



MarketLine Industry Profile

Global Car Manufacturing

April 2020

Reference Code: 0199-2010

Publication Date: April 2020

[WWW.MARKETLINE.COM](http://WWW.MARKETLINE.COM)  
MARKETLINE, THIS PROFILE IS A LICENSED PRODUCT  
AND IS NOT TO BE PHOTOCOPIED



# 1. Executive Summary

## 1.1. Market value

The global car manufacturing industry shrank by 2% in 2019 to reach a value of \$978.4 billion.

## 1.2. Market value forecast

In 2024, the global car manufacturing industry is forecast to have a value of \$1,009.4 billion, an increase of 3.2% since 2019.

## 1.3. Market volume

The global car manufacturing industry shrank by 6.1% in 2019 to reach a volume of 63.3 million units.

## 1.4. Market volume forecast

In 2024, the global car manufacturing industry is forecast to have a volume of 68.3 million units, an increase of 7.8% since 2019.

## 1.5. Geography segmentation

Asia-Pacific accounts for 62.3% of the global car manufacturing industry value.

## 1.6. Market share

Toyota Group is the leading player in the global car manufacturing industry, generating a 14.2% share of the industry's volume.

## 1.7. Market rivalry

Rivalry in this industry is reduced by its high concentration. However, 2020 looks set to be a tough year for car manufacturers amidst the COVID-19 pandemic, which may intensify rivalry as players compete for share.

## 1.8. Competitive Landscape

The global car manufacturing industry is fairly consolidated with the four leading players, Volkswagen, General Motors, Toyota, and Hyundai, accounting for a combined 38.2% share of the production volume in 2019. The leading players in this industry are tapping into the growing demand for hybrid & electric vehicles, while alliances within the industry are a common strategy. The Covid-19 pandemic has halted production in many countries, as well as disrupting the supply chain, and as such the leading players will be negatively impacted.

# TABLE OF CONTENTS

|      |                              |    |
|------|------------------------------|----|
| 1.   | Executive Summary            | 2  |
| 1.1. | Market value .....           | 2  |
| 1.2. | Market value forecast .....  | 2  |
| 1.3. | Market volume .....          | 2  |
| 1.4. | Market volume forecast ..... | 2  |
| 1.5. | Geography segmentation ..... | 2  |
| 1.6. | Market share .....           | 2  |
| 1.7. | Market rivalry .....         | 2  |
| 1.8. | Competitive Landscape .....  | 2  |
| 2.   | Market Overview              | 8  |
| 2.1. | Market definition .....      | 8  |
| 2.2. | Market analysis .....        | 8  |
| 3.   | Market Data                  | 10 |
| 3.1. | Market value .....           | 10 |
| 3.2. | Market volume .....          | 11 |
| 4.   | Market Segmentation          | 12 |
| 4.1. | Geography segmentation ..... | 12 |
| 5.   | Market Outlook               | 13 |
| 5.1. | Market value forecast .....  | 13 |
| 5.2. | Market volume forecast ..... | 14 |
| 6.   | Five Forces Analysis         | 15 |
| 6.1. | Summary .....                | 15 |
| 6.2. | Buyer power .....            | 16 |
| 6.3. | Supplier power .....         | 18 |
| 6.4. | New entrants .....           | 20 |
| 6.5. | Threat of substitutes .....  | 22 |

|      |                                                                                  |    |
|------|----------------------------------------------------------------------------------|----|
| 6.6. | Degree of rivalry .....                                                          | 24 |
| 7.   | Competitive Landscape .....                                                      | 26 |
| 7.1. | Market share .....                                                               | 26 |
| 7.2. | Who are the leading players? .....                                               | 26 |
| 7.3. | How are strategic alliances used by the leading companies? .....                 | 27 |
| 7.4. | How is new technology opening up competition? .....                              | 28 |
| 7.5. | How are leading players progressing in the hybrid & electric cars segment? ..... | 28 |
| 7.6. | What impact could the Covid-19 pandemic have on leading players? .....           | 29 |
| 8.   | Company Profiles .....                                                           | 30 |
| 8.1. | General Motors Company .....                                                     | 30 |
| 8.2. | Volkswagen AG .....                                                              | 35 |
| 8.3. | Hyundai Motor Company .....                                                      | 41 |
| 8.4. | Toyota Motor Corporation .....                                                   | 46 |
| 9.   | Macroeconomic Indicators .....                                                   | 53 |
| 9.1. | Country data .....                                                               | 53 |
|      | Appendix .....                                                                   | 54 |
|      | Methodology .....                                                                | 54 |
| 9.2. | Industry associations .....                                                      | 55 |
| 9.3. | Related MarketLine research .....                                                | 55 |
|      | About MarketLine .....                                                           | 57 |

