



Auto Industry Recovers; Faces New Challenges

Sales of cars and light trucks are projected to reach 17 million in 2015.¹ As consumer confidence plummeted, unemployment increased, and credit evaporated during the 2008–2009 recession, sales dropped to 11.2 million in 2009, about 40 percent lower than the pre-recession peak of 17.7 million in 2006.²

Introduction

People who held off buying a car or truck during the recession caused the age of vehicles on the road to increase to an average of 11.4 years.³ Now that the economy has bounced back, people are flooding to dealerships to purchase new vehicles. This has stopped the average age of cars on the road from increasing, and will presumably allow it to return to more normal levels. There is further incentive to purchase a new car or truck before the Federal Reserve raises interest rates, likely in the fourth quarter of 2015.⁴ Although sales and manufacturer profits are up, the auto industry faces new challenges.

The Environmental Protection Agency (“EPA”) has established fuel-economy regulations that are putting pressure on automakers to develop more efficient vehicles. Specifically, each automaker must have a fleet-wide average of 54.5 miles per gallon by 2025. However, a stronger economy and lower gas prices are spurring purchases of larger, less efficient vehicles. In 2014, the sale of trucks made up 53.2 percent of total vehicle sales, which is the highest market share seen in over 9 years.⁵

Gas Guzzlers

The world is currently experiencing an increase in oil supplies. Iranian nuclear negotiations seem likely to result in a deal that allows Iran to sell more crude oil in an “already oversupplied global market.” Saudi Arabia and North Dakota are also increasing production of oil.⁶ China is experiencing a slow-down in industrial activity, lowering the demand for oil.

The growing supply of oil combined with lower demand has caused gas prices to significantly decrease. Average

U.S. gas prices decreased 33 percent from August 2014 to \$2.69 per gallon in August 2015.⁷ As a result, gas prices are not as much of a concern for vehicle buyers. This is causing increased sales of higher priced trucks and performance sports cars, allowing automakers to enjoy higher profit margins.⁸

Lower gas prices are also causing the demand for fuel-efficient cars to decline. During the first half of 2015, hybrid-electric cars made up 2.8 percent of U.S. auto sales, down from 3.6 percent in the first half of 2014.⁹ So although total vehicle sales are up, low gas prices and low interest rates are changing the ratio of fuel-efficient cars to less efficient trucks.

Although trucks and SUVs are more profitable, they make it more challenging to meet efficiency mandates that prevent financial penalties. This change in consumer preferences will challenge automakers to find new ways to reach the EPA’s 2025 standards.

EPA Rules

As current macroeconomic factors are encouraging consumers to purchase vehicles with lower fuel efficiency, automakers are generally lobbying for less stringent fuel efficiency targets. Tesla, the California-based maker of electric cars, is lobbying for stricter efficiency requisites. The company earns regulatory credits from selling vehicles that emit zero pollution; these credits are then sold.¹⁰ If the EPA relaxes its regulations, Tesla will have a reduced opportunity to cash in on these pollution credits. The EPA has not amended its fleet average targets, however, so manufacturers continue to develop fuel-efficient vehicles despite the relatively weak demand.

GM is scheduled to release its electric Chevrolet Bolt in 2017, which is expected to have a 200-mile range. Audi and Nissan are also designing and manufacturing electric



cars with impressive ranges. Toyota and Honda both presented fuel-cell vehicles at the 2015 Detroit Auto Show, proving that they are still innovating and designing fuel-efficient cars despite low gas prices.

Going Lighter

One way to meet the EPA's mileage regulations is to create lighter cars. Steel accounts for about 60 percent of the weight in passenger vehicles, and the automotive industry currently uses 12 percent of the steel produced globally. Although steel is relatively inexpensive, it is heavy and increases a vehicle's fuel consumption. The steel industry is expected to face lower demand as automakers switch to materials like aluminum that have higher strength-to-weight ratios.

