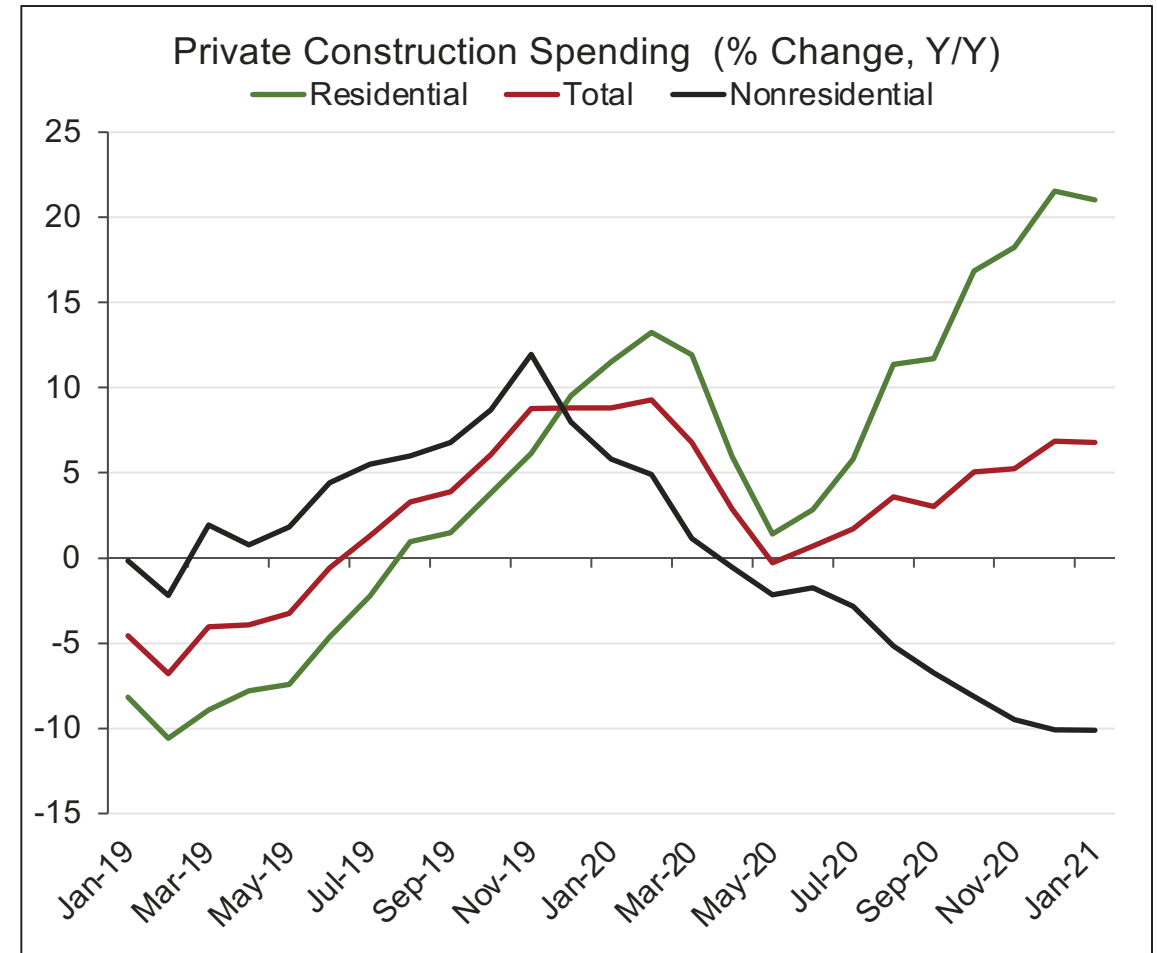
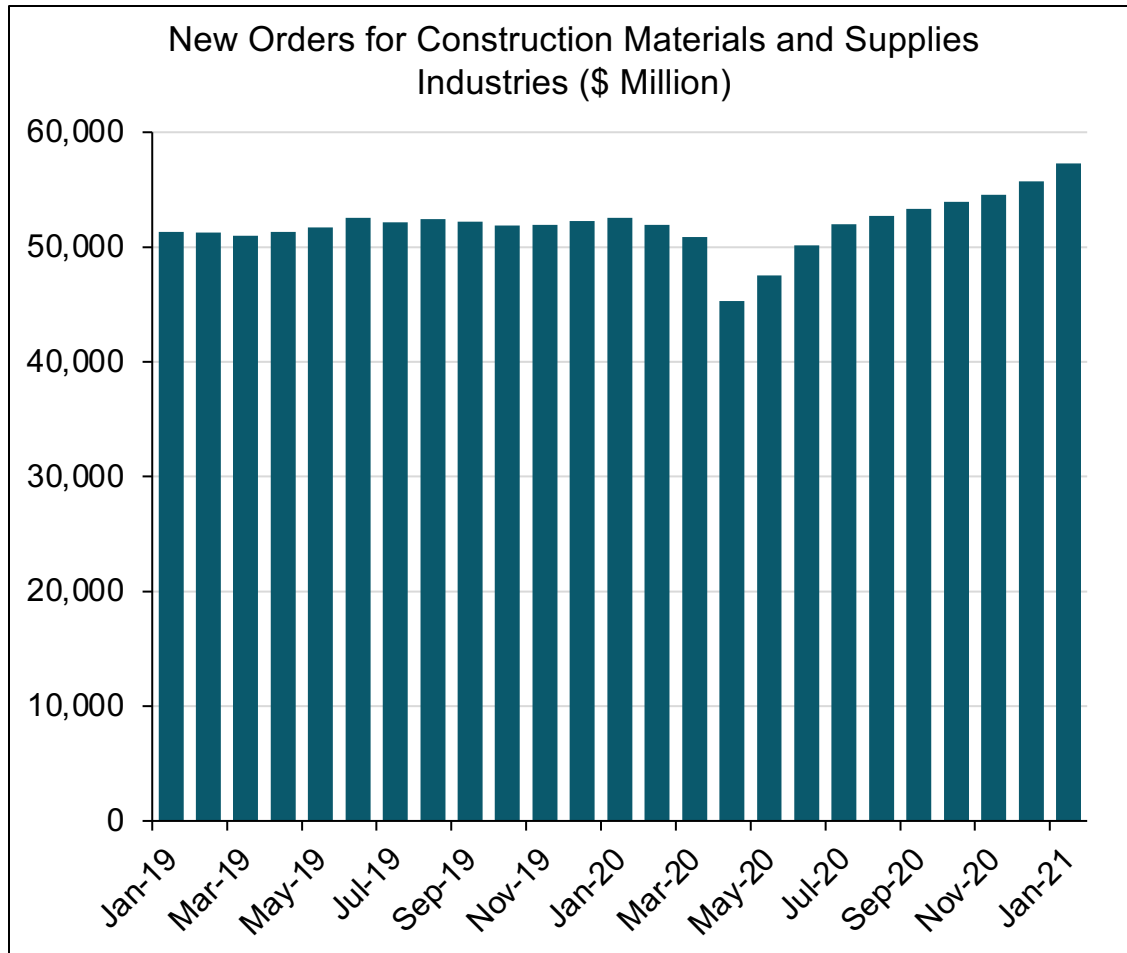
Fast lane: vehicle ownership
Slow lane: ride-sharing