# LIST OF TABLES

|                                                                                     |    |
|-------------------------------------------------------------------------------------|----|
| Table 1: Global car manufacturing industry value: \$ billion, 2015–19               | 10 |
| Table 2: Global car manufacturing industry volume: million units, 2015–19           | 11 |
| Table 3: Global car manufacturing industry geography segmentation: \$ billion, 2019 | 12 |
| Table 4: Global car manufacturing industry value forecast: \$ billion, 2019–24      | 13 |
| Table 5: Global car manufacturing industry volume forecast: million units, 2019–24  | 14 |
| Table 6: Global car manufacturing industry share: % share, by volume, 2019          | 26 |
| Table 7: General Motors Company: key facts                                          | 30 |
| Table 8: General Motors Company: Annual Financial Ratios                            | 32 |
| Table 9: General Motors Company: Key Employees                                      | 33 |
| Table 10: General Motors Company: Key Employees Continued                           | 34 |
| Table 11: Volkswagen AG: key facts                                                  | 35 |
| Table 12: Volkswagen AG: Annual Financial Ratios                                    | 37 |
| Table 13: Volkswagen AG: Annual Financial Ratios (Continued)                        | 38 |
| Table 14: Volkswagen AG: Key Employees                                              | 39 |
| Table 15: Volkswagen AG: Key Employees Continued                                    | 40 |
| Table 16: Hyundai Motor Company: key facts                                          | 41 |
| Table 17: Hyundai Motor Company: Annual Financial Ratios                            | 43 |
| Table 18: Hyundai Motor Company: Key Employees                                      | 44 |
| Table 19: Hyundai Motor Company: Key Employees Continued                            | 45 |
| Table 20: Toyota Motor Corporation: key facts                                       | 46 |
| Table 21: Toyota Motor Corporation: Annual Financial Ratios                         | 48 |
| Table 22: Toyota Motor Corporation: Key Employees                                   | 49 |
| Table 23: Toyota Motor Corporation: Key Employees Continued                         | 50 |
| Table 24: Toyota Motor Corporation: Key Employees Continued                         | 51 |
| Table 25: Toyota Motor Corporation: Key Employees Continued                         | 52 |
| Table 26: Global exchange rate, 2015–19                                             | 53 |

## LIST OF FIGURES

|                                                                                                             |    |
|-------------------------------------------------------------------------------------------------------------|----|
| Figure 1: Global car manufacturing industry value: \$ billion, 2015–19                                      | 10 |
| Figure 2: Global car manufacturing industry volume: million units, 2015–19                                  | 11 |
| Figure 3: Global car manufacturing industry geography segmentation: % share, by value, 2019                 | 12 |
| Figure 4: Global car manufacturing industry value forecast: \$ billion, 2019–24                             | 13 |
| Figure 5: Global car manufacturing industry volume forecast: million units, 2019–24                         | 14 |
| Figure 6: Forces driving competition in the global car manufacturing industry, 2019                         | 15 |
| Figure 7: Drivers of buyer power in the global car manufacturing industry, 2019                             | 16 |
| Figure 8: Drivers of supplier power in the global car manufacturing industry, 2019                          | 18 |
| Figure 9: Factors influencing the likelihood of new entrants in the global car manufacturing industry, 2019 | 20 |
| Figure 10: Factors influencing the threat of substitutes in the global car manufacturing industry, 2019     | 22 |
| Figure 11: Drivers of degree of rivalry in the global car manufacturing industry, 2019                      | 24 |
| Figure 12: Global car manufacturing industry share: % share, by volume, 2019                                | 26 |

## 2. Market Overview

### 2.1. Market definition

The passenger cars manufacturers market value is calculated in terms of manufacturer selling price (MSP), and excludes all taxes and levies.

