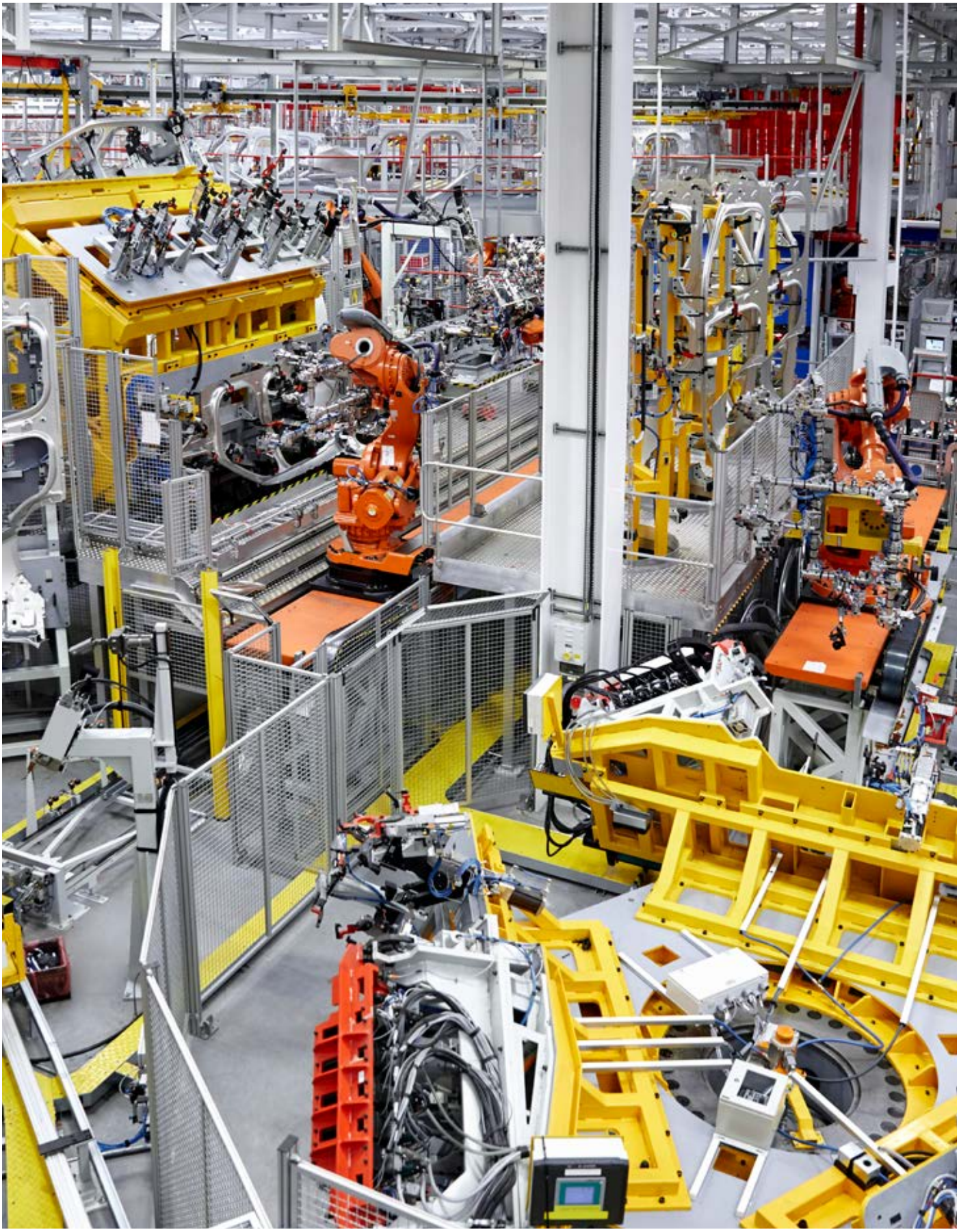
Epicor White Paper

Growth Opportunities in Motor Vehicle Parts Manufacturing



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Introduction

As an automotive parts or components manufacturer, you may be both encouraged and challenged by a growing number of trends in the automotive marketplace. From disruptive trends in product developments—such as electric vehicles, advanced assistance and safety capabilities, and driverless vehicles—to trade tariff increases, regulation changes, and higher interest rates, it's apparent that change is in the air.

Production trends show that manufacturing of most motor vehicles is on the rise—at least for SUVs, crossovers, pick-up trucks, and commercial trucks. Conversely, production is down for cars and medium-duty trucks. Ford surprised some when it announced scaling back significantly on its car offerings, continuing production on only two car models in order to focus more attention on its SUVs, crossovers, trucks, and commercial vehicles.

