

NORTH AMERICAN AUTO MANUFACTURING CHALLENGES DURING A GLOBAL PANDEMIC: A REMI MODELING APPROACH

Concept: Decline in Auto Sector



- We will consider four main factors squeezing the auto industry
 1. Auto manufacturers temporarily halting production
 2. Auto dealers are seeing short-term shrinkage in sales
 3. Consumer demand is likely to remain low for several months
 4. Consumer price of new motor vehicles is likely to rise

Auto Industry: Production Decline



- Most NA manufacturers have halted production in their factories until at least mid-April

- Methodology:
 - 100% Decrease in Motor Vehicles, Bodies, & Parts Manufacturing Output for 1 month
 - Equal to a 8.33% Annual Decrease for 2020

Auto Industry: Falling Dealer Sales



- Auto dealers saw ranging slumps in sales in the second half of March, which are likely to sustain in April
 - Each dealer is hit differently, but ~33.33% seemed to be in the realm of Thursday's auto sales report

- Methodology:
 - 33.33% Decline in Detailed Retail Sales of Motor Vehicles & Parts Dealers for 1 month
 - Equal to a 2.78% Annual Decrease for 2020
 - This decline is spread across the areas of the U.S. based on their overall volume of retail sales

Auto Industry: Fall in Consumer Demand



- Related to the short-term fall in sales, there is likely to be a medium-term decline in consumer demand for new motor vehicles
 - ▣ Driven by constraints on personal income from overall economic decline

- Methodology:
 - ▣ 33.33% Decrease in Consumer Spending on New Motor Vehicles for 6 months
 - Equal to a 16.67% Annual Decrease for 2020

Auto Industry: Change in Consumer Price



- Auto dealers have tried to ease prices with favorable financing, but the negative supply shock to new autos and the established trend of year-on-year price increase are likely to result in a spike
- Methodology
 - 2% Increase in Consumer Price for New Motor Vehicles
 - This is about double the year-on-year rate in our base data

Auto Industry: Demonstrative Model



- Configuration: 160-sector, 9-region PI+ model of the United States
- Previously mentioned assumptions are intended to broadly isolate the economic impacts resulting from shifts in the auto industry
- Keep in mind, we have chosen not to factor in the shifts occurring in other industries simultaneously that are likely to exacerbate the impacts

Model Demonstration

Followed by a Q&A session