The volume represents the quantity of completely built up (CBU) cars in the particular country/region.

Passenger cars are defined as motor vehicles with at least four wheels, used for the transport of passengers, and comprising no more than eight seats in addition to the driver's seat. The market includes both petrol and diesel passenger cars, as well as hybrid, electric, SUVs and pickup trucks. Any sort of commercial vehicles e.g. vans or HGVs are excluded.

Market shares refer to the volume - not value - of built units in a particular country in the respective calendar year. Note that this is representative of the number of cars manufactured, not necessarily sold.

Any currency conversions used in the creation of this report have been calculated using constant 2019 annual average exchange rates.

Car manufacturing can be a highly concentrated industry, and in some countries there is only one significant manufacturer. Forecasts made in this profile should not be interpreted as predictions of any individual company's performance.

For the purposes of this report, the global market consists of North America, South America, Europe, Asia-Pacific, Middle East, South Africa and Nigeria.

North America consists of Canada, Mexico, and the United States.

South America comprises Argentina, Brazil, Chile, Colombia, and Peru.

Europe comprises Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Switzerland, Turkey, and the United Kingdom.

Scandinavia comprises Denmark, Finland, Norway, and Sweden.

Asia-Pacific comprises Australia, China, Hong Kong, India, Indonesia, Kazakhstan, Japan, Malaysia, New Zealand, Pakistan, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam.

Middle East comprises Egypt, Israel, Saudi Arabia, and United Arab Emirates.

### 2.2. Market analysis

The global car manufacturing industry has been declining in value and volume terms in recent years. 2020 will see a decline in the industry value as the COVID-19 pandemic impacts car manufacturing across the world.

The Asia-Pacific region is the biggest globally, accounting for over 62% of the global industry's value and production volume. China accounts for around half of the Asia-Pacific industry in terms of value and production volume. Growth in this industry has been hindered by environmental concerns in China. High pollution levels in the major urban cities have led the government to encourage consumers to revert back to non-fossil fuel burning substitutes such as bicycles. This return to bicycles has been boosted by the emergence of bike sharing start-ups such as Ofo, Bluegogo and Mobike, which now operate millions of bicycles across the country. On top of this, many of the younger consumers in the Chinese industry increasingly see bicycles as trendy and fashionable, much like their counterparts do in Amsterdam or Copenhagen.

The global car manufacturing industry had total revenues of \$978.4bn in 2019, representing a compound annual rate of change (CARC) of -0.4% between 2015 and 2019. In comparison, the Asia-Pacific and US industries declined with

CARCs of -0.5% and -10.7% respectively, over the same period, to reach respective values of \$609.7bn and \$39.7bn in 2019.

Germany is the largest market in the European region, accounting for almost 30% of the industry value in 2019. Like much of the rest of Europe, car sharing start-ups have dented growth in Germany's sales, as an increasing number of Germans, especially those belonging to the younger segments of society, opt to share vehicles rather than purchase their own due to financial restraints or environmental reasons. Car2Go, which is owned by Daimler AG, is a prime example of a successful car sharing platform that has cemented its position, especially in the urban centers of Germany.

Industry production volumes declined with a CARC of -0.9% between 2015 and 2019, to reach a total of 63,340.1 thousand units in 2019. The industry's volume is expected to rise to 68,284.1 thousand units by the end of 2024, representing a compound annual growth rate (CAGR) of 1.5% for the 2019-2024 period.

As technology improves the efficiency and price competitiveness of electric cars, demand for these vehicles will undoubtedly increase. A number of major global car manufacturers such as Volvo, Aston Martin, and Jaguar Land Rover have announced plans to switch over to manufacturing only electric or hybrid cars at some point within the coming decade. For new entrants looking to enter this industry, the electric cars segment will therefore be particularly interesting.

The performance of the industry is forecast to accelerate, with an anticipated CAGR of 0.6% for the five-year period 2019 - 2024, which is expected to drive the industry to a value of \$1,009.4bn by the end of 2024. Comparatively, the Asia-Pacific and US industries will grow with CAGRs of 0.8% and 0.8% respectively, over the same period, to reach respective values of \$634.6bn and \$41.2bn in 2024.

