Auto Industry Outlook Summary

AutoPacific, Inc.
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AutoPacific Sales Forecast Through 2024
Q1 2019 AutoPacific Sales Forecast

U.S. Light Vehicles Sales History and Forecast

Source: AutoPacific Sales Service, Q1 2019

AutoPacific Q1 Forecast for 2019: 16.85 million units
Pent-Up Demand Has Been Fulfilled, Leading to Industry Volumes Trending Downward Since 2017

- Volume decline already in progress, following strong growth up to 2016.
  - Growth was due to pent-up demand and economic recovery following the recession.
  - Volume decline is not in and of itself a sign of a troubled economy; the market is returning to “normal”.
Demographic Shifts Also Contribute to the Overall Decline of Industry Volume

• While young adults have finally become a major force within the new vehicle market, they have been entering at a later age.
  • A tough job market in the years following the recession made new vehicles unaffordable to many young adults until recently.
  • Alternatives to vehicle ownership are more compelling and feasible than ever, further delaying their entry into the new vehicle marketplace.

• The oldest Baby Boomers are retiring, getting onto fixed incomes, and will be acquiring new vehicles less frequently.
Longer Loans Are Also Hurting Light Vehicle Volumes

- Interest rates are rising, ultimately reducing consumers’ purchasing power.
- Higher transaction prices mean longer loans for those who finance – meaning consumers are upside down on their loans longer and cannot replace their vehicles as frequently.
  - Today, three-quarters of all new vehicle loans are more than five years.
    - 72 months is the most common loan term (24% of market vs. 10% in 2008).
    - 84 and 96 month loans are continuing to become more and more common.
- AutoPacific’s latest NVSS data show that the median price of a new vehicle today is $35,000!
- Dropping used car values (glut of lease returns) also contribute to negative equity too.
Trucks Will Continue to Gain at Cars’ Expense

• Migration to trucks shows no sign of ending; today’s most popular “cars” are classified as trucks.

• For the majority of new vehicle consumers today, trucks are better cars than cars, and technology has brought crossover SUV fuel economy within spitting distance of comparable passenger cars.

Passenger Car vs. Truck Mix

Source: AutoPacific Sales Service, Q1 2019
Technology Has Enabled SUVs to Thrive

• Earlier this decade, unstable fuel prices caused SUV sales to crash while passenger car mix soared.

• This is not likely to happen again because:
  • Fuel prices have been trending upward, but slowly this time. AutoPacific’s research shows that consumers change buying behavior when fuel prices are unstable.
  • Technology has brought SUV fuel economy closer to parity with passenger cars.
Consequently, Only Trucks Are Growing Sales This Year

Segment Performance: 2019 Forecast vs. 2018 Actuals

- As total light vehicle volumes are declining, most vehicle segments will see a volume decline in 2019.
- The exceptions are four truck segments.
  - SUV segment bookends are both expected to grow this year.
  - Mid-Size SUVs continue to draw from former mid-size sedan owners.
  - Much action in the small pickup space with Ford Ranger and Jeep Gladiator joining the segment this year.

Source: AutoPacific Sales Forecast Service, Q1 2019
Impact of Ride Hailing Autonomous Vehicles?

• Autonomous vehicles proliferation will go hand in hand with growing deployment of ride hailing services, but ride hailing (with human drivers) will have a stronger and more immediate impact on the industry.

• In dense urban centers, ride hailing services aim to be cheaper and more convenient than car ownership.

• However, the proliferation of autonomous ride hailing cars will take quite some time.

• Privately owned, self-driven vehicles are not going away anytime soon, and industry sales volumes will not feel a negative impact from autonomous ride hailing vehicles in the near term.
Still, We’re Witnessing Changing Attitudes Towards Driving

- In dense areas, even car enthusiasts don’t find traffic jams fun; that’s NOT driving.
- Also, young adults do not have the same connection or enthusiasm for cars and driving as prior generations when they were young.
  - They got into vehicle ownership later than prior generations due to recession, student debt, and increasingly viable alternatives to vehicle ownership.

Source: AutoPacific 2018 New Vehicle Satisfaction Study
Changing Attitudes Towards Ownership

- People are getting accustomed to paying for access rather than owning outright.
  - Leasing continues to grow.
  - Netflix
  - Spotify
  - Turo
  - AirBnB
  - Renting instead of buying real estate
- There is an inverse relationship between comfort with paying for access instead of owning and age.

“Costs Being Equal, I Would Prefer Uber/Lyft Over Owning a Vehicle”

Source: AutoPacific 2018 New Vehicle Satisfaction Study
So, Paying for Access to On-Demand Autonomous Transportation Isn’t Far Fetched, But It’s Still Years Away

• With attitudes towards ownership changing, it’s not a stretch to apply the idea to automotive.

• Uber, Lyft, and other ride hailing services are already blazing the trail in automotive.
  • Currently an alternative to taxis.
  • In the future, autonomous technology will bring costs down, making them increasingly viable alternatives to vehicle ownership – and ultimately cheaper than owning a vehicle.

• However, transitioning from human-driven privately owned cars to shared autonomous transportation will take many, many years to realize.
Alternative Powertrain Sales Are Growing, But a Fully Electric Future is Still a Ways Off

- Despite an overall decline in industry volume, hybrid sales are forecast to grow dramatically, especially as mild hybrids make a big comeback.
  - That growth rate is temporary as 48v mild hybrids are more of a stopgap and won’t be a growth segment for long.
- **EV sales growth is strong in percentage terms but not in terms of absolute volumes, with 2024 sales around half a million (still well over double 2018’s volumes).**

Source: AutoPacific Sales Forecast Service, Q1 2019
Range Improvements are Making BEVs More Ready for the Mainstream, But They Are Still Years From Replacing ICE Vehicles

- Range improvements reduce range anxiety – one of the primary reasons people reject BEVs

- Makes driving an BEV a more “normal” experience.
  - This was critical in the early success of hybrids; hybrids were seamless in operation and did not require drivers to make big changes in routine

- Still, overall consumer consideration for EVs remains modest as cost and required behavioral changes deter mainstream consumers, making widespread adoption still many years away.

Next Vehicle Engine Type Desired

- Gasoline Engine: 73%
- Diesel Engine: 5%
- Hybrid: 10%
- Plug-in Hybrid: 6%
- Plug-in Full Electric: 3%
- Hydrogen Fuel Cell: 2%

Source: AutoPacific 2018 New Vehicle Satisfaction Study
Consumers Will Soon Have an Abundance of EV Offerings in the Market; Will Choice Exceed Demand?

• The next few years will be a very exciting time for EV fans as there will be a massive amount of choice in the next few years.
  • Tesla will finally have lots of competition from most luxury brands.
  • Mainstream brands will also be launching numerous EVs at popular price points.

• HOWEVER:
  • In 2018, there were 15 EV nameplates on sale.
  • In 2024, there will be at least 73 EV nameplates on sale!

• This means a smaller average piece of the pie for each entry.

Source: AutoPacific 2018 New Vehicle Satisfaction Study
• Massive changes are coming to the auto industry, and Silicon Valley is a big part of that change.

• However, not only is the auto industry slower to change than the tech industry, but AutoPacific’s data also consistently show that mainstream consumers are also resistant to rapid change.
  • The sheer cost of a new vehicle, compared to personal technologies, contributes to consumers’ generally greater conservatism when it comes to automobiles.

• This is why the move to electrification and autonomy are not overnight developments.

• Technology applied in ways that result in tangible and cost effective consumer benefits speed up adoption of new ideas. Maintaining a razor sharp focus on consumer needs is key when developing new ideas and technologies.