High-speed collision: Production has slowed in response to sluggish vehicle sales
About this Industry

Industry Definition
Companies in the Car and Automobile Manufacturing industry manufacture cars and automobile chassis. These operators, which are referred to as automakers, typically produce cars, including electric cars, in assembly plants. The manufacturing of light trucks (e.g. vans, pickups and SUVs), heavy trucks and motorcycles is excluded from this industry.

Main Activities
The primary activities of this industry are

- Automobile assembling
- Automobile chassis manufacturing

The major products and services in this industry are

- Compact and subcompact cars
- Large cars
- Luxury cars
- Midsize sedans

Similar Industries

33611b SUV & Light Truck Manufacturing in the US
Companies in this industry manufacture light trucks (such as vans and pickup trucks) and sport-utility vehicles (SUVs).

33612 Truck & Bus Manufacturing in the US
Operators in this industry manufacture heavy trucks and buses.

33621 Truck, Trailer & Motor Home Manufacturing in the US
Operators in this industry manufacture car bodies and assemble vehicles on a purchased chassis.

33699b Tank & Armored Vehicle Manufacturing in the US
Operators in this industry produce militarized versions of SUVs and light trucks.

Additional Resources
For additional information on this industry

www.autoalliance.org
Alliance of Automobile Manufacturers

www.oica.net
International Organization of Motor Vehicle Manufacturers

www.wardsauto.com
WardsAuto
Industry at a Glance
Car & Automobile Manufacturing in 2018

Key Statistics
Snapshot

Revenue
$107.5bn

Annual Growth 13–18
-2.9%

Annual Growth 18–23
-3.1%

Profit
$3.9bn

Exports
$43.2bn

Businesses
159

Market Share
Toyota Motor Corporation
15.0%

General Motors Company
11.4%

Ford Motor Company
10.9%

Honda Motor Co. Ltd.
6.0%

Key External Drivers
New car sales
Trade-weighted index
Consumer Confidence Index
Yield on 10-year Treasury note
World price of crude oil

Products and services segmentation (2018)

41.8%
Midsize sedans

40.4%
Compact and subcompact cars

15.7%
Large cars

2.1%
Luxury cars

Life Cycle Stage
Mature

Revenue Volatility
Medium

Capital Intensity
High

Industry Assistance
High

Concentration Level
Medium

Regulation Level
Medium

Technology Change
High

Barriers to Entry
Medium

Industry Globalization
High

Competition Level
Medium

FOR ADDITIONAL STATISTICS AND TIME SERIES SEE THE APPENDIX ON PAGE 40

SOURCE: WWW.IBISWORLD.COM
Industry Performance

Executive Summary | Key External Drivers | Current Performance

Industry Outlook | Life Cycle Stage

The Car and Automobile Manufacturing industry has experienced bumpy roads over the five years to 2018. General improvements to the economy and heavy buying activity from integral downstream markets are expected to help the auto sector overall. However, declining prices for fuel and crude oil have helped bolster demand light trucks and sports-utility vehicles at the expense of compact cars and sedans. Furthermore, automakers’ response to consumer preference has been to shift production away from industry-relevant vehicles. In 2017, Fiat Chrysler Automobiles NV halted production of cars and sedans in the United States. In 2018, General Motors Company and Ford Motor Company both announced plans to further restructure operations away from industry-relevant vehicles. As a result, despite positive economic conditions, the industry has suffered throughout the period. Over the five years to 2018, industry-relevant revenue is expected to decline at an annualized rate of 2.9% to $107.5 billion. This includes an anticipated 10.7% drop in 2018 alone.

As economic conditions have improved, industry operators have focused more on product innovation to capitalize on shifting consumer tastes. As consumers become increasingly environmentally conscious, major players have focused operations on the production of hybrid and compact cars. As a result, this product line has increased rapidly during the five-year period and is set to generate the greatest revenue moving forward. As operators continue to tailor-make vehicles to consumer desires, companies within the industry have also attempted to modernize equipment. Wage costs are higher in the United States compared with some foreign countries, making automation an appealing strategy to cut costs. However, offshoring is prevalent in the industry and is expected to negatively affect industry growth.

Over the five years to 2023, the industry is expected to remain in decline. While operators are expected to continue producing fewer and fewer cars and sedans, industry struggles are expected to be exacerbated by reversing economic trends. Anticipated rises in interest rates and unemployment are forecast to hinder consumer sentiment. As confidence in the economy drops, consumers will be less inclined to make expensive discretionary purchases such as vehicles. Over the five years to 2023, industry revenue is forecast to accelerate its decline. During the period, revenue is anticipated to fall at an annualized rate of 3.1% to $92.1 billion.

Key External Drivers

New car sales
New car sales are an integral component to the industry. With the US economy improving, new car sales have grown strongly throughout the period, as both consumer sentiment and disposable income have grown following the recession. New car sales are expected to decrease in 2018.

Trade-weighted index
Exchange rates play an important role in the industry’s ability to remain competitive. An appreciation of the US dollar typically leads to a decline in exports, which has a negative effect on industry revenue. The trade-weighted index is expected to decrease in 2018.

As economic conditions have improved, industry operators have focused more on product innovation to capitalize on shifting consumer tastes. As consumers become increasingly environmentally conscious, major players have focused operations on the production of hybrid and compact cars. As a result, this product line has increased rapidly during the five-year period and is set to generate the greatest revenue moving forward. As operators continue to tailor-make vehicles to consumer desires, companies within the industry have also attempted to modernize equipment. Wage costs are higher in the United States compared with some foreign countries, making automation an appealing strategy to cut costs. However, offshoring is prevalent in the industry and is expected to negatively affect industry growth.

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Industry Performance

**Key External Drivers continued**

**Consumer Confidence Index**
People will generally postpone big-ticket purchases, such as new vehicles, when consumer confidence is low. For example, consumer confidence plummeted during the recession; consequently, the effects flowed upstream to automakers. The Consumer Confidence Index is expected to increase in 2018, representing a potential opportunity for industry operators.

**Yield on 10-year Treasury note**
The yield on the 10-year Treasury note is a proxy for, and analogous to, the interest rate set by the central bank. As the interest rate decreases, demand for cars rises because it costs consumers less to finance vehicle purchases. The yield on the 10-year Treasury note is expected to increase in 2018, posing a potential threat to the industry.

**World price of crude oil**
The price of gas represents a significant aspect of a vehicle’s running cost. The retail price of gasoline has grown rapidly, and this increase has led consumers to rethink their fuel consumption. Consequently, consumers have demanded smaller and more fuel-efficient vehicles, even though domestic automakers have historically focused on larger, less fuel-efficient cars. The world price of crude oil is expected to increase in 2018.

![Graph showing new car sales and trade-weighted index](source: www.ibisworld.com)
Industry Performance

Current Performance

Companies in the Car and Automobile Manufacturing industry produce midsize and large sedans, compact and subcompact passenger cars and luxury vehicles. Over the five years to 2018, the performance of the automotive sector has been strong, largely due to upward trends of key macroeconomic indicators. Since 2013, rises in employment, disposable income and the stock market have helped foster a generally positive perception of the strength of the US economy. This perception has also been boosted by falling fuel prices over the five years to 2018. As a result, the Consumer Confidence Index has been strong throughout the period. Increased consumer sentiment was further assisted by historically low interest rates. With rates staying low for much of the period, increased financing options and access to credit encouraged consumers to spend money on big-ticket discretionary items such as automobiles. In turn, more Americans purchased vehicles.

However, most vehicles purchased have been SUVs, light trucks and recently popular crossovers. Declining oil prices have helped shift consumer preferences away from compact cars and sedans. As demand for industry-specific vehicles declined, manufacturers began to alter production schedules. Domestic automakers began focusing higher percentages of production on trucks, neglecting cars. Over the five years to 2018, every major domestic automaker has reduced sedans and compact cars’ share of their overall vehicle production. In 2017, Fiat Chrysler Automobiles NV (Fiat Chrysler) exited the industry entirely, opting to utilize all US manufacturing plants for light trucks and sport utility vehicles (SUVs). In 2018, Ford Motor Company (Ford) announced further restructuring of operations away from sedans, while General Motors Company (GM) announced the closure of five plants used to produce industry relevant vehicles. Overall, IBISWorld estimates industry revenue to decrease at an annualized rate of 2.9% to $107.5 billion over the five years to 2018. This sharp decline is likely the result of rising interest rates, as well as recent plant closures and announced restructuring from major automakers.

Fuel prices and consumer preference

Fuel prices have a particularly complex relationship with the Car and Automobile Manufacturing industry. Over the five years to 2018, the world price of crude oil has drastically decreased, falling an annualized 8.4%. High gasoline prices are often detrimental to industry operators; if consumers consider fuel prices to be too high, they may be more likely to seek alternative forms of transportation. These alternative options include public transportation, bicycles, walking and ride-sharing, each of which reduces demand for vehicles. The sharp decline in fuel prices during the five-year period has helped consumers view cars as more affordable, boosting overall demand. Furthermore, lower prices...
Fuel prices and consumer preference continued

at the pump also help to boost consumer sentiment. Overall, lower fuel prices increase general demand for automobiles, benefiting the sector at large.

However, while low gasoline prices generally aid industry operators, they may also shift consumer tastes in a negative way. When gasoline prices are high, as they were in the early years of the period, consumers tend to opt for smaller, more fuel-efficient compact cars and sedans compared with gas guzzling vans and trucks. Companies such as Toyota Motor Corp. (Toyota) were well-poised to benefit from this trend because of their focus on compact vehicles. Other companies, such as the Big Three (GM, Ford and Fiat Chrysler), failed to adapt to the trend and remained focused on their core products: pick-up trucks and SUVs. However, when fuel prices decline, American consumers are more inclined to purchase trucks, vans and SUVs, products that fall outside of the industry. This relationship between consumer tastes and fuel prices drastically hurt industry revenue. Fiat Chrysler eventually would exit the industry entirely, while Ford and GM are rapidly working to restructure to satisfy consumer preferences. This development has been damaging to the industry overall.

Restructuring

The world price of steel has risen at an annualized rate of 2.9% during the period. Since steel is the single largest input for operators, increasing steel prices are harmful to profit margins. This industry is extremely competitive, and products are highly differentiated, meaning increases in raw material prices generally cannot be passed along to consumers through price increases. Despite improved productivity, profit margins for this industry, measured as earnings before interest and taxes, have fallen from 4.1% of revenue in 2013 to 3.8% in 2018.