The 2020 global COVID-19 pandemic is having a huge impact on the automotive industry globally. There has been severe disruption in the export of Chinese parts and widespread manufacturing plant closures. Automakers across the world have enforced temporary shutdowns at production plants. This will hinder manufacturing output in 2020.

## 3. Market Data

### 3.1. Market value

The global car manufacturing industry shrank by 2% in 2019 to reach a value of \$978.4 billion.

The compound annual rate of change of the industry in the period 2015–19 was -0.4%.

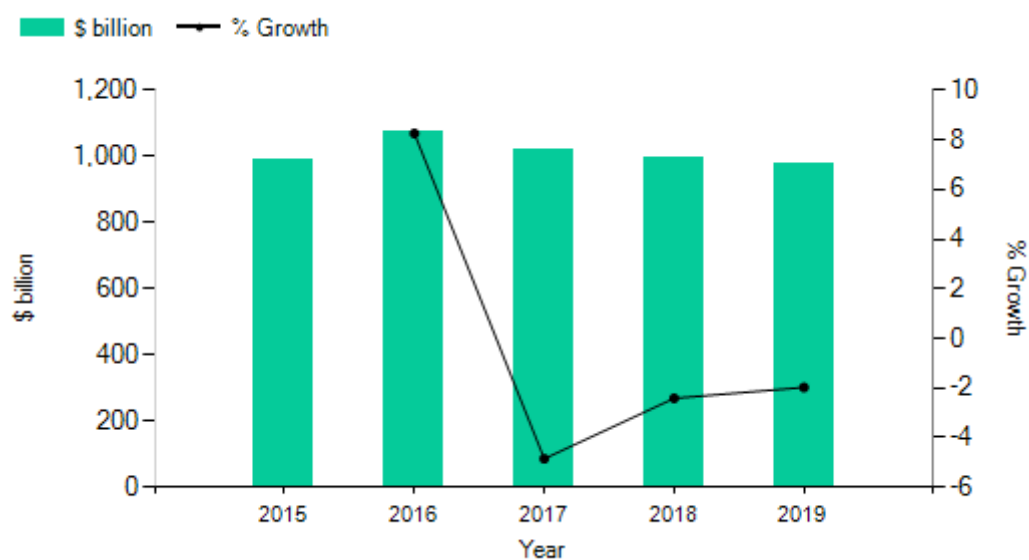
Table 1: Global car manufacturing industry value: \$ billion, 2015–19

| Year          | \$ billion | € billion | % Growth |
|---------------|------------|-----------|----------|
| 2015          | 992.8      | 1,111.9   |          |
| 2016          | 1,074.8    | 1,203.8   | 8.3%     |
| 2017          | 1,022.7    | 1,145.4   | (4.8%)   |
| 2018          | 998.1      | 1,117.8   | (2.4%)   |
| 2019          | 978.4      | 1,095.8   | (2.0%)   |
| CAGR: 2015–19 |            |           | (0.4%)   |

SOURCE: MARKETLINE

MARKETLINE

Figure 1: Global car manufacturing industry value: \$ billion, 2015–19



SOURCE: MARKETLINE

MARKETLINE

### 3.2. Market volume

The global car manufacturing industry shrank by 6.1% in 2019 to reach a volume of 63.3 million units.

The compound annual rate of change of the industry in the period 2015–19 was -0.9%.