How these trends will shape the future of the automotive industry and the manufacturers that supply them remains to be seen. As an industry insider, you know that multiple factors can add up to affect the automotive industry in complex ways. New trends and the risks, opportunities, and challenges associated with them were examined recently during a presentation hosted by Today's Motor Vehicles[1] and sponsored by Epicor® Software. Read on for an overview of what's shaping today's auto vehicle industry.

Trends

The biggest trends in the market today are growth in both consumer and commercial sales, changing consumer tastes, and increased adoption of electric cars.

Positive sales outlook continues

The auto vehicle sales run that began in 2010 continues to be strong, and the outlook over the next several years is good. Although the number of auto vehicles sold in 2017 was down from recent years at 17.2 million[2], it marked the third year in a row of vehicle sales greater than 17 million. Furthermore, trucks, SUVs, and crossovers—which all have higher profit margins—are making up a bigger share of vehicle sales as consumer tastes shift away from cars. This means that even if per-unit vehicle sales decline slightly, the higher profit margins could make up for it.

Shift in consumer tastes

Car sales are going down, SUV and crossover sales are going up, and pick-up trucks remain the same.

We've seen a dramatic change in vehicle sales over the past five years. The biggest trend in vehicle sales now is the mix of vehicle types in the market. Cars have gone from nearly half the market to about a third. That space has been taken up entirely by crossovers first and SUVs second—making the small crossover the hottest vehicle on the market. Pickup trucks have maintained a steady share of the market.

Commercial sales are "red hot"

Because the economy has been doing well in recent years, purchasing, shipping, and freight activities have all increased. More people are buying more things that need to be shipped cross country—increasing demand on the shipping business. In response, shipping companies are buying more heavy-duty Class 8 trucks. According to freight industry analysts, North American Class 8 truck sales are a very elevated market, and "order levels will continue to put pressure on the OEMs and suppliers to increase production and output. The market will stay red-hot into 2019[3]."

Demand for medium-duty trucks—such as delivery trucks, beverage delivery, and cement mixers—slowed after several strong years, but sales should pick up again. Since the rebuilding of the economy, most businesses that needed new medium-duty trucks have already purchased them. However, a replacement market is expected over the next few years as these fleets begin to age.

Electric vehicles

Despite shrinking demand for cars in favor of bigger, gas-powered SUVs and crossovers, electric vehicle (EV) car sales are on the rise and doing better than ever. Pure EVs and hybrid EVs make up only about 1 percent of the consumer auto vehicle market, however, the EV market is growing quickly—sales increased by 41 percent from 2016 to 2017.

Consumer adoption of EVs is growing for a combination of reasons. The battery charging infrastructure is growing—making it easier than ever to recharge. Another reason is that today's electric car designs blend in with a more mainstream look—a contrast to the futuristic lines of the early models. Some, like the Tesla Model 3, are even elegant. These factors are helping to normalize EVs in the eyes of the consumer.

Autonomous vehicles

Though self-driving vehicle technology is a longer term trend, it's important to keep an eye on it because of its potential to disrupt the market. Many aspects of the current auto industry supply chain will carry over to the future autonomous market, and there is a strong potential for new types of parts and components as well.

Despite autonomous vehicle development taking a big hit with recent fatal accidents, the investment flow has not stopped. Google's self-driving vehicle initiative—Waymo—is working with several automakers to develop a fleet of autonomous taxi-like vehicles for use worldwide. The investment in autonomous vehicle technology is only increasing. People are investing billions of dollars, and there's a lot of potential for both the commercial truck and consumer vehicle markets.

Risk Factors

Along with these trends come a few risks to keep an eye on—including changes in interest rates, trade tariffs, and government regulations.

Interest rates

The interest rates are the biggest concern for automotive retail. The Federal Reserve will raise interest rates as the economy stays strong to fight inflation, and that will make it more expensive to finance a vehicle purchase.

The vast majority of new car sales are financed, and the average length of an auto loan is a record 69 months[4]. Consumers are willing to extend the terms of a loan to nearly six years and often longer in order to get the vehicle they want. The average length of ownership of a vehicle in the U.S. is 6.5 years, so many consumers might be paying on a loan even after they are no longer driving the vehicle[5]. As car sales decline and consumer preferences shift to more expensive SUVs and crossovers, the average length of loans will likely increase. Higher interest rates could push the average loan length even further.

The limit that consumers are willing to extend loan terms in order to get the vehicle they want—and how that will impact the auto industry—are unknown. However, longer loan terms could lock some people out of the market for longer periods—especially considering that new vehicles are lasting longer[6] and may not need to be replaced during these longer loan terms.