Many industry operators have taken steps to reduce costs and streamline processes. American producers such as GM and Fiat Chrysler have historically been less efficient than their foreign counterparts because the industry is heavily influenced by union labor. A significant proportion of workers belong to the United Automobile Workers (UAW) union, and these workers have relatively high wages for the Manufacturing sector, with the average wage in 2018 expected to exceed $77,000. In addition, these workers carry substantial bargaining power, which has led to numerous work stoppages.

Operators have made a concerted effort to reduce wages and improve efficiency

Over the five years to 2018, operators have made a concerted effort to reduce wages and improve efficiency. The same is true for foreign manufacturers with facilities in the United States. Nevertheless, to keep up with product innovations and advancements, many automakers are increasingly investing in research and development and automation. Plant closures have also occurred over the past five years. Many operators have moved vehicle production to Canada, Mexico and other foreign nations in an effort to lower costs. In 2017, Fiat Chrysler exited the industry entirely, either closing car producing plants or converting them to light-truck production. Meanwhile, other automakers are working to restructure operations to better meet consumer preference. GM announced that in 2019 it plans to close five plants that produce industry-relevant vehicles. This comes on
Industry Performance

Restructuring continued

Trade is an integral part of the Car and Automobile Manufacturing industry. In 2018, industry operators generated 40.1% of revenue from exporting their product lines overseas. US automakers ship their products globally, but most industry exports are destined for Canada, China, Germany and Mexico. While exports are an important source of income for industry operators, they have been in decline during the five-year period. This has mainly been the result of a strengthening US dollar. The value of the US dollar, as measured by the trade-weighted index (TWI), is expected to have risen at an annualized rate of 1.4% over the five years to 2018. As the dollar appreciates, dollar-denominated exports become more expensive and therefore less appealing on international markets. As a result, total industry exports are expected to decrease at an annualized rate of 2.1% to $43.2 billion over the five years to 2018.

Meanwhile, imports, which comprise an estimated 73.5% of cars sold in the United States, have grown at a moderate pace. Over the five years to 2018, the value of industry imports has increased at an annualized rate of 1.3% to $178.5 billion. Import penetration has increased since 2013 as offshoring activity has increased. Most foreign automobiles are sourced from Japan, which is the home of the largest auto producer, Toyota, along with Nissan Motor Company Ltd. and Honda Motor Company Ltd.; Japan accounts for 24.2% of industry imports. The second-most imported automobiles come from Canada due to its proximity and favorable trade agreements. Many US-based manufacturers have operations in Canada and share components across the border. Meanwhile, imports from Mexico have increased the most of any country, growing an annualized 11.2% over the five years to 2018. Most outsourced operations have been moved to Mexico due to the country’s proximity, its relatively cheap labor force and similar trade advantages as Canada. These combined factors make Mexico a perfect outsource destination for the industry.

Global landscape

Restructuring continued
Industry Performance

Fuel prices and regulations

Rising fuel prices are also set to hurt the industry as a whole moving forward. When fuel prices rise, consumers are incentivized to use alternate forms of transport, discouraging them from purchasing new vehicles. Moreover, increased gas and oil prices put a damper on consumer confidence and generally discourage vehicle purchases. However, this anticipated increase in gasoline prices during the five-year period may encourage consumers to opt for smaller, more fuel-efficient passenger vehicles and sedans, rather than SUVs, vans and trucks. Over the five years to 2023, the world price of crude oil is expected to increase at an annualized rate of 2.8%. Despite concerted efforts to enhance fuel efficiency, the gas mileage of trucks and SUVs will remain generally inferior to that of sedans and compact vehicles. The impact of fuel prices on consumer tastes may marginally help industry operators moving forward.

Corporate Average Fuel Economy (CAFE) requirements set by the Obama administration in July 2011 were set to encourage automakers to restructure their vehicle product lines to meet the industry-standard average fuel economy of 54.5 miles per gallon (mpg) by 2025 for all industry goods. However, the Trump administration recently froze CAFE requirements at 2020 levels, making the standard 37.0 mpg. The plan sets fuel-efficiency standards to improve in annual increments. Though automakers will incur higher production costs in meeting these goals, updated standards also offer opportunities for further growth in sales of the industry’s fuel-efficient product line. In recent years, consumers have favored hybrid and fuel-efficient compact and subcompact models, which will likely continue to drive demand for fuel-efficient vehicles over the next five years. Furthermore, the recent reduction in regulations may help operators reduce costs.

Over the five years to 2023, the Car and Automobile Manufacturing industry is set to continue its decline at an annualized rate of 3.1% to $92.1 billion. This sustained slowdown will most likely be the result of the reversing trends of key macroeconomic industry conditions. For example, the national unemployment rate, which decreased significantly during the previous period, is set to grow an annualized 1.5% over the five years to 2023. Furthermore, rising interest rates are expected to hinder industry performance. While the Federal Reserve (the Fed) has already begun to tighten its monetary policy, this trend is expected to accelerate over the five years to 2023. As inflationary concerns reassert themselves during the latter half of the coming five-year period, the Fed will be incentivized to speed up its selling of treasury bonds, increasing interest rates. As interest rates rise, consumers will be further incentivized to save money rather than spend it as borrowing costs increase and access to credit is limited. All in all, these trends are expected to lead to a decrease in consumer confidence, which is expected to decline an annualized 2.4% during the five-year period to 2023. As confidence in the economy declines, consumers will be less likely to purchase big-ticket goods such as vehicles, resulting in dissipated industry demand.

Rising fuel prices are set to hurt the industry moving forward
Industry Performance

Costs and capacity
Declining demand is expected to hinder industry profit margins moving forward. This downward pressure on industry profitability is only expected to intensify as operators continue to focus on light trucks and crossovers, as opposed to industry-relevant vehicles. As demand weakens and profit falls over the five years to 2023, companies are anticipated to attempt to take further advantage of improved manufacturing capacity. Production schedules for automakers enable quick responses to demand shifts, as the actual assembly process takes less than 20.0 hours depending on factory size. This increased focus on innovation and production efficiency is expected to lead to a reduced need for labor. Furthermore, recently announced car manufacturing plant closings are expected to take place during the outlook period. Automakers have made it clear that they expect consumer preference to continue shifting toward light trucks as opposed to cars. As key OEMs continue to shift production away from industry vehicles over the coming years, overall industry operations are expected to decline. As a result, industry employment is forecast to decrease at an annualized rate of 2.2% to 63,862 workers over the five years to 2023. Additionally, industry establishments are anticipated to decrease an annualized 1.9% to 156 during the same period.

Trade and threats
Over the five years to 2023, global trade of industry products is expected is also expected to reverse course. The trade-weighted index is anticipated to decline an annualized 0.2% during the coming five-year period. As the dollar weakens, industry goods made abroad will become relatively more expensive to the American consumer. As a result, IBISWorld expects the value of exports to increase an annualized 0.5% to $44.2 billion over the next five years. The depreciation of the US dollar and the weakening of consumer confidence are expected to hinder industry imports, which are anticipated to decline to $170.4 billion at an annualized rate of 0.9% during the five-year period.

While these developments should help industry operators, uncertainty surrounding trade policies may disrupt this opportunity. The current administration is considering the possibility of placing tariffs on foreign vehicles. If implemented, this will likely cause sharp retaliatory tariffs that could disrupt international trade for the entire industry. Furthermore, the high concentration of trade within the industry to Canada and Mexico make the future of NAFTA (the North American Free Trade Agreement) particularly important to industry operators. The principals of NAFTA have created an easy-to-deliver export destination for industry products. Industry goods such as midsize, large and luxury cars can be expensive to ship due to the size and weight of such products, making the ease of conducting trade with Canada and Mexico integral to the strength of trade revenue for the industry. Fortunately, if approved by congress, the recently signed United States-Mexico-Canada Agreement (USMCA) is expected to keep intact most of NAFTA’s industry-relevant principles.
Industry Performance

The market for midsized and oversized cars has been contracting.

Industry operators have improved production efficiency.

There is consolidation of products and brands.

Life Cycle Stage

Key Considerations:
An industry’s life cycle stage is determined by multiple factors, such as IVA vs. GDP performance and establishment growth. However, other key factors must also be considered. For more information, please refer to the Industry Life Cycle section analysis.

Maturity
Company consolidation; level of economic importance stable

Quality Growth
High growth in economic importance; weaker companies close down; developed technology and markets

Quantity Growth
Many new companies; minor growth in economic importance; substantial technology change

Decline
Shrinking economic importance

Source: www.ibisworld.com
Industry Performance

Industry Life Cycle

Having endured the tumultuous previous period and now improving in the aftermath, the Car and Automobile Manufacturing industry is in the mature stage of its life cycle. Industry value added (IVA), or the measure of the industry’s contribution to the overall economy, is expected to decrease at an annualized rate of 3.9% over the 10 years to 2023. Comparatively, US GDP is growing at an estimated annualized rate of 2.1% during the same period. While IVA is expected to grow at a slower rate than of the overall economy, this industry is firmly in the mature stage of its life cycle due to the wide acceptance of the industry’s products.

Industry output has decreased despite overall economic improvements and rising consumer confidence. Old stalwarts of the industry, such as compact vehicles and midsize sedans, have done poorly in light of shifting consumer preference. However, new vehicle options are also being introduced to meet consumers’ changing preferences. Industry operators are constantly evolving product lines to match regulatory requirements including those related to fuel efficiency. When coupled with brand consolidation, the result is a phasing out of many inefficient vehicles as businesses restructure to meet consumer preference.

Furthermore, automakers are looking toward development of automated technological operating processes that will help cut costs and make manufacturing more efficient. The prominence of hybrid and hybrid-electric vehicles on the market is growing and will continue to do so through 2023. Many of the technological changes in this industry have been made in an effort to ease operating costs. In doing so, automakers are expected to improve efficiency of their production plants, while also enhancing profitability. Moreover, higher gas prices over the next five years poses an opportunity for the industry, as consumers may shift preference back to cars from SUVs and other light trucks.