As increased use of aluminum can help automakers meet EPA requirements, industry experts predict that the volume of aluminum in vehicles will increase from 6.6 percent in 2015 to 26.6 percent in 2025.¹¹ Twenty-five percent of the weight of the most popular pickup truck in the U.S., Ford's F-150, is from aluminum.¹² Its aluminum-alloy body makes the vehicle about 700 pounds lighter than the previous model, providing for better fuel efficiency and acceleration.¹³

Autopilot

As demand for electric vehicles is modest, and the EPA's willingness to ultimately increase or decrease efficiency mandates is uncertain, Tesla is forging ahead with not just more efficient cars but also self-driving ones. Tesla expects all of its model S vehicles to have an autopilot feature in the hopes of promoting the brand as a leader of smart car technology.¹⁴

The "connected car" and its related software may be the future of the automotive industry. Many cars already have some form of driver-assist features, such as lane departure warnings, pre-collision braking, and blind spot monitoring. Google, Apple, and Uber are some of the companies developing self-driving cars. Google's self-driving cars have logged 1.8 million miles with 12 minor accidents, none of which were the fault of the vehicle.¹⁵ BNP Paribas predicts that automated driving technology will be a \$25 billion market by 2020. It also expects that automated cars will be widely available by 2025 once regulatory rules are amended. Most states, except for Nevada, Florida, California, and Michigan, do not currently allow cars to operate without a human driver.¹⁶

Conclusion

The automotive industry is changing greatly as it tries to meet both customer demands and the EPA's fuel efficiency requirements. Self-driving cars are also revolutionizing the industry, and will greatly impact the future for automakers and drivers.

Appraisal Economics has performed valuation services for clients in the automotive industry for more than 25 years. Our team of independent valuation experts includes appraisers, accountants, economists, and engineers with significant expertise in a wide range of valuation and appraisal matters. We have appraised numerous vehicle and parts manufacturers, distributors, and retailers. If you are looking for an appraisal firm that has a deep understanding of your industry and need a valuation for accounting, tax, transaction, or litigation purposes, please call us at +1 201 265 3333.

Disclaimer: this article has content that is general and informational in nature. This document is not intended to be accounting, tax, legal, or investment advice. Data from third parties is believed to be reliable, but no assurance is made as to the accuracy or completeness.



Endnotes:

1. https://www.whitehouse.gov/sites/default/files/uploads/auto_report_06_01_11.pdf
2. <http://www.macrotrends.net/1372/auto-and-light-truck-sales-historical-chart>
3. http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_01_26.html_mfd
4. <http://press.ihs.com/press-release/automotive/average-age-light-vehicles-us-rises-slightly-2015-115-years-ihs-reports>
5. <http://www.autoalliance.org/index.cfm?objectid=1D520070-A439-11E1-B5BF000C296BA163>
6. <http://www.wsj.com/articles/oil-prices-extend-slide-on-uncertainty-around-iran-greece-1436764852>
7. <http://www.eia.gov/petroleum/gasdiesel/>
8. <http://www.forbes.com/sites/joannmuller/2015/01/05/5-big-trends-driving-the-auto-industry-in-2015/>
9. <http://www.wsj.com/articles/fiat-chrysler-sales-up-6-2-in-july-1438605060>
10. <http://ir.teslamotors.com/secfiling.cfm?filingid=1193125-14-69681&cik=>
11. <http://www.forbes.com/sites/greatspeculations/2015/05/20/trends-in-steel-usage-in-the-automotive-industry/>
12. <http://www.ford.com/trucks/f150/features/#page=Feature3>
13. <http://www.ford.com/trucks/f150/>
14. <http://www.forbes.com/sites/jeremyanwyl/2015/04/02/evidence-of-forces-behind-the-tesla-factor-at-this-weeks-new-york-auto-show/3/>
15. <http://worldif.economist.com/article/11/what-if-autonomous-vehicles-rule-the-world-from-horseless-to-driverless>
16. <http://www.reuters.com/article/2015/02/14/us-apple-autos-idUSKBN0Ll0J20150214>