Trade tariffs

As of this publication, major changes in U.S. trade tariffs on imported steel and aluminum have begun, and subsequent effects on commodity prices and trade are still unfolding. Any rise in raw material costs will absolutely affect the automotive industry in an adverse way, according to industry leaders[7]. Increasing the tariff on steel and aluminum could raise commodity prices on just about everything that goes into a vehicle. Even if higher tariffs manage to restart a lot of the aluminum and steel production in the U.S., it affects global commodity prices, and the more they cost, the more expensive vehicles are going to be to produce.

Easing regulations

Easing fuel economy regulations will help truck and SUV sales because it will be easier and cheaper to make more large SUVs. However, the opposite may be true for car sales. Easing regulations could slow already-declining car sales. If we lower fuel economy regulations, it could make it harder for certain car programs to stay economically viable. One of the only growth areas in the car market—the small fuel-efficient vehicle market—is predicated on the need to balance out fuel economy over the entire fleet.

Manufacturing Opportunities

Vehicle replacement rate is the estimated percentage of sales volume that will be replaced with entirely new or next-generation models during a period of time. In their latest auto industry report, Bank of America Merrill Lynch estimated that 83 percent of vehicles built in 2018 will be replaced by 2022[8]. That's up from an average 81 percent estimated replacement rate for the 2016–2020 time period, with some vehicle replacement rate estimates as high as 86 percent and 88 percent in that period (Ford and GM, respectively)[9]. These rates are higher than in recent times—and rising.

The higher replacement rates will result in significantly more product launches. Typically, the industry averages about 39 new vehicle launches per year. However, for the 2018–2021 model years, the average is estimated to be 57 vehicle launches per year[10]. More launches means more opportunities for automotive suppliers—especially in the areas of advanced driver assistance systems (ADAS) and vehicle lightweighting.

ADAS

The industry has evolved beyond the well-established passive safety systems like air bags and seat belts. Now the industry is focusing on developing and advancing active safety systems like adaptive cruise control, lane departure warning systems, blind spot detection, and distracted driving detection. ADAS represents the next generation of life-saving advancements in auto vehicle safety, and that's where the real manufacturing opportunities lie. A lot of development is going into ADAS, and growth is expected to be very good. Compound annual growth rate estimates for the next several years are over 21 percent, and it will continue to grow.

It's important to make a distinction between the relatively shorter-term opportunities of ADAS and the longer-term opportunities of autonomous vehicles—and how advancements in one may someday lead to advancements in the other. An investment in today's advanced safety systems technology may lead to an investment in tomorrow's self-driving cars. If you're looking for opportunities for your manufacturing company to get involved in, ADAS is worth considering, because it may have a big future beyond the immediate project.

Lightweighting

Lightweighting is the ongoing effort to make vehicles lighter by replacing parts with lighter-weight materials without sacrificing performance or safety. The effort is ongoing, with the goal of increasing fuel efficiency and improving handling. Three areas of manufacturing opportunity in lightweighting innovation are:

Aluminum door panels and closures— Industry experts expect steel door panels to be completely replaced by aluminum within the next few years. Trunk lids in cars have been aluminum for quite some time. Now, we're seeing this in trucks and SUVs, because the more weight that can be shaved off, the

better the fuel economy and the more weight capacity that can be applied to towing and hauling.

Composites for interior and structural components—The use of composites for interior and structural components is increasing. Some new SUV models now have composite lift gates, and the global automotive lift gate market is predicted to surpass $5 billion in 2022[11]. There may be an increased use of plastics on structural components in suspension pieces and vehicle underbodies.

High-strength steel alloys—The use of difficult-to-process, high-strength and ultra-high-strength steel is growing significantly and will continue to grow. These are heavily heat-treated steel formulations that offer all the strength of mild steel with significantly less volume. They are used in the structural underbody components and safety cages of a vehicle and offer a very thin gauge, yet very strong material that reduces weight dramatically without the higher cost of extruded aluminums.

These alloys are very difficult to cut or process and require specialized laser cutting and hole-drilling techniques and equipment. Auto parts manufacturers who work only in mild steels will start seeing opportunities shrink if they don't adopt the new processes and equipment required for high-strength steels.

Manufacturing Challenges

Some of the toughest challenges for auto vehicle parts manufacturers revolve around tighter tolerances, smaller and more precise powertrain features, and market timing.