Another indicator that this industry is mature is the decline in establishment numbers during the period. Over the 10 years to 2023, the number of industry locations is expected to decrease at an annualized rate of just 1.0%. This indicates consolidation for the industry. At the same time, downstream markets are mostly established and product segmentation is relatively well-defined. Some sub-categories may emerge during the period, but product offerings will remain largely unchanged.
To address consumers’ changing preferences over the five years to 2018, operators in the Car and Automobile Manufacturing industry have been improving their product portfolios. Fuel efficiency has become a top design concern for manufacturers, with more car models featuring hybrid-electric drivetrains, smaller forced-induction engines and more advanced transmissions, delivering fuel economy gains.

**Midsize sedans**
Midsize sedans are the mainstay of the industry. Over the past 20 years, midsize and compact car sales have gained market share over full-size cars as consumer preferences changed. Demand for this segment was supported by high gas prices in the early part of the five-year period, which prompted consumers to prefer midsize, more fuel-efficient cars rather than large cars or SUVs. Midsize cars offer better fuel efficiency than full-size vehicles without sacrificing too much cargo or passenger room. Midsize vehicles on sale today include the Ford Fusion, Chevrolet Malibu, Dodge Charger and the Toyota Camry, which was named the best-selling car of 2016. In addition, hybrid-electric drivetrains are now commonly available as an upgrade option for midsize cars up...
from just a few models five years ago. However, this segment has slightly declined, as consumers become increasingly fond of crossover vehicles, which are sport utility vehicles built on car-based platforms. Moreover, in response to volatile oil prices, compact and subcompact cars are becoming a more popular option in recent years.

**Compact and subcompact cars**
Compact and subcompact cars offer exceptional fuel economy, but offer limited legroom and smaller engine options. Most cars in this segment come with four-cylinder engines, although six-cylinder V6s are available as well. Compact cars on sale today include the Ford Focus, Chevrolet Cruze and Toyota Corolla. Subcompact cars on sale today include the Ford Fiesta, Chevrolet Sonic (formerly Aveo), Hyundai Accent and the Toyota Yaris. This segment has expanded rapidly over the past five years thanks to the incorporation of high-efficiency engines with superior fuel efficiency. Furthermore, industry operators have shifted operations to focus on the innovation and production of such vehicles to capitalize on consumers increased environmental concerns, as well as to get ahead of emission regulations. This product line is likely to surpass midsize sedans in terms of revenue generation in the upcoming years.

**Luxury cars**
Unlike the other product segments of this industry, luxury cars can range in size from subcompacts to full-size cars. Some automakers specialize in luxury cars, most notably BMW and Mercedes-Benz. All other automakers produce their luxury cars with significant parts sharing from similar mass-market models. For example, the Ford Fusion shares its chassis and many drivetrain components with the luxury Lincoln MKZ. Luxury cars on sale today include the Cadillac CTS, BMW 528i and the Lexus GS 350. This segment also includes sports cars. Sports cars feature larger performance engines and stiffer suspensions than other cars, emphasizing an entertaining driving experience. This segment has increased as a percentage of revenue over the past five years, as income levels has increased.

**Large cars**
Large cars are similar to midsize cars, though they are generally longer and offer more legroom. Due to the similarity of this segment to the more
Products & Markets

Products & Services continued

Popular midsize category, it has declined over the five years to 2018. This is mainly due to high oil prices for much of the period, as well as the growing popularity of so-called “crossover” vehicles, which do not fall with the scope of this industry. Crossover vehicles have increasingly supplanted large cars, as they offer similar or better passenger and storage space with the added benefit of a high driving position. This has limited the appeal of large cars over the past five years. Full-size vehicles on sale today include the Ford Taurus, Chevrolet Impala, Chrysler 300 and the Toyota Avalon.

Demand Determinants

Traditionally, motor vehicle prices were considered the most significant factor in deciding whether or not to buy a new car. Now, the focus has turned to the costs of running a vehicle as well as its effect on the environment. Price still plays an important role, particularly the cost to finance a vehicle. As interest rates remain low, consumers have an added incentive to finance big-ticket items such as cars. Consumer sentiment also plays an important role in determining significant consumer investments, such as a house or a car. When consumers are optimistic about their financial position, they are more likely to spend their income. During recessions, households are pessimistic about the future and tend to tighten their belts and postpone unnecessary expenses until times are better. Demand for motor vehicles is also highly dependent on population growth because individuals make up the majority of car and automobile users. Demand for cars and automobiles rises when population, particularly above the driving age, grows.

Fuel prices also have an effect on demand for vehicles, as lower prices at the pump encourage more people to invest in personal or family cars. However, lower fuel prices may also encourage some car buyers to consider SUVs or light trucks, which are not part of this industry. This means fuel prices have a mixed effect on demand, though overall, declining fuel prices tend to benefit sales. At the same time, the environmental benefits of higher fuel-economy vehicles can push some buyers toward smaller and more economical options, or vehicles with hybrid drives. The importance of this feature has climbed substantially over the past five years.

Major Markets

Operators in the Car and Automobile Manufacturing industry use a variety of distribution channels to sell their vehicles to the public. Car dealerships and wholesalers sell vehicles primarily to consumers and businesses. Exports account for over a third industry revenue about 40.0% of exported industry goods destined for fellow NAFTA members, Canada and Mexico. Leasing companies and government agencies also make up integral markets for industry operators.

Wholesalers

Wholesalers are the largest market segment of this industry and expected to account for 30.3% of industry revenue in 2018. Wholesalers buy large volumes of identical vehicles from automakers. They then sell vehicle fleets to businesses such as taxi services, rental
Major Markets continued

Companies and dealerships. Demand from wholesalers is driven by business investment and gasoline prices. Dealerships buy vehicles from wholesalers to supplement inventories; wholesalers provide faster delivery than directly purchasing from automakers. While most cars are eventually sold through a car dealership, car dealers do not order their entire inventory directly from the manufacturer because of long delivery times and uncertain demand for specific models.

**Exports**
A significant portion of vehicles produced in the United States are shipped abroad. Global automakers tend to produce distinct vehicle lines or vehicle types in different factories throughout the world. However, demand for different types of vehicles is fairly geographically dispersed. This means exports are an important part of the industry, and estimated to account for 40.1% of revenue in 2018. This has decreased since 2013. As the dollar appreciates, US-made vehicles become less attractive on international markets. Over the past five years, the US dollar has increased in value, contributing to the decline in exports as a percentage of revenue.

**Automobile dealerships**
Automobile dealerships are expected to directly purchase 20.0% of this industry’s products in 2018. Dealers sell the clear majority of their vehicles directly to consumers. New car dealerships share of revenue is expected to trend higher over the five years to 2018, bolstered by low interest rates. As interest rates remain at historically low levels, consumers are more apt to finance new vehicle purchases, lifting this segment’s share of overall revenue higher.

**Leasing companies and the government**
Government agencies, including local and federal law enforcement, directly purchase 1.8% of all light trucks and SUVS. Vehicle leasing companies, including automaker subsidiaries and independent companies, lease vehicles to consumers and businesses used as either commercial vehicles or rentals for day to day use. These companies typically purchase their fleet either directly from automakers or from independent wholesalers. Overall these companies are expected to account for an estimated 7.8% of industry revenue in 2018.
International Trade

International trade is a very important aspect of the Car and Automobile Manufacturing industry. In 2018, imports are expected to satisfy 73.5% of domestic demand for automobiles, while exports are expected to generate 40.1% of industry revenue. The United States is one of the largest vehicle marketplaces in the world, as well as home to some of the largest global automakers. Since 1993, trade-flow patterns of cars through the United States have grown increasingly complex because of the elimination of trade barriers under the North American Free Trade Agreement (NAFTA). NAFTA makes it easier for automakers to run their North American operations as if their supply chains did not cross borders; it is common practice for cars destined for sale in the United States to be assembled in Mexico or Canada from US-produced components. This practice tends to inflate import and export statistics between the United States, Mexico and Canada.

Imports

In 2018, Canada, Japan, Germany and Mexico are expected to be the four main sources for US imports. The prevalence of imports from Canada (21.2%) and Mexico (19.3%) is primarily due to the incentives outlined in the NAFTA treaty. US-based manufacturers are not the only automakers that target the US market with vehicles in Canada and Mexico. Locating assembly plants in Mexico helps automakers reduce labor costs, since the US automotive manufacturing labor force is highly unionized by the United Automobile Workers (UAW) union. Imports from Japan (24.2%) and Germany (11.3%) generally rise and fall along with the performance of their largest automakers. Japan’s largest automakers with a US presence are Toyota Motor Corporation, Honda Motor Co. Ltd. and Nissan Motor Company Ltd.

Exports

In 2018, the four main destinations of automobile exports are Canada (34.1%), China (14.4%), Germany (12.3%) and Mexico (6.0%). As with imports, Canada’s dominance in exports is primarily due to the NAFTA treaty. The bulk of US automaker’s manufacturing capacity is in the Great Lakes region, on both the US and Canadian sides of the border. China and Mexico are also both rapidly growing export markets for US-made automobiles. China’s rise in the automobile marketplace is due to its rapidly growing affluence, which is radically changing life styles and the standard of living in the country. This also makes the strength of the Chinese economy a key determinant of overall industry trends. Overall, industry imports are expected to rise at an annualized rate of 1.3% over the five years to 2018, to reach $178.5 billion.

Germany’s largest automakers with a US presence are Volkswagen, Daimler and BMW. Overall, industry imports are expected to rise at an annualized rate of 1.3% over the five years to 2018, to reach $178.5 billion.
less desirable. Therefore, over the five years to 2018, demand for foreign-made vehicles was high.

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<th>Exports To...</th>
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<tr>
<td><strong>Year: 2018</strong></td>
<td><strong>Total $178.5bn</strong></td>
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<tr>
<td><strong>34.1%</strong> Canada</td>
<td><strong>11.3%</strong> Germany</td>
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<tr>
<td><strong>19.3%</strong> Mexico</td>
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<tr>
<td><strong>24.0%</strong> Canada</td>
<td></td>
</tr>
<tr>
<td><strong>24.0%</strong> Other</td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: USITC
Products & Markets

Business Locations 2018

Additional States (as marked on map)

1 VT 0.0 2 NH 0.5 3 MA 1.1 4 RI 0.0
5 CT 0.0 6 NJ 1.6 7 DE 0.5 8 MD 0.0 9 DC 0.0

Establishments (%)

- Less than 3%
- 3% to less than 10%
- 10% to less than 20%
- 20% or more

SOURCE: WWW.IBISWORLD.COM
The largest proportion of establishments for the Car and Automobile Manufacturing industry are located in the Great Lakes area, with 32.6% of total facilities: General Motors in Detroit; Ford in Dearborn, MI; and Chrysler in Auburn Hills, MI. These three companies are often referred to as the Big Three, or the Detroit Three. The recession wreaked havoc on the Big Three, forcing GM and Chrysler into bankruptcy and Ford to make drastic cutbacks. Consequently, these companies closed several plants as these companies restructured themselves out of loss-making performances. However, the number of establishments in the region has improved in recent years as the Big Three companies recover, boosted by strong financial performances.