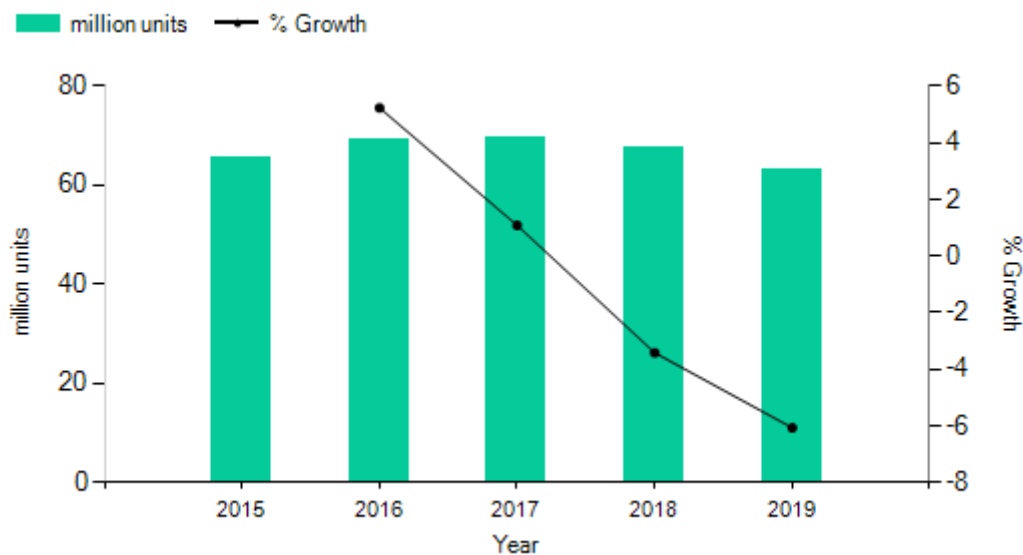
Table 2: Global car manufacturing industry volume: million units, 2015–19

| Year          | million units | % Growth |
|---------------|---------------|----------|
| 2015          | 65.6          |          |
| 2016          | 69.1          | 5.2%     |
| 2017          | 69.8          | 1.1%     |
| 2018          | 67.4          | (3.4%)   |
| 2019          | 63.3          | (6.1%)   |
| CAGR: 2015–19 |               | (0.9%)   |

SOURCE: MARKETLINE

MARKETLINE

Figure 2: Global car manufacturing industry volume: million units, 2015–19



SOURCE: MARKETLINE

MARKETLINE

## 4. Market Segmentation

### 4.1. Geography segmentation

Asia-pacific accounts for 62.3% of the global car manufacturing industry value.

Europe accounts for a further 26.3% of the global industry.

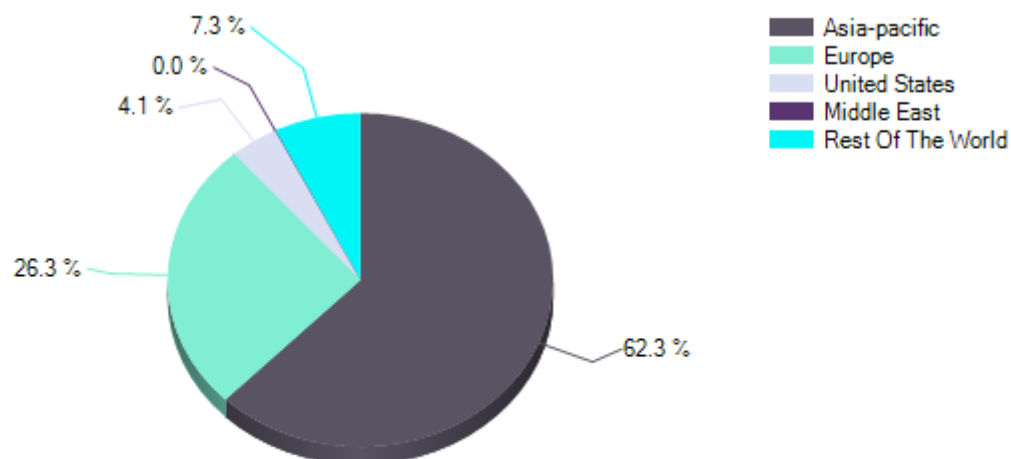
**Table 3: Global car manufacturing industry geography segmentation: \$ billion, 2019**

| Geography         | 2019  | %    |
|-------------------|-------|------|
| Asia-pacific      | 609.7 | 62.3 |
| Europe            | 257.4 | 26.3 |
| United States     | 39.7  | 4.1  |
| Middle East       | 0.5   | 0.0  |
| Rest Of The World | 71.2  | 7.3  |
| Total             | 978.5 | 100% |

**SOURCE:** MARKETLINE

**MARKETLINE**

**Figure 3: Global car manufacturing industry geography segmentation: % share, by value, 2019**



**SOURCE:** MARKETLINE

**MARKETLINE**

## 5. Market Outlook

### 5.1. Market value forecast

In 2024, the global car manufacturing industry is forecast to have a value of \$1,009.4 billion, an increase of 3.2% since 2019.