Tolerances

Automotive OEMs continue to demand tighter tolerances on door gaps and panel gaps. These requirements are often very difficult to achieve—especially when the bar continues to rise—but it's absolutely critical for fit and finish quality. A differentiating premium is placed on a vehicle's ability to block road noise and eliminate internal rattles, knocks, and vibrations. Most of these qualities are determined by panel gap tolerances.

Powertrain

Efficient engine and transmission designs contain smaller features with a lower margin for error. Today, 10-speed transmissions are used in vehicles that take up the same space as the old 4-speed transmissions. Each year, the planetary gear set is smaller with more precision teeth, and there's virtually no room for error when fitting these very tough, very small parts with extremely precise features on every surface. Additionally, new thinner gauge materials require special surface treatments that weren't necessary in the past. Ultra-high-strength steels are so precision-intensive that they don't allow for any margin of error. Despite these challenges, it's a way to improve fuel economy and power transmission—which the industry now demands.

Market timing

Market demand has shifted radically in the past and can shift again—making it difficult to plan business investments and actions. For example, today's consumer market appears to be moving away from car production in favor of larger vehicles. However, that could change quickly if gas prices jump to the highs of several years ago—which would make previous investments in serving big truck lines difficult to recover. Trade disputes, tariffs, and counter-tariffs could all raise commodity prices, and that would affect investments in new equipment.

To determine which vehicle lines are worth pursuing and help protect yourself against possible shifts in the market, pay close attention to business news and information related to trade conflicts, commodity markets, consumer tastes, sales numbers, and other industry trends.

Epicor CMS—the Right Fit for Your Auto Parts Manufacturing Growth Strategy

As a parts and components supplier serving the automotive industry, you rely on an ERP system to effectively manage the resources and planning elements of your business—the lifeblood of your company. Reducing costs, seamless integration, ease of use, and instant real-time access to information are critical to the success of your organization.

With Epicor CMS, your shop floor is primed to enter the era of Industry 4.0 and Digital Transformation. Gain clear shop floor visibility with machine integration, reduce shipping errors and tighten inventory accuracy with serialized inventory tracking, and meet ever-changing customer labeling and compliance requirements with world-class automotive EDI—all within an easy-to-use touchscreen interface.

Epicor CMS is designed for the automotive industry, and helps run your automotive parts manufacturing business more efficiently and profitably. Epicor CMS includes tools to meet your challenges head on and features solutions designed for tight supply chains, EDI, and the stringent requirements your customers demand.

Flexible deployment options range from public cloud, private cloud, and hybrid cloud—as well as on-premises deployment—to suit your needs.

Epicor CMS is used in a variety of automotive parts manufacturing operations—from agile make-to-order applications, to repetitive production under long-term supply contracts—including the following lines of business:

- Metal processing
- Forming and stamping
- Plastic and rubber injection molding and extrusion
- Plastic sheet thermoforming and processing
- Blow molding
- Electronic assembly and components
- Fastening and springs

[1] Today's Motor Vehicles, "2018 Motor Vehicles Industry Outlook" webinar, April 2018

[2] USA Today, "U.S. auto industry's record sales streak snapped in 2017," January 2018

[3] FTR Transportation Intelligence, "FTR Reports April North American Class 8 Orders Dropped from Exceptionally Strong March as Expected," May, 2018

[4] Interest.com, "April car loans remain surprisingly cheap," April 2018

[5] Consumer Financial Protection Bureau, "CFPB Report Finds Sharp Increase In Riskier Longer-Term Auto Loans," November 2017

[6] 24/7 Wall St., "As Average Age of American Cars Nears 12 Years, a Challenge and Opportunities for Manufacturers," December 2017

[7] Nasdaq.com, "How Trump Tariffs Could Impact the U.S. Auto Industry," March 2018.

[8] WardsAuto, "Car Wars Study Forecasts Toyota to Have Highest Replacement Rate," May 2017

[9] Automotive News, Bank of America Merrill Lynch Car Wars 2017-2020, April 2016

[10] Auto Breaking News, "Lots of Vehicles, Especially Crossovers, on the Way Over Next Four Years," May 2017

[11] Stratview Research, "Global Automotive Liftgate Market by Vehicle Type" report overview, April 2017

About Epicor

Epicor Software Corporation drives business growth. We provide flexible, industry-specific software designed to fit the precise needs of our manufacturing, distribution, retail, and service industry customers. More than 45 years of experience with our customers' unique business processes and operational requirements are built into every solution—in the cloud or on premises. With this deep understanding of your industry, Epicor solutions dramatically improve performance and profitability while easing complexity so you can focus on growth. For more information, connect with Epicor or visit www.epicor.com.

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