The second automotive hub in the United States is the Southeast region which holds holding 22.3% of industry locations. This region is mainly home to Japanese manufacturers. Toyota’s manufacturing plants are mainly located in Alabama, Kentucky and West Virginia; Honda is based in Alabama; and Nissan is in Tennessee. The Southeast region’s importance in the Car and Automobile Manufacturing industry has been growing along with its automakers. Addition, this region is home to the largest segment of the US population, at 25.7%.

The West Region also plays a significant role in the industry, holding 19.6% of industry establishments. Many automakers have joint ventures and plants in California due to the facilities, such as skilled labor and transport advantages, provided by being close to a manufacturing hub. California alone holds 16.8% of industry establishments, the most of any state. The smaller Japanese and South Korean companies, namely Mazda, Isuzu, Mitsubishi, Suzuki, Kia and Hyundai, also have headquarters in Southern California. NUMMI, a joint venture between GM and Toyota, is located in California and was shut down in the previous period. NUMMI has since been purchased by electric car startup Tesla Motors and began production of the Tesla Model S sedan in late 2011.

The three automotive hub regions are expected to gain greater concentration in the future, as domestic demand for new vehicles continues to trend higher. They are expected to be located in those three main regions. However, many industry operators are expected to expand in other countries, which may hinder domestic expansion. For example, industry operators that establish a presence in Mexico are able to benefit from lower labor costs.
Competitive Landscape

Market Share Concentration

The Car and Automobile Manufacturing industry has moderate market share concentration, with the top four companies accounting for an estimated 43.4% market share in 2018. Generally, industry market share falls between 35.0% and 45.0% of industry output. IBISWorld expects the market share winners over the five years to 2023 will be the companies that can most effectively balance affordability, technological advancement (particularly with engines and entertainment) and attractive vehicle styling. Furthermore, the companies that are able to find the appropriate balance of car and sedan production when these types of vehicles are losing favorability amongst consumers. Industry concentration has declined since the start of the period primarily due to Fiat Chrysler Automobiles NV (Fiat Chrysler) exiting the industry. In 2016, Fiat Chrysler announced it would no longer produce cars and sedans in the United States, instead focusing solely on SUVs, light trucks and crossovers.

Key Success Factors

**Strong supply chain links**
Close relationships with suppliers and good distribution channels are important. Manufacturers need to be able to access parts on a timely basis to ensure the smooth flow of production. Good distribution channels are needed to minimize supply chain costs.

**Establishment of export markets**
Development of export markets is crucial in an industry where the domestic demand is shrinking.

**Access to the latest available and most efficient technology and techniques**
The degree of investment in technological improvements and product development is important. In the current environment, the development of fuel-efficient, hybrid and alternative-fuel vehicles is crucial for competitive purposes.

**Use of most efficient work practices**
Good industrial relations through a motivated workforce ensure the smooth running of a production plant. Work stoppages can be costly to automakers and good industrial relations can hedge manufacturers against that type of risk.

**Optimum capacity utilization**
Idle plants are costly. Maximizing capacity utilization is an important cost advantage.

**Ability to negotiate with workers’ union**
The workers’ union has strong bargaining power, which can lead to work stoppage and higher labor costs.

Cost Structure Benchmarks

**Profit**
In 2018, the average operator in the Car and Automobile Manufacturing industry is expected to generate profit, measured as earnings before interest and taxes, of 3.6% of revenue. While a combination of improved economic conditions, specifically credit access and consumer confidence, has helped boost industry revenue, margins within the industry have been hindered during the five-year period, falling from 4.1% of revenue in 2013. This decline can be attributed to wages rising share of revenue as well as increasing input prices. Unionization has helped labor receive a higher share of revenue while the industry generates a larger revenue stream. Meanwhile, the world price of steel and aluminum, two key metal inputs for industry operators,
have increased at annualized rates of 2.9% and 2.5% respectively over the five-year period. Furthermore, margins in this industry are slim compared with many others. Average returns for the SUV and Light Truck Manufacturing industry (IBISWorld report 33611b) are generally higher, so most manufacturers prefer to sell vehicles in that category rather than this one.

**Purchases**

Automobile manufacturing requires a large array of components, ranging from engines and transmissions to radiators and electronics, from parts suppliers. Generally, companies in this industry perform the final assembly and design of vehicles; as a result, purchases account for the majority of industry costs at 78.8% in 2018. Companies contain cost fluctuations by purchasing parts under contract with suppliers, which usually include provisions mandating annual price decreases. Automakers typically have very long-term relationships and contracts with a handful of large automotive suppliers. This helps these companies keep purchases share of revenue relatively stable. However, the further anticipated increase of the price of steel is expected to enhance purchases share of revenue moving forward.

**Wages**

Wages make up the next-largest component of this industry’s cost structure, consuming roughly 5.1% of revenue in 2018. The three domestic automakers have struggled to maintain profitability under very expensive labor union contracts, which include defined-benefit pensions and limits to operators’ ability to fire union workers; average wages tend to be highly inflated in this industry, at over $75,000.
Competitive Landscape

Basis of Competition

Internal
Operators in the Car and Automobile Manufacturing industry compete primarily on the basis of price, fuel economy, reliability, styling and utility. Business customers and consumers place different weights on each trait; businesses tend to emphasize utility and reliability, while consumers are more concerned with price and styling. Automakers periodically redesign a vehicle’s styling (typically every five years) but only occasionally change the vehicle’s mechanics. Recently redesigned cars typically sell in significantly higher volumes after the redesign, so automakers with a relatively fresh product lineup tend to outperform automakers that are lacking new vehicle styles. In some cases, a redesigned vehicle will actually sell worse than the outgoing model, which can be a disastrous outcome for an automaker that has invested large amounts of time and money in the new product.

Industry customers choose their vehicle purchases on the basis of price. Each car class (subcompact, compact, midsize and full-size) has a premium subcategory, resulting in a range of prices. For example, the midsize Ford Fusion sedan pricing starts at just over $20,000, while the midsize Lincoln MKZ pricing starts at $35,000.00, even though the vehicles are very similar. The two vehicles are marketed to different market segments, with the luxury sedan being differentiated based on more expensive interior materials (e.g. leather, natural wood) and styling.

Over the past five years, business customers and consumers have become increasingly concerned with fuel economy. Consumers have pushed manufacturers to offer more fuel-efficient drivetrain options. Ford is in the process of moving its entire vehicle lineup from traditional naturally aspirated engines to smaller forced-induction (i.e. turbo-charged) engines; the resulting vehicles have similar performance to outgoing naturally aspirated models but boast significantly higher fuel economy. Moreover, manufacturers are expanding their offerings of hybrid-electric, electric and clean diesel engines to improve fuel economy.

Cost Structure

Benchmarks continued

The long-term relationship between the automakers and the United Automobile Workers (UAW) union, which remains in question, will play a tremendous role in the future success of this industry. Manufacturers that continue signing labor contracts favoring the UAW will struggle to compete with nonunion manufacturers, which will be able to offer mass-market small cars with lower prices or higher quality than unionized competitors.

Other
Research and development (R&D) is expected to make up 3.7% of industry revenue. Auto manufacturers invest in R&D to engineer new technologies to obtain a competitive advantage. For example, Ford Motor Company (Ford) and General Motors Company (GM) are teaming up to jointly engineer a 9- and 10-speed transmission. With this new transmission, the two companies will be able to offer better fuel efficiency and compete with foreign operators. Additionally, Ford and GM will be able to save on R&D costs by working together.

Depreciation is expected to account for 2.3% of cost structure, which has fallen since 2013. Finally, rent and utilities and marketing are expected to account for 0.4% and 2.0% of cost structure, respectively.

Level & Trend

Competition in this industry is Medium and the trend is Increasing.

Provided to: University of Nevada, Las Vegas (2132071889) | 31 March 2019
Competitive Landscape

Barriers to Entry

With moderate concentration, a high level of capital requirements and rapid technological change, the Car and Automobile Manufacturing industry is extremely difficult for new entrants to break into. Generally, manufacturing cars is a capital-intensive enterprise requiring sophisticated manufacturing facilities and robust supply chains. Production facilities use specialized equipment and substantial floor space. In addition, prospective automakers need proprietary or licensed vehicle designs and an experienced workforce. Vehicles are made from thousands of separate parts, so sufficient volumes of reliable supplies typically require long-term contracts with several parts supply companies.

New industry entrants must comply with strict regulatory standards for safety and environmental concerns. These standards are subject to periodic revisions, which may require additional research and development. R&D expenses can be reduced by forming a partnership with an existing automaker, as many foreign manufacturers have done. In addition, partnerships can be used to secure design and branding intellectual property, which is of immense benefit. Brand awareness and image is a major factor for many buyers, and a significant barrier to entry for any new companies.

Barriers to Entry checklist

- Competition: Medium
- Concentration: Medium
- Life Cycle Stage: Mature
- Capital Intensity: High
- Technology Change: High
- Regulation and Policy: Medium
- Industry Assistance: High

SOURCE: WWW.IBISWORLD.COM

Basis of Competition continued

Reliability is a pervasive concern of all vehicle shoppers. These concerns were more pressing a decade ago when domestic automakers noticeably lagged behind Toyota and Honda in reliability. Enhanced quality control procedures and superior manufacturing equipment have since mitigated the disparity.

External

The industry’s primary external competitor is the SUV and Light Truck Manufacturing industry (IBISWorld report 33611b). Falling fuel prices tend to benefit sales of larger vehicles slightly more than sales of smaller and more efficient ones. As a result, declining fuel costs may have mixed effects on consumers’ vehicle preferences, especially as more SUVs and light trucks include forced-induction and hybrid drives. Moreover, SUVs and light trucks typically yield higher returns than smaller passenger vehicles, and may be more highly promoted by automakers.

