Auto Industry Outlook

2021 Revenue Estimation and Tax Research Conference
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Alivia Metts
Principal Economist
The Metts Group
Overview

- Introduction
- State of the Industry
- Contributing Indicators and Trends
- Technologies
- Conclusion
Missouri: Hallmark Cards Inc.

Here’s a nice sentiment to share with a loved one: Most greeting cards are still manufactured in the US of A. Hallmark’s home base has been Kansas City, Missouri, ever since 18-year-old J.C. Hall from Nebraska stepped off a train in K.C. with two shoeboxes of postcards and a dream. Hallmark is the largest manufacturer of greeting cards in the U.S., and manufactures most of those cards right across the river in Lawrence, Kansas. (Wrapping paper, ribbon and bows are primarily manufactured in Leavenworth, Kansas.) In 2019, Hallmark employed 5,200 people in the Kansas City area, all of whom have no excuse for forgetting to send a card on Mother’s Day.
Industry Performance (Revenue, 2013-2026)

Source: IBISWorld
Production

Historical Average: 10.5-11.5 million units per year

Source: Center for Automotive Research
New Vehicle Inventory

60 days supply is considered normal

Source: Cox Automotive
U.S. Automotive Parts Imports Sources

Countries in Green account for 99% of all U.S. auto parts imports.

70% of U.S. parts imports from 4 countries:
- Mexico (39%)
- Canada (11%)
- China (10%)
- Japan (10%)

Source: Center for Automotive Research
The Chip Dilemma

- Low margins for chip manufacturers
- Stringent requirements by auto industry
- Redistribution of Design and Manufacturing

Source: The Economist, Intel
Sales
Sales & Sales Forecast

Source: Center for Automotive Research

-25%
-20%
-15%
-10%
-5%
0%
5%
10%
15%

2000-2028

Year

YoY % Change

Sales ($ millions)

Forecast

$15.5M 2021 Sales Forecast

2021 Sales Forecast

$15.5M
New Vehicle Rolling Sales

- 19% v 2020, - 23% v 2019

Source: Cox Automotive
# Sales by Brand

<table>
<thead>
<tr>
<th>Brand</th>
<th>YTD 2021</th>
<th>Versus 2019</th>
<th>Versus 2020</th>
<th>YTD 2021 Share</th>
<th>Market Share % Change Versus 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toyota</td>
<td>1,878,701</td>
<td>5.6%</td>
<td>29.4%</td>
<td>16.0%</td>
<td>1.5%</td>
</tr>
<tr>
<td>GM</td>
<td>1,794,200</td>
<td>-16.4%</td>
<td>1.5%</td>
<td>15.3%</td>
<td>-2.1%</td>
</tr>
<tr>
<td>Stellantis (FCA)</td>
<td>1,347,531</td>
<td>-18.9%</td>
<td>2.0%</td>
<td>11.5%</td>
<td>-1.0%</td>
</tr>
<tr>
<td>Hyundai/Kia</td>
<td>1,172,819</td>
<td>19.1%</td>
<td>32.8%</td>
<td>10.0%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Honda</td>
<td>1,188,934</td>
<td>-1.4%</td>
<td>21.2%</td>
<td>10.1%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Ford</td>
<td>1,334,118</td>
<td>-26.2%</td>
<td>-10.8%</td>
<td>11.4%</td>
<td>-2.6%</td>
</tr>
<tr>
<td>Nissan</td>
<td>791,940</td>
<td>-24.2%</td>
<td>20.7%</td>
<td>6.8%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Subaru</td>
<td>462,594</td>
<td>-11.9%</td>
<td>6.0%</td>
<td>3.9%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>VW</td>
<td>508,016</td>
<td>5.5%</td>
<td>28.5%</td>
<td>4.3%</td>
<td>0.4%</td>
</tr>
<tr>
<td>ALL BRANDS</td>
<td>11,724,870</td>
<td>-8.1%</td>
<td>13.0%</td>
<td>100.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Source: Cox Automotive
Used Vehicle Retail Sales and Volume

2021 Sales Forecasts:
$15.5M New Car Sales
$39.2M Used Car Sales

Source: Cox Automotive
Average Listing Price

At a New Peak
$42,000

Source: Cox Automotive
Market Share by Segment

- Mid-Size Car: 6.0%
- Compact Car: 8.0%
- Compact SUV/Crossover: 15.0%
- Full-Size Pickup Truck: 15.5%
- Mid-Size SUV/Crossover: 17.0%

Source: Cox Automotive
Employment impact on Income Tax Revenue
Concentration of Manufacturing Employment, Q1 2021

Source: BLS
Wages as a Share of Revenue
The Great Resignation

Motor Vehicle Manufacturing
2016-2021

Source: IBISWorld
Y-o-Y % Change in Employment

Source: BLS
Production Occupations

Production Occupations, Number of Unemployed (in 000s)

Source: BLS

Production Occupations, Employed (in 000s)

Source: BLS
Individual Income Tax as a Percentage of Total State Taxes Collected, Q2 2021

Source: Census, Quarterly Summary of State and Local Government Tax Revenue
Labor Force Participation

AVERAGE ANNUAL GROWTH RATE (%)

Source: BLS
BEV impact on Motor Fuel Tax Revenue
The Future of Transportation

- Multi-modal Transportation
- Vehicle Communications
- Autonomous Vehicles
- Electric Vehicles

- 1,000-1,400 chips / car
- $427 chip value / car in 2020
What are States doing?

Some of the many active states working to advance self-driving/autonomous vehicles include:

- Michigan
- Washington
- Colorado
- Rhode Island
- Virginia
- Pennsylvania
- Oregon
- Ohio
- North Carolina
- Nevada
- Minnesota
- Maryland
- Florida
- Delaware

Many states are working hard to promote the development of electric vehicles, connected and autonomous.

- Supporting research at universities
- Increasing workforce development programs and training
- Outreach and funding of startups – particularly in high-tech arenas
- Implementing testing friendly DOT programs
- Upgrading infrastructure, including charging
- Incentives for consumers, infrastructure
Partnering in the New Automotive World

Source: Center for Automotive Research
Local Impact

State and local motor fuel tax revenue accounts for roughly 27% of highway and road spending.

Source: Federation of Tax Administrators (FTA), Tax Rates (as of January 1, 2021).
Note: Motor fuel tax rates include gasoline excise tax and related state fees, but not local taxes. Some states have different rates for diesel and gasohol.
State Government Tax Collections
Motor-related Taxes

Share of Total Sales
- Motor fuel sales: 4.2%
- Motor vehicle sales tax, registration and licensing: 2.6%

Motor-related Tax Collections (adjusted $2021)

Source: Census, Quarterly Summary of State and Local Government Tax Revenue
What can states do?

- Raise their gas tax rates
- Tie the gas tax rate to the price of gasoline
- Tie the gas tax rate to inflation or population
- Use another revenue source
- Tax miles traveled instead of gasoline
Takeaways

- Affordability
- Technologies disrupting supply chains
- Labor will continue to be an issue
Thank You

Alivia Metts
Principal Economist
ametts@themettsgroup.com
(208) 277-6940