The compound annual growth rate of the industry in the period 2019–24 is predicted to be 0.6%.

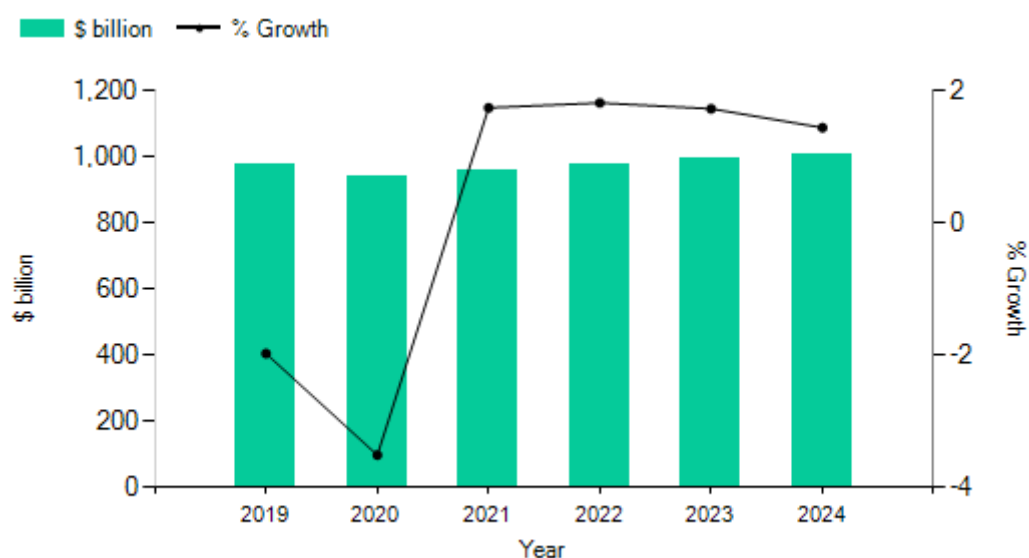
**Table 4: Global car manufacturing industry value forecast: \$ billion, 2019–24**

| Year          | \$ billion | € billion | % Growth |
|---------------|------------|-----------|----------|
| 2019          | 978.4      | 1,095.8   | (2.0%)   |
| 2020          | 944.1      | 1,057.3   | (3.5%)   |
| 2021          | 960.6      | 1,075.8   | 1.7%     |
| 2022          | 978.1      | 1,095.4   | 1.8%     |
| 2023          | 995.0      | 1,114.4   | 1.7%     |
| 2024          | 1,009.4    | 1,130.5   | 1.4%     |
| CAGR: 2019–24 |            |           | 0.6%     |