In addition, this industry experiences substantial external competition from foreign manufacturers. Imports are estimated to account for almost three-quarters of domestic demand, putting increased pressure on US automakers. While the quality and range of automobiles produced by the domestic industry targets many downstream markets, foreign producers also provide desirable and affordable offerings. Additionally, many global manufacturers devote entire facilities to single vehicle lines, meaning they must export and import various models throughout the world to satisfy demand. Accordingly, the value of the US dollar, as measured by the trade-weighted index, plays a large role in international trade and import demand.
Globalization is a major force in the Car and Automobile Manufacturing industry. Toyota Motor Corporation, a Japanese based automaker holds the highest market concentration. Meanwhile, other foreign-owned companies such as Honda Motor Co. Ltd., Nissan Motor Company Ltd. and Volkswagen are key operators in the US market. At the same time, US-based automakers such as Ford Motor Company (Ford), General Motors Company (GM) and Fiat Chrysler Automobiles NV generate a large portion of their revenue from sales outside of the United States. Finding an efficient business model to operate in this globalized industry environment is a key aspect of any automaker’s success.

Since 2005, Ford has focused on this concern with its “One Ford” initiative, which streamlined vehicle design and platform sharing across Ford’s global operations, which helps the company save on manufacturing costs and leverage its size. Prior to the “One Ford” initiative, Ford models in Europe and the US would routinely have different styling, chassis platforms and engines, even for similarly sized vehicles. The 2011 Ford Focus was the first modern Ford that is synchronized between United States and European models, though the European model still has more engine options than the US model (due to European regulatory structures that favor diesels over gasoline engines).

GM, the largest US-based automaker, has had a successful joint venture in China since 1997. GM’s China joint venture is with Shanghai Automotive Industry Corporation (SAIC), one of the five largest automakers in China. Under the joint venture, SAIC manufacturers Chevrolet, Buick and Cadillac vehicles for the Chinese market. The joint venture’s design department is playing an increasingly prominent role in GM’s global design following GM’s 2009 bankruptcy, primarily due to the breakout success of Buick designs in China. The 2011 Buick Regal and Lacrosse designs came out of that joint venture.

International trade is also a major component of this industry. Exports are expected to generate 40.0% of revenue in 2018, an increase from 38.6% in 2013. Imports are estimated to fulfill 73.8% of domestic demand. This obviously puts immense pressure on domestic producers to compete against foreign offerings on both price and quality. In turn, the value of the US dollar, as determined by the trade-weighted index, has a significant effect on import penetration as well as export volume. As the dollar appreciates, imported vehicles become less expensive to domestic buyers, while exported goods become more expensive and less appealing on domestic markets. Despite this, recent protectionist US trade policies call into question the long-term globalization level of the industry. The potential for future tariffs on automobiles may weaken industry globalization going forward. Nonetheless, if approved by Congress, the recently signed United States-Mexico-Canada Agreement (USMCA) should grant domestic automakers some assurance down the road.
International trade is a major determinant of an industry’s level of globalization. Exports offer growth opportunities for firms. However, there are legal, economic, and political risks associated with dealing in foreign countries. Import competition can bring a greater risk for companies as foreign producers satisfy domestic demand that local firms would otherwise supply.

SOURCE: WWW.IBISWORLD.COM
Player Performance

Toyota Motor Corporation (Toyota) is headquartered in Japan, and its North American operations are based in Torrance, CA. Toyota employs more than 364,445 workers in its 67 manufacturing facilities across the globe, and the company’s vehicles are sold in more than 170 countries. For fiscal 2017 (year-end March), Toyota generated $246.1 billion in global revenue through all of its operating segments. The company has long had a strong presence in the United States, and was named the world’s largest automaker in 2015, while coming in second place in 2016. While the company originated in Japan, Toyota is currently the largest producer of passenger cars in the United States.

Although Toyota has performed well in the United States over the past five years, its success has not come without drawbacks. Toyota endured its most significant operational complications over the past five years, following the Great East Japan Earthquake during the previous period. The damage caused production to halt at most of the company’s Japanese plants and created a parts shortage that spread across its global network of production facilities. Furthermore, the company has been plagued by vehicle recalls, recalling more than 1.0 million vehicles in the spring of 2017.

The Toyota Prius, first launched in Japan in 1997, was the first mass-produced hybrid gasoline-electric car and has been a major success for Toyota. Toyota now uses its signature Hybrid Synergy Drive (HSD) technology in some of its cars and SUVs as an option, as well as limited licensing arrangements such as Nissan’s Altima.

Toyota Motor Corporation (US industry-specific segment) - financial performance*

<table>
<thead>
<tr>
<th>Year**</th>
<th>Revenue ($ million)</th>
<th>(% change)</th>
<th>Operating Income ($ million)</th>
<th>(% change)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>22,435.9</td>
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<td>1,343.1</td>
<td>N/A</td>
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<tr>
<td>2016-17</td>
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<td>2,016.3</td>
<td>5.4</td>
</tr>
<tr>
<td>2017-18</td>
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<td>1,217.4</td>
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<tr>
<td>2018-19</td>
<td>16,154.5</td>
<td>-4.1</td>
<td>1,073.3</td>
<td>-11.8</td>
</tr>
</tbody>
</table>

*Estimates, **Year-end March

SOURCE: ANNUAL REPORT AND IBISWORLD
Major Companies

Player Performance continued

General Motors Company (GM), headquartered in Detroit, MI, is one of the world’s largest automakers. GM is one of the Big Three domestic automakers based in the Great Lakes region. GM operates manufacturing facilities and distribution networks in Europe, Asia, Africa, Australia, North America and South America. The company operates in 157 countries, employing about 180,000 people. Its most notable industry brands include Chevrolet, GMC, Buick and Cadillac. In 2017, GM generated $145.6 billion in revenue from its global operations (latest data available).

Financial performance
While the company experienced many ramifications from the earthquake, and economic difficulties from the previous period, Toyota was able to return to profitability in 2013. Toyota has managed to maintain its dominant status in the automotive market because of its commitment to new vehicle technology. Toyota is increasingly focusing on newer small passenger vehicles, as well as emphasizing fuel economy in its industry relevant vehicles, which will likely aid overall sales. The company has recently cemented itself as the largest producer of cars in the US due in part to the popularity of Toyota’s sedans in the US market. According to USA Today, the Toyota Camry and Corolla model cars were the second- and third-highest selling cars in the United States in 2017. However, Toyota’s industry-relevant sales are not expected to be immune to overall industry trends. Over the five years to fiscal 2018, Toyota’s industry-relevant revenue is expected to decrease at an annualized rate of 6.4% to $16.2 billion.

General Motors Company (US industry-specific segment) - financial performance*

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue ($ million)</th>
<th>(% change)</th>
<th>Operating Income ($ million)</th>
<th>(% change)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>20,104.8</td>
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<td>16,134.4</td>
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<td>658.3</td>
<td>202.7</td>
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<td>17,892.4</td>
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<td>2017</td>
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<td>1,009.5</td>
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<tr>
<td>2018</td>
<td>12,283.5</td>
<td>-16.3</td>
<td>875.6</td>
<td>-13.3</td>
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</table>

*Estimates

SOURCE: ANNUAL REPORT AND IBISWORLD
Prior to the five-year period, GM filed for bankruptcy and experienced multibillion-dollar losses. The company’s bankruptcy led to restructuring that eliminated plant assets and workforce. With optimized production capacity and reduced labor costs, GM can now profitably produce small vehicles and increasingly fuel-efficient trucks.

To revamp its image and attract a new consumer base, GM has wagered on alternatively fueled vehicles advancing in the future. Just prior to the five-year period, the company started offering the Chevy Volt, which, unlike the Toyota Prius, is always supported by its electric motors. However, a small onboard gasoline engine acts as a generator to recharge the car’s lithium ion batteries when its charge is low, which lets the vehicle run more than 420.0 miles with a full charge and full tank of gas. In recent years, GM has experienced strong Volt sales, increasing 60.7% in 2016 alone. Due to strong demand, new technology is expected to be folded into other vehicles and platforms to enhance profitability. In addition to the Volt, GM introduced another electric vehicle in 2016, the Chevy Bolt. The Chevy Bolt includes an all-electric drive system and differs from the Volt because it does not use gasoline at all. The Bolt is expected to rival Tesla’s capabilities at an affordable price. GM has experienced strong Bolt sales in recent months; however, because the vehicle is so new, the ultimate success of the Bolt is still uncertain.

In November 2018, GM announced major restructuring plans which aims to shift further shift production focus to light trucks and electric vehicles. GM announced that it plans to idle five North American plants in 2019. The company is set to discontinue production of a variety of car models and lay off 14,000 workers or nearly 15.0% of the automaker’s salaried workforce. The company also announced its plans to eliminate 25.0% of its leadership team in an attempt to streamline decision making. GM will cease to produce vehicles such as the Chevrolet Cruze, the Cadillac CT6 and the Buick LaCrosse, which are all cars or sedans. The company is expected to further shift production to light trucks and SUVs, which should hurt the company’s industry-relevant revenue going forward.

Financial performance
Over the five years to 2018, revenue from GM’s US car and automobile manufacturing segment is expected to decrease at an annualized rate of 9.4% to $12.3 billion. First, the company has struggled to maintain a positive consumer image. In May 2014, the National Highway Traffic Safety Administration fined the company $35.0 million for failing to recall cars with malfunctioning ignitions, despite being aware of the problem. Although the fine will not significantly affect the company’s bottom line, it is anticipated to have a negative effect on its brand, which may deter sales moving forward. At the same time, sales of the company’s SUVs and light trucks have been the major driver of company growth. While GM is expected to release several more vehicles with alternate fuel engines or electric propulsion. Product innovation, as well affordable pricing, this has not been enough to bolster demand for passenger vehicles. Each year cars and sedans have made up less and less of company sales, decreasing from 38.3% in 2013 to an estimated 21.3% in 2018. As fuel prices have declined, consumer preference has shifted to SUVs and light trucks, incentivizing GM to focus operations on these high-margin vehicles.
Ford Motor Company (Ford) is an American automaker based in Dearborn, MI. Ford operates in the United States under the Ford and Lincoln brands, while also holding a small portion of Mazda in Japan and Aston Martin in the United Kingdom. The company operates 61 plants worldwide, employing about 202,000 people. Ford was the only one of America’s Big Three automakers that successfully endured the 2009 crisis without the assistance of a government bailout or filing for Chapter 11 bankruptcy protection. Since then, Ford has carried its momentum to solid growth while its peers General Motors and Chrysler continue to recover. In 2017, Ford’s Automotive Sector generated $145.7 billion in global revenue (latest data available).