Drive for supply chain efficiency



Building and Construction



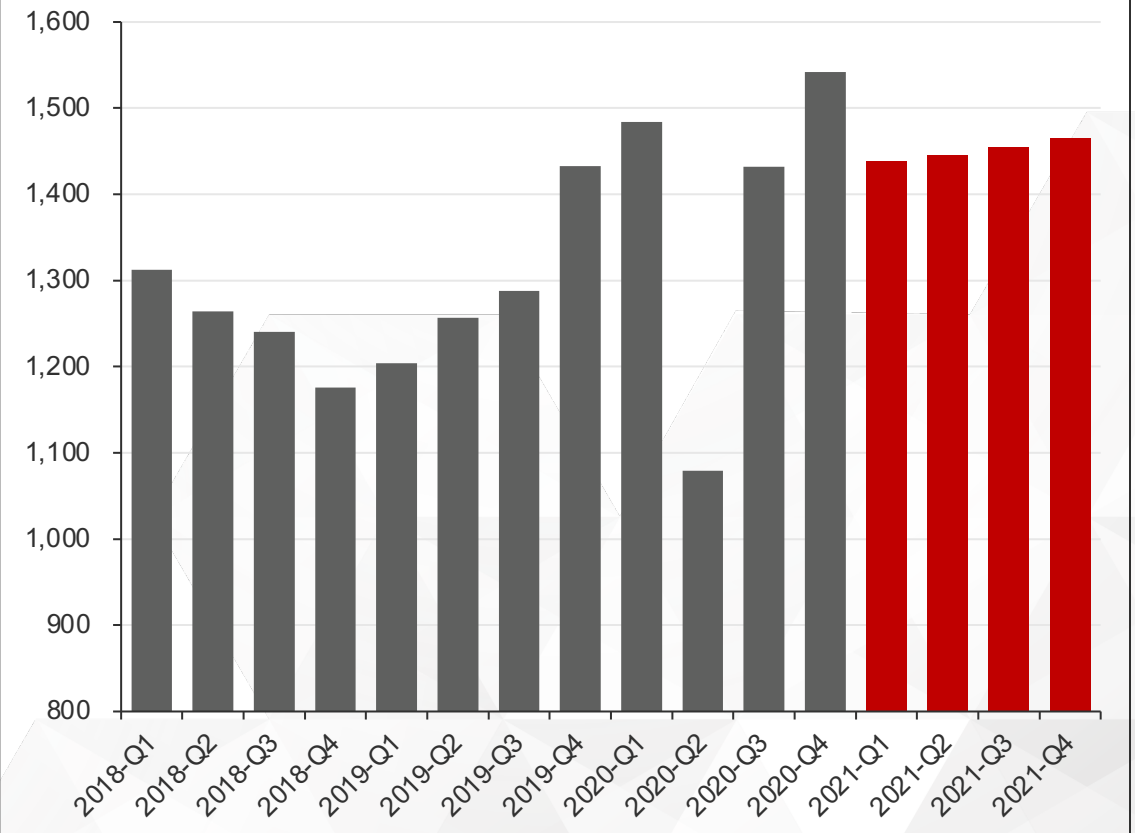
Source: Census Bureau

Housing Forecast

Fannie Mae Housing Forecast (February 2021)

Growth Rate (Y/Y)	2020	2021	2022
Housing starts (%)	7.0	9.7	-2.9
New single-family home sales (%)	18.7	6.0	-1.0
Total existing home sales (%)	5.6	7.0	-4.9
30-year fixed mortgage rate (%)	3.1	2.8	3.0
Median new home price (\$1,000)	334	361	371
Median total existing (\$1,000)	295	319	328

Housing Starts Total Quarterly Forecast
(PLASTICS estimates based on U.S. Census Bureau data)