**SOURCE:** MARKETLINE

**MARKETLINE**

**Figure 4: Global car manufacturing industry value forecast: \$ billion, 2019–24**



**SOURCE:** MARKETLINE

**MARKETLINE**

5.2. Market volume forecast

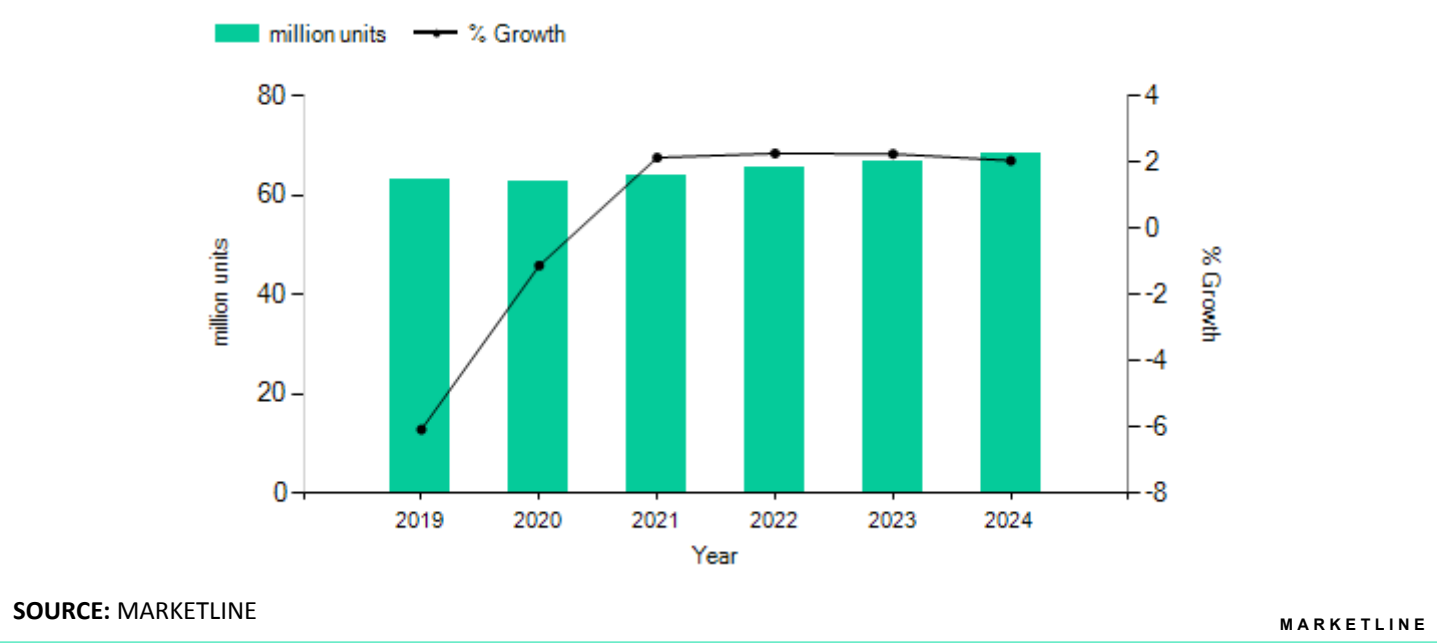
In 2024, the global car manufacturing industry is forecast to have a volume of 68.3 million units, an increase of 7.8% since 2019.

The compound annual growth rate of the industry in the period 2019–24 is predicted to be 1.5%.

Table 5: Global car manufacturing industry volume forecast: million units, 2019–24

| Year               | million units | % Growth   |
|--------------------|---------------|------------|
| 2019               | 63.3          | (6.1%)     |
| 2020               | 62.6          | (1.1%)     |
| 2021               | 64.0          | 2.1%       |
| 2022               | 65.4          | 2.3%       |
| 2023               | 66.9          | 2.3%       |
| 2024               | 68.3          | 2.1%       |
| CAGR: 2019–24      |               | 1.5%       |
| SOURCE: MARKETLINE |               | MARKETLINE |

Figure 5: Global car manufacturing industry volume forecast: million units, 2019–24

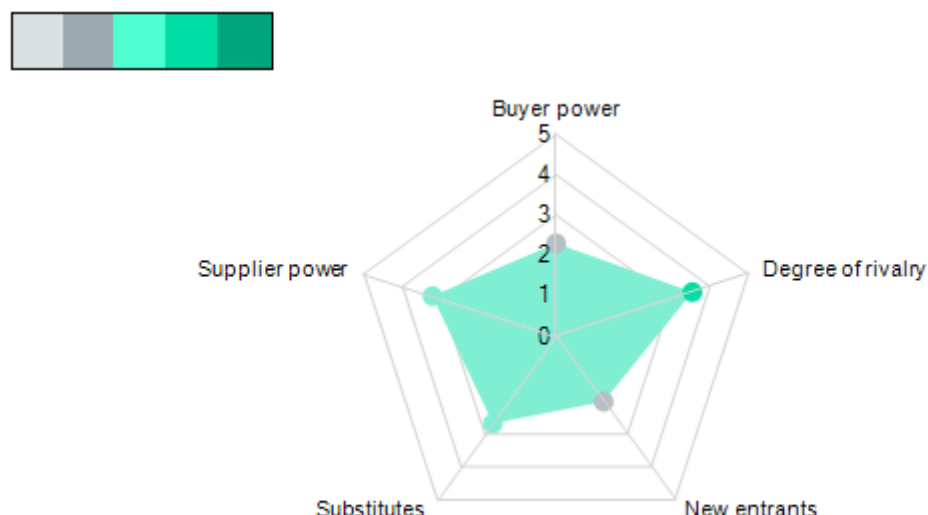


## 6. Five Forces Analysis

The car manufacturing market will be analyzed taking car manufacturers as players. The key buyers will be taken as car dealerships, and suppliers of commodities as the key suppliers.

### 6.1. Summary

Figure 6: Forces driving competition in the global car manufacturing industry, 2019



SOURCE: MARKETLINE

MARKETLINE

Rivalry in this industry is reduced by its high concentration. However, 2020 looks set to be a tough year for car manufacturers amidst the COVID-19 pandemic, which may intensify rivalry as players compete for share.

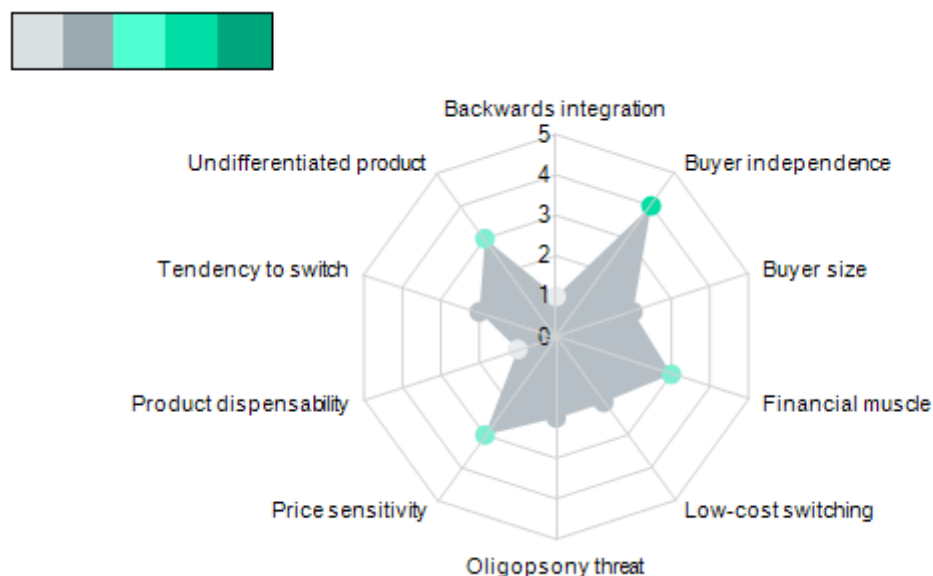
Car dealerships, which are the main buyers in this industry, serve as intermediaries between car manufacturers and end users. Car dealerships generally have exclusive contractual agreements with one particular manufacturer, which reduces buyer power. Suppliers in this industry provide commodity items such as metals or technological pieces and fabricated components. Typical suppliers are likely to sell to a wide variety of manufacturing companies, with the car industry accounting for only a small share of total supplier revenues, increasing supplier power.

Brand strength, goodwill, and reputation are exceptionally important in the car manufacturing industry, and it is therefore quite difficult for new players to directly enter a particular country's industry. Where there is already a strong manufacturing presence, it can be particularly off-putting for potential new entrants. Used cars and personal contract purchase (PCP) related deals form the main substitutes to the car manufacturing industry. The emerging trend of car sharing has also negatively impacted growth.

Rivalry in the car manufacturing industry is reduced through differentiation, with several defined segments within the industry, such as luxury and budget vehicles. Most companies service a number of different segments, either through different models or through different brands, in order to diversify their product portfolio and reduce competition.

## 6.2. Buyer power

Figure 7: Drivers of buyer power in the global car manufacturing industry, 2019



SOURCE: MARKETLINE

MARKETLINE

Car dealerships, which are the main buyers in this industry, serve as intermediaries between car manufacturers and end users (consumers). These dealerships tend to be relatively large and few in number, which increases buyer power.

However, these companies are usually linked to one specific manufacturer via exclusive contractual agreements, meaning that the reliance on car manufacturers is increased