By continuing its operations without resorting to bankruptcy or bailout, Ford has earned some goodwill from the American public. The company has been restructuring its business practices since the economic downturn, which put Ford in a better position when the recession occurred. The company’s “One Ford” initiative has the central goal of streamlining Ford’s global design and production by sharing designs, platforms and parts for Ford vehicles sold in different regions. Before the “One Ford” initiative, Ford Europe and Ford US would manufacture completely different vehicles for the same segment in their selected markets, which wasted design resources and failed to take advantage of purchasing power.

However, like its peers, Ford relied too heavily on trucks and SUVs throughout the past decade. This shift to SUV and truck production has been further encouraged by generally low and falling oil prices throughout the period. Underinvestment in smaller car designs led to significant lag before car sales could recover, even after the company decided to switch to a more car-focused model. The “One Ford” initiative put the company in a slightly better position than its competitors because Ford was already well on its way to bringing over cars such as the European-designed Ford Focus and Fiesta. Additionally, the Ford Focus was named the most sold vehicle in the world for 2013. More recently, Ford’s attention to the SUV and light-truck markets has benefited the company, though this revenue has come somewhat at the expense of its passenger car sales.

Ford, like almost every other major automaker, has made it clear that production will continue to refocus to

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**Ford Motor Company (US industry-specific segment) - financial performance**

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue ($ million)</th>
<th>(% change)</th>
<th>Operating Income ($ million)</th>
<th>(% change)</th>
</tr>
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<td>11,734.5</td>
<td>-10.4</td>
<td>431.8</td>
<td>30.8</td>
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</table>

*Estimates

SOURCE: ANNUAL REPORT AND IBISWORLD
Honda Motor Company Ltd. (Honda) is Japan’s second-largest automaker, as well as the world’s largest motorcycle manufacturer. The company is headquartered in Tokyo, Japan with its North American operations based in Torrance, CA. Honda currently employs about 208,000 people in its assembly plants in 15 different countries. In fiscal 2017 (year-end March), Honda generated $124.8 billion in global revenue from all of its operating segments.

Honda is noted for its unusually high spending on research and development, which is about 5.0% of revenue. Honda’s research efforts have resulted in major developments in robotics, jet-engine design and numerous automotive

### Financial performance

Over the five years to 2018, revenue from Ford’s US car and automobile manufacturing segment is expected to fall at an annualized rate of 8.6% to roughly $11.7 billion. The company’s industry relevant revenue has heavily relied on the success of its midsize Fusion, the compact Focus and the sporty Mustang. Over the past five years, Ford has maintained a relatively stable market share in the automobile industry. However, sales of the company’s SUVs and trucks generally do better than its passenger vehicles. Moreover, Ford has increased the number of SUVs and light trucks in its product portfolio in recent years and are expected to continue doing so moving forward, pressuring industry-relevant growth. Just five years ago, car sales made up over one-third of Ford’s company revenue. Today, that number is as low as 20.0%. Like other players, Ford’s industry-relevant revenue has suffered from declining consumer interest as the company has shifted production schedules to meet demand.

<table>
<thead>
<tr>
<th>Year**</th>
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<th>(% change)</th>
<th>Operating Income ($ million)</th>
<th>(% change)</th>
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<td>8.1</td>
<td>357.6</td>
<td>-0.6</td>
</tr>
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</table>

*Estimates, **Year-end March

SOURCE: ANNUAL REPORT AND IBISWORLD
Major Companies

**Tesla Inc.**

Founded in 2003, Tesla Inc. (Tesla) is an electric automaker headquartered in Palo Alto, CA, with over 13,000 employees. The company also manufacturers electric powertrain components for automakers, such as Daimler and Toyota. In 2017, Tesla reported revenue of $11.8 billion. Tesla has created a niche market with its all-electric Model S luxury vehicle. Although the company’s market share is minimal, sales are expected to trend upward as recharging stations become increasingly popular across the United States. The viability of electric vehicles has been heavily criticized due to the lack of current electric vehicle infrastructure, but the company is nonetheless expected to expand operations. Tesla is anticipated to generate $2.5 billion in revenue from its US car and automobile operations in 2018, which is expected to account for roughly 2.6% of total industry revenue.

**Nissan Motor Company Ltd.**

Nissan Motor Company Ltd. (Nissan) is one of Japan’s largest automakers and was founded in 1933. The company first came to the United States in 1958 and established Nissan Motor Corporation USA in 1960. Nissan operates in this industry under the Nissan and Infiniti brands, while also handling operations for its NISMO performance and motorsports divisions. Like other major automakers, Nissan has expanded operations in the United States and is continuously focusing on the introduction of fuel-efficient vehicles. IBISWorld estimates Nissan to generate $4.3 billion in industry-relevant revenue in 2018. The company holds five of its manufacturing plants in the United States. About 45.0% of Nissan’s sales are of industry-relevant vehicles.

**Honda Inc.**

Honda was one of the first automakers to mass-produce engines with variable valve timing, which can significantly increase an engine’s fuel efficiency or power output. Honda was also the first automaker to offer a hybrid vehicle, the 1999 to 2006 Honda Insight, but it did not achieve the commercial success of its rival, the Toyota Prius. In the United States, Honda sells vehicles under the Honda and Acura brands. Among driving enthusiasts, Honda has developed a reputation for excellence in engineering. Despite being known for its engine designs, Honda has never produced a V8 for passenger vehicles. In Japan, cars are taxed according to engine displacement, which encourages automakers to make smaller engines more powerful. Honda’s top-of-the-line engines are therefore V6 engines with variable valve timing.

**Financial performance**

Over the five years to fiscal 2018, Honda’s sales from its US cars and automobile manufacturing segment are expected to marginally increase at an annualized rate of 0.2% to $6.5 billion. During this period, fluctuations in currency exchange rates and increased demand for SUVs and trucks have negatively affected industry-relevant growth. In fiscal 2017, the company experienced low demand for passenger vehicles, specifically the Honda Accord, in the United States, which hampered growth. However, decreased competition within the industry has alleviated pressure on Honda car sales. Furthermore, the popularity of Honda car models such as the Civic has helped the company’s industry-relevant sales remain in slight growth throughout the period.
Major Companies

However, it is important to note that since all but one of Tesla’s manufacturing operations are located domestically, whereas other automakers have significant operations abroad, the company’s market share is slightly inflated.

Formerly Chrysler Group LLC (Chrysler), Fiat Chrysler Automobiles NV (Fiat Chrysler) was formed following Fiat’s acquisition of the Auburn Hills, MI-based automaker. Chrysler was the smallest of the Big Three domestic automakers, selling vehicles under the Chrysler, Dodge, Ram and Jeep brands. However, the company has traditionally been more dependent on light trucks and SUVs than Ford or General Motors. For example, Fiat Chrysler has planned a phaseout of the Chrysler 2000 and Dodge Dart to better meet market demand for pickup trucks and SUVs. In 2016, the company’s passenger vehicles accounted for roughly 30.0% of sales; however, that year, the company announced that it planned to cease manufacturing industry-relevant vehicles in the United States. In 2017, the company either closed all its US-based car manufacturing facilities or converted them to produce light trucks. Today, Fiat Chrysler does not generate any industry-relevant revenue.
Operating Conditions

Capital Intensity | Technology & Systems | Revenue Volatility
Regulation & Policy | Industry Assistance

Capital Intensity

Level
The level of capital intensity is **High**

The Car and Automobile Manufacturing industry’s assembly plants are highly automated production lines fitted with high-tech machinery and equipment. Companies in this industry must spend large sums on their plants and equipment, with periodic reinvestment in the case of equipment failure. For every $1.00 spent on labor, the average industry operator will invest nearly $0.45 in capital equipment. This is one of the most capital-intensive manufacturing industries, due to the complexity of automation machinery and the large capital investments needed to achieve economies of scale.

At the same time, this industry employs a substantial labor force. Although the ratio of capital investment to labor expenditure is quite high, wages account for a large portion of cost structure, at 5.1%. Margins are fairly

Tools of the Trade: Growth Strategies for Success

**New Age Economy**

*Recreation, Personal Services, Health and Education.* Firms benefit from personal wealth so stable macroeconomic conditions are imperative. Brand awareness and niche labor skills are key to product differentiation.

**Capital Intensive**

- SUV & Light Truck Manufacturing
- Truck & Bus Manufacturing
- Car & Automobile Manufacturing

**Labor Intensive**

- New Car Dealers
- Paint Manufacturing
- Automobile Wholesaling

**Traditional Service Economy**

*Wholesale and Retail.* Reliant on labor rather than capital to sell goods. Functions cannot be outsourced therefore firms must use new technology or improve staff training to increase revenue growth.

**Old Economy**

*Agriculture and Manufacturing.* Traded goods can be produced using cheap labor abroad. To expand firms must merge or acquire others to exploit economies of scale, or specialize in niche, high-value products.

Change in Share of the Economy

SOURCE: WWW.IBISWORLD.COM
Operating Conditions

Capital Intensity continued

narrow in this industry, meaning fluctuations in labor compensation rates have the potential to significantly affect profitability. For this reason, automation trends have increased over the five years to 2018.

Technology & Systems

Over the past five years, the Car and Automobile Manufacturing industry has displayed a high level of technological change, mostly in the form of lighter, more fuel-efficient sedans and coupes. On the actual manufacturing side, modern vehicle design processes make heavy use of computer-assisted design software, enabling an initial concept to be developed in days rather than months. The latest vehicle assembly plants are automated, with most labor performed by specially designed robotic arms. In December 2009, General Motors passed an industry milestone by announcing it would begin operating three of its assembly plants on a 24-hour basis. Traditionally, these factories operate with two eight-hour production shifts and one eight-hour resupply shift. GM plans to adjust its production processes to permit single stages of the assembly line to be re-supplied independently during production. With its position as the one of the top two largest automakers worldwide, GM can be a standard-bearer on this new production style.