**PLASTICS
MARKET
WATCH**

WATCHING: TRANSPORTATION

A SERIES ON ECONOMIC-DEMOGRAPHIC-
CONSUMER & TECHNOLOGY TRENDS IN SPECIFIC
PLASTICS END MARKETS

Winter 2019

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WATCHING: CONSUMER GOODS

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WATCHING: PLASTICS' CONTRIBUTIONS TO HEALTHCARE

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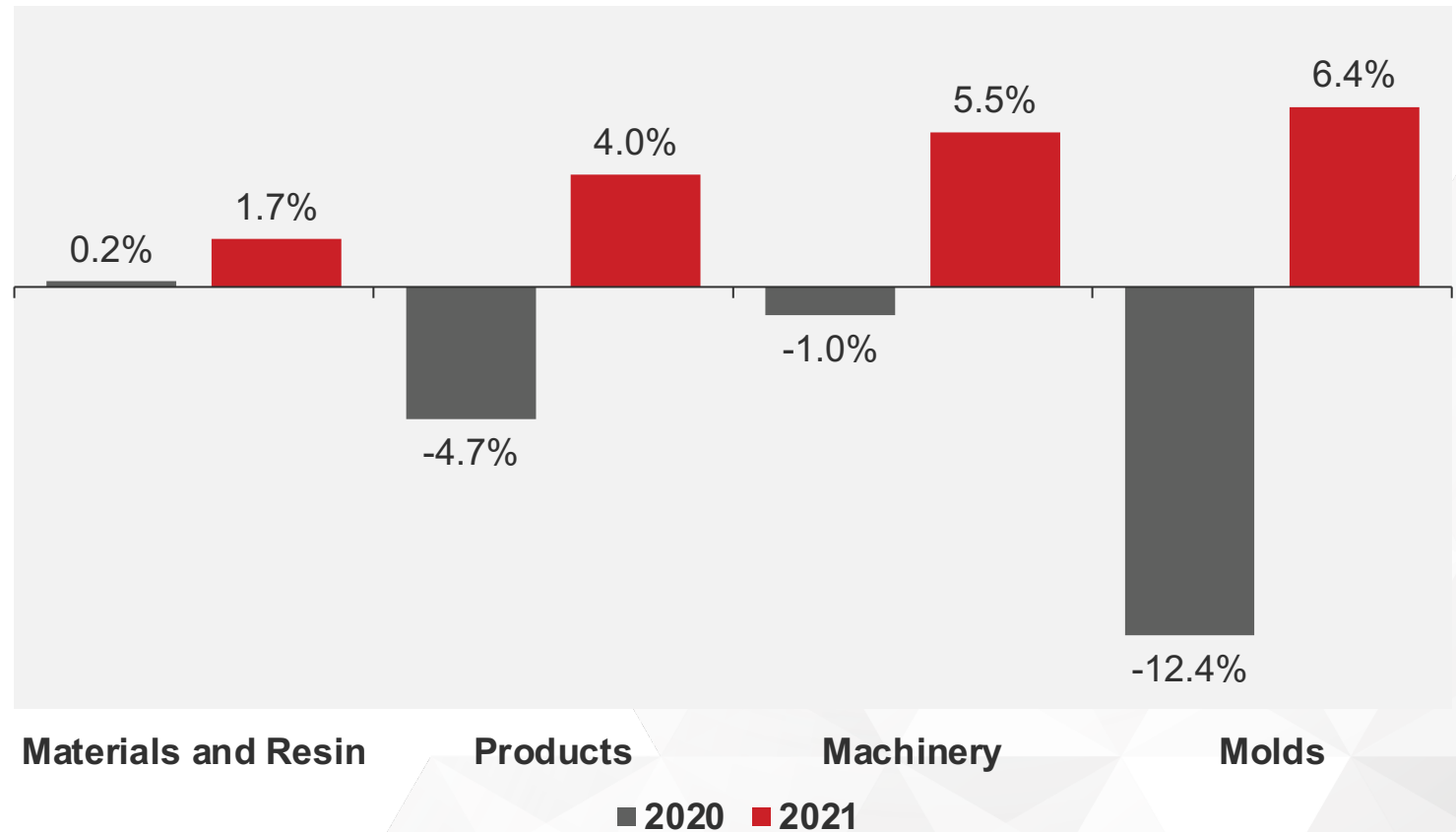
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www.plasticsindustry.org/data/industry/data/plastics-market-watch



Plastics Industry Forecast

Plastics Industry Production Forecast



For the remainder of 2021...



- Economic recovery not without risks
- Improvement in global plastics trade can be expected
- Economy will not return to full employment in 2021
- Positive outlook for plastics, revenue stream will be uneven
- Innovation will always be a source of competitive advantage



U.S. Plastics Market



OPEN FOR BUSINESS



POISED FOR
GROWTH



ENDLESS
POSSIBILITIES





PLASTICS
INDUSTRY ASSOCIATION

Thank You!

Perc Pineda, PhD
Chief Economist

ppineda@plasticsindustry.org

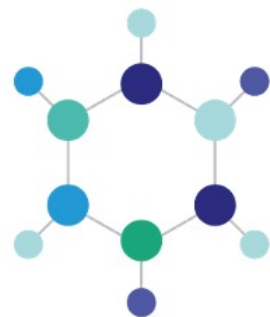
@PercPineda

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SUSTAINABILITY THROUGHOUT THE VALUE CHAIN: INSIGHTS FROM THE FOOD INDUSTRY



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TIFFANI BURT**
SEALED AIR CORPORATION