The largest technological change in this industry’s products has been more widespread availability of green technologies. Each year, many automakers are reintroducing vehicle makes and platforms to include hybrid, diesel or electric versions. For example, GM introduced the Chevrolet Volt for model year 2013, the company’s flagship electric vehicle. The introduction of the Volt gave way for other electric vehicles in the United States such as the Nissan Leaf and the Ford Focus Electric. Additionally, the ever-expanding availability of hybrid and clean diesel vehicles has also seen new automakers dip into the green vehicle market with models like Volkswagen Passat Diesel and the Kia Optima Hybrid. Though success of electric vehicles is still uncertain, the increased production of all green vehicles shows a general trend that the industry is heading in.

Generally, automakers are heavily involved in the research and development of vehicle technologies, including electric, hybrid-electric and fuel cell vehicles. Cars and trucks are host to an ever-increasing array of electronic gadgets typically designed with a supply company. Spending on research is an important component of an automaker’s long-term business strategy. Automakers constantly race to innovate new technologies that improve the ease, cost or safety of driving. These technologies could change the industry when they become commercially viable.

Revenue Volatility

Over the five years to 2018, the Car and Automobile Manufacturing industry has exhibited a moderate level of revenue volatility. The type of new models introduced in a given period can influence sales trends dramatically. The introduction of new models with innovative features and styles gives consumers the incentive to upgrade cars more regularly. This is also applicable when complements, such as gasoline, are priced affordably. However, during periods of high gasoline prices, consumers tend to shy away from SUVs
Operators in the Car and Automobile Manufacturing industry are required to comply with government regulations regarding safety, fuel consumption and pollution control. Federal law requires that a manufacturer recall a vehicle if it finds a defect that “poses an unreasonable risk to safety.” The National Highway Traffic and Safety Administration (NHTSA) compiles complaints from consumers and can prod a manufacturer to recall a vehicle; this is a rare occurrence today, as automakers are keen to preemptively recall products. However, the NHTSA formalized a recall of vehicles using defective Takata airbag inflators in 2014, with efforts to replace the parts continuing through 2014. This recall represents the largest in US automotive history, and is expected to take over four years to complete. Though regulators are focused on the airbag supplier, automakers bear a substantial responsibility to rectify the issue. Buyback programs and civil penalties have driven up addition costs for US operators.

Since 2004, the NHTSA has ranked vehicles for risk of rollovers, using a percent-risk rating system. Light trucks and SUVs with a high center of gravity are the most prone to rollover. Since 2006, automakers have advertised vehicle safety ratings with stickers on new vehicles. All vehicle window stickers display the star ratings awarded by the NHTSA for frontal, side and rollover crash-safety test ratings.

**Chicken tax**
A 1963 law imposes a 25.0% tax on imported light trucks. The law was originally intended as retaliation to a

A higher level of revenue volatility implies greater industry risk. Volatility can negatively affect long-term strategic decisions, such as the time frame for capital investment. When a firm makes poor investment decisions it may face underutilized capacity if demand suddenly falls, or capacity constraints if it rises quickly.
Operating Conditions

Regulation & Policy
continued

European tax on US chicken imports, though the law has not been repealed since. The North American Free Trade Agreement created exemptions for Canada and Mexico, but complete trucks manufactured elsewhere are still subject to the tax. Manufacturers circumvent the tax by importing vehicles in nearly complete kits, known as complete knockdowns. These kits are shipped to US assembly facilities where workers reassemble the vehicle. In late November, President Trump floated the possibility of imposing a similar tax on imported cars in order to boost this vehicle types waning US production. It is yet to be seen whether anything will come from the President’s comment.

Emissions issues
Some 25.0% of greenhouse gases generated in the US were attributable to car and truck exhausts, attracting the interest of environmental groups and government agencies. In August 2004, California released its plan to reduce greenhouse gas emissions from cars and trucks by about 30.0% by requiring costly technology to control air pollution in new cars. The California Air Resources Board indicated that the initial phase from 2009 through 2012, the plan calls for regulation requiring technology to reduce emissions by about 25.0% for cars and light trucks, and by about 18.0% for larger trucks and sport-utility vehicles. When it is fully implemented by 2018, the recommended regulation would reduce emissions by up to 34% for cars and light trucks and by 25% for larger vehicles. California accounts for about 14.0% of the US auto market.

In April 2007, the US Supreme Court ruled that the Environmental Protection Agency has the authority to regulate vehicle emissions that are contributing to global warming. The decision is seen to have far-reaching consequences for the automobile sector, which had supported the Bush administration’s argument that the EPA did not have the right to regulate tailpipe emissions under the Clean Air Act. Automakers were worried that the EPA would push for more drastic emissions standards with their expanded power. When emissions regulations change, automakers must invest into new technology, which affects costs significantly. Technological innovations also come at the cost of profit, as automakers find it challenging to manufacture vehicles fitted with new technology without taking losses.

Fuel economy
In early April 2003, the National Highway Traffic Safety Administration (NHTSA) approved the first increase in US fuel economy regulations (known as the CAFE standards, or the corporate average fuel economy standards) in nine years, requiring vehicle makers to increase the average fuel efficiency of light trucks by 1.5 miles per gallon by 2007. The regulation required light truck fleets to average 21.0 miles per gallon (mpg) in the 2005 model year, 21.6 mpg in 2006 and 22.5 mpg in 2007. Passenger car targets were set at 27.5 mpg by 2007. In December 2007, a new energy bill was passed. After the bill was passed, the NHTSA announced new CAFE standards. They required cars, trucks and SUVs to average 35.0 mpg by 2020, up from 27.5 mpg for cars and 22.5 for light trucks in 2007.

In May 2009, the Obama administration proposed changes to the 2007 standards that by 2016 (earlier than the previously regulated 2020 deadline), automakers’ car fleets must average 37.8 mpg, while light trucks must average 22.5 mpg. However, in July 2011, President Obama updated the regulations once more, increasing the average fuel economy of all cars and light trucks to 54.5 mpg by model year 2025. An auto manufacturer’s CAFE rating is
Operating Conditions

Industry Assistance

Companies in the Car and Automobile Manufacturing industry are frequent beneficiaries of government assistance. Automakers have a powerful lobbying presence, which often results in policies that favor the industry. In recent years, these policies have centered on research subsidies and the highly publicized bailout of General Motors (GM) and Chrysler. In addition to these high-profile cases, government agencies at all levels are required to purchase vehicles produced by a domestic automaker.

The federal government subsidizes research on alternatively fueled vehicles on an ad hoc basis. In 2004, the Department of Energy (DoE) provided $350.0 million in assistance to stimulate science and research projects into hydrogen fuel cells, which produce no pollutants or greenhouse gases but are expensive to produce. GM, Chrysler and Ford each participated. In 2009, the DoE gave out $2.4 billion in grants for the development of batteries, parts and programs for electric vehicles. The money has not been completely dispersed, but GM and Chrysler received $100.0 million and $70.0 million, respectively.

While tariffs for the SUV and Light Truck industry features some odd quirks (such as the 25.0% “chicken tax” tariff on imported pickup trucks), this industry has relatively lower protective measures. Most vehicles have a 2.5% ad valorem tariff regardless of origin. The Trans-Pacific Partnership is anticipated to alter the current tariff structure with respect to Asian manufacturers, potentially removing tariffs completely.

This could have an impact on the pricing of domestically produced vehicles, and in turn, the profit margins of US-based operators.

Potential tariffs

In March 2018, President Trump signaled a desire to place tariffs on imported cars, trucks and auto parts. The Commerce Department is currently investigating whether auto imports are a threat to national security. If so, the President would be able to implement tariffs under Section 232 of the Trade Expansion Act of 1962. The President used the same provision when implementing tariffs on imported steel and aluminum, key industry inputs, earlier this year. Since then, President Trump has signaled an openness of placing Auto tariffs on imported vehicles from Europe as well as Asian sources. As of yet he has not done so. However, increased tariffs on steel and aluminum have increased industry input prices, driving up costs.

NAFTA to USMCA

If approved by congress, the recently signed United States Mexico Canada Agreement (USMCA) should apply further assistance to US manufacturing. This agreement is set to replace NAFTA, and while Canada and Mexico will still be exempt from tariffs on industry goods, operators are expected to be assisted in other ways. For example, a by 2023, it will be required that 40.0% of auto products must be made by workers earning a minimum of $16.00 per hour.
Operating Conditions

Industry Assistance continued

This principle was put in place to help protect auto manufacturing jobs from low wage competition in Mexico. Unless Mexico increases its minimum nearly 300% by 2023, this development should limit the number of transmission manufacturing jobs being outsourced. While helping workers, this policy may increase wage and overall costs for domestic operators.
### Industry Data

#### Key Ratios

<table>
<thead>
<tr>
<th>Year</th>
<th>Imports/Demand (%)</th>
<th>Exports/Demand (%)</th>
<th>Revenue per Employee ($'000)</th>
<th>Wages/Revenue (%)</th>
<th>Employees per Est.</th>
<th>Average Wage ($)</th>
<th>Share of the Economy (%)</th>
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<td>2023</td>
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<td>Economy Rank</td>
<td>655/694</td>
<td>24/216</td>
<td>40/216</td>
<td>31/694</td>
<td>652/694</td>
<td>8/694</td>
<td>110/694</td>
<td>192/694</td>
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**Figures are in inflation-adjusted 2018 dollars. Rank refers to 2018 data.**
### Industry Financial Ratios

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<td><strong>Liquidity Ratios</strong></td>
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<td>Current Ratio</td>
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<td>1.4</td>
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<td>Quick Ratio</td>
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<td>0.6</td>
<td>0.5</td>
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<td>Sales / Receivables</td>
<td>11.3</td>
<td>10.4</td>
<td>10.6</td>
<td>9.8</td>
<td>Small (&lt;$10m)</td>
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<tr>
<td>Days’ Receivables</td>
<td>32.3</td>
<td>35.1</td>
<td>34.4</td>
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<td>Cost of Sales / Inventory (Inventory Turnover)</td>
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<td>4.8</td>
<td>4.4</td>
<td>4.3</td>
<td>Medium ($10-50m)</td>
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<td>Days’ Inventory</td>
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<td>76.0</td>
<td>83.0</td>
<td>84.9</td>
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<td>Cost of Sales / Payables (Payables Turnover)</td>
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<td>11.0</td>
<td>13.8</td>
<td>13.9</td>
<td>Large (&gt;50m)</td>
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<td>Days’ Payables</td>
<td>29.0</td>
<td>33.2</td>
<td>26.4</td>
<td>26.3</td>
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<td>Sales / Working Capital</td>
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<td>10.1</td>
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<td>16.4</td>
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<td><strong>Coverage Ratios</strong></td>
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<tr>
<td>Earnings Before Interest &amp; Taxes (EBIT) / Interest</td>
<td>4.8</td>
<td>7.1</td>
<td>16.5</td>
<td>5.3</td>
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<tr>
<td>Net Profit + Dep., Depletion, Amort. / Current Maturities LT Debt</td>
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<td>7.0</td>
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<td>Fixed Assets / Net Worth</td>
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<td><strong>Operating Ratios</strong></td>
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<tr>
<td>Profit before Taxes / Net Worth, %</td>
<td>22.9</td>
<td>36.0</td>
<td>38.0</td>
<td>32.5</td>
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<td>Profit before Taxes / Total Assets, %</td>
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<td>8.2</td>
<td>9.9</td>
<td>6.6</td>
<td>45.5</td>
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<td>Sales / Net Fixed Assets</td>
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<td>15.5</td>
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<td>Sales / Total Assets (Asset Turnover)</td>
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<td>2.1</td>
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<td>2.0</td>
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<td><strong>Cash Flow &amp; Debt Service Ratios (% of sales)</strong></td>
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<td>17.6</td>
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<td>Cash after Operations</td>
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<td>Net Cash after Operations</td>
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<td>Cash after Debt Amortization</td>
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<td>Interest Coverage (Operating Cash)</td>
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<td>3.7</td>
<td>13.2</td>
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<td><strong>Assets, %</strong></td>
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<tr>
<td>Cash &amp; Equivalents</td>
<td>11.7</td>
<td>10.3</td>
<td>7.4</td>
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<tr>
<td>Trade Receivables (net)</td>
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<td>21.3</td>
<td>22.1</td>
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<td>n/a</td>
</tr>
<tr>
<td>Inventory</td>
<td>28.5</td>
<td>35.2</td>
<td>40.2</td>
<td>40.7</td>
<td>n/a</td>
</tr>
<tr>
<td>All Other Current Assets</td>
<td>3.1</td>
<td>4.9</td>
<td>2.0</td>
<td>1.4</td>
<td>n/a</td>
</tr>
<tr>
<td>Total Current Assets</td>
<td>67.2</td>
<td>71.7</td>
<td>71.6</td>
<td>70.1</td>
<td>n/a</td>
</tr>
<tr>
<td>Fixed Assets (net)</td>
<td>19.8</td>
<td>19.4</td>
<td>17.4</td>
<td>20.7</td>
<td>n/a</td>
</tr>
<tr>
<td>Intangibles (net)</td>
<td>4.1</td>
<td>5.6</td>
<td>4.0</td>
<td>4.1</td>
<td>n/a</td>
</tr>
<tr>
<td>All Other Non-Current Assets</td>
<td>8.9</td>
<td>3.3</td>
<td>7.0</td>
<td>5.1</td>
<td>n/a</td>
</tr>
<tr>
<td>Total Assets</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total Assets ($m)</td>
<td>2,075.8</td>
<td>1,699.9</td>
<td>1,118.7</td>
<td>1,706.7</td>
<td>2,83.0</td>
</tr>
<tr>
<td><strong>Liabilities, %</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notes Payable-Short Term</td>
<td>11.5</td>
<td>13.0</td>
<td>17.8</td>
<td>9.4</td>
<td>n/a</td>
</tr>
<tr>
<td>Current Maturities LT/T/DD</td>
<td>3.6</td>
<td>2.9</td>
<td>1.3</td>
<td>3.3</td>
<td>n/a</td>
</tr>
<tr>
<td>Trade Payables</td>
<td>16.3</td>
<td>18.3</td>
<td>15.7</td>
<td>16.0</td>
<td>n/a</td>
</tr>
<tr>
<td>Income Taxes Payable</td>
<td>0.1</td>
<td>0.1</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>All Other Current Liabilities</td>
<td>18.9</td>
<td>17.7</td>
<td>18.5</td>
<td>22.5</td>
<td>n/a</td>
</tr>
<tr>
<td>Total Current Liabilities</td>
<td>50.4</td>
<td>51.9</td>
<td>53.3</td>
<td>51.1</td>
<td>n/a</td>
</tr>
<tr>
<td>Long Term Debt</td>
<td>10.0</td>
<td>10.9</td>
<td>8.3</td>
<td>11.1</td>
<td>n/a</td>
</tr>
<tr>
<td>Deferred Taxes</td>
<td>0.3</td>
<td>0.1</td>
<td>n/a</td>
<td>0.2</td>
<td>n/a</td>
</tr>
<tr>
<td>All Other Non-Current Liabilities</td>
<td>13.7</td>
<td>4.4</td>
<td>2.5</td>
<td>5.3</td>
<td>n/a</td>
</tr>
<tr>
<td>Net Worth</td>
<td>25.5</td>
<td>32.6</td>
<td>35.9</td>
<td>32.2</td>
<td>n/a</td>
</tr>
<tr>
<td>Total Liabilities &amp; Net Worth ($m)</td>
<td>2,075.8</td>
<td>1,699.9</td>
<td>1,118.7</td>
<td>1,706.7</td>
<td>2,83.0</td>
</tr>
</tbody>
</table>

Source: RMA Annual Statement Studies, rmahq.org. RMA data for all industries is derived directly from more than 260,000 statements of member financial institutions’ borrowers and prospects.

Note: For a full description of the ratios refer to the Key Statistics chapter online.

Provided to: University of Nevada, Las Vegas (2132071889) | 31 March 2019
Jargon & Glossary

**Industry Jargon**

DOMESTIC INTERNATIONALS The Japan-based automakers operating in the United States: Toyota, Nissan and Honda.

HYBRID A car that runs on an electric battery combined with a gasoline engine to be more fuel-efficient than a standard car.

**IBISWorld Glossary**

BARRIERS TO ENTRY High barriers to entry mean that new companies struggle to enter an industry, while low barriers mean it is easy for new companies to enter an industry.

CAPITAL INTENSITY Compares the amount of money spent on capital (plant, machinery and equipment) with that spent on labor. IBISWorld uses the ratio of depreciation to wages as a proxy for capital intensity. High capital intensity is more than $0.333 of capital to $1 of labor; medium is $0.125 to $0.333 of capital to $1 of labor; low is less than $0.125 of capital for every $1 of labor.

CONSTANT PRICES The dollar figures in the Key Statistics table, including forecasts, are adjusted for inflation using the current year (i.e., year published) as the base year. This removes the impact of changes in the purchasing power of the dollar, leaving only the “real” growth or decline in industry metrics. The inflation adjustments in IBISWorld’s reports are made using the US Bureau of Economic Analysis’ implicit GDP price deflator.

DOMESTIC DEMAND Spending on industry goods and services within the United States, regardless of their country of origin. It is derived by adding imports to industry revenue, and then subtracting exports.

EMPLOYMENT The number of permanent, part-time, temporary and seasonal employees, working proprietors, partners, managers and executives within the industry.

ENTERPRISE A division that is separately managed and keeps management accounts. Each enterprise consists of one or more establishments that are under common ownership or control.

ESTABLISHMENT The smallest type of accounting unit within an enterprise, an establishment is a single physical location where business is conducted or where services or industrial operations are performed. Multiple establishments under common control make up an enterprise.

EXPORTS Total value of industry goods and services sold by US companies to customers abroad.

IMPORTS Total value of industry goods and services brought in from foreign countries to be sold in the United States.

INDUSTRY CONCENTRATION An indicator of the dominance of the top four players in an industry. Concentration is considered high if the top players account for more than 70% of industry revenue. Medium is 40% to 70% of industry revenue. Low is less than 40%.

INDUSTRY REVENUE The total sales of industry goods and services (exclusive of excise and sales tax); subsidies on production; all other operating income from outside the firm (such as commission income, repair and service income, and rent, leasing and hiring income); and capital work done by rental or lease. Receipts from interest royalties, dividends and the sale of fixed tangible assets are excluded.

INDUSTRY VALUE ADDED (IVA) The market value of goods and services produced by the industry minus the cost of goods and services used in production. IVA is also described as the industry’s contribution to GDP, or profit plus wages and depreciation.

INTERNATIONAL TRADE The level of international trade is determined by ratios of exports to revenue and imports to domestic demand. For exports/revenue: low is less than 5%, medium is 5% to 20%, and high is more than 20%. Imports/domestic demand: low is less than 5%, medium is 5% to 35%, and high is more than 35%.

LIFE CYCLE All industries go through periods of growth, maturity and decline. IBISWorld determines an industry’s life cycle by considering its growth rate (measured by IVA) compared with GDP, the growth rate of the number of establishments; the amount of change the industry’s products are undergoing; the rate of technological change; and the level of customer acceptance of industry products and services.

NONEMPLOYING ESTABLISHMENT Businesses with no paid employment or payroll, also known as nonemployers. These are mostly set up by self-employed individuals.

PROFIT IBISWorld uses earnings before interest and tax (EBIT) as an indicator of a company’s profitability. It is calculated as revenue minus expenses, excluding interest and tax.

VOLATILITY The level of volatility is determined by averaging the absolute change in revenue in each of the past five years. Volatility levels: very high is more than ±20%; high volatility is ±10% to ±20%; moderate volatility is ±3% to ±10%; and low volatility is less than ±3%.

WAGES The gross total wages and salaries of all employees in the industry. The cost of benefits is also included in this figure.
At IBISWorld we know that industry intelligence is more than assembling facts
It is combining data with analysis to answer the questions that successful businesses ask

Identify high growth, emerging & shrinking markets
Arm yourself with the latest industry intelligence
Assess competitive threats from existing & new entrants
Benchmark your performance against the competition
Make speedy market-ready, profit-maximizing decisions

Who is IBISWorld?
We are strategists, analysts, researchers, and marketers. We provide answers to information-hungry, time-poor businesses. Our goal is to provide real world answers that matter to your business in our 700 US industry reports. When tough strategic, budget, sales and marketing decisions need to be made, our suite of Industry and Risk intelligence products give you deeply-researched answers quickly.

IBISWorld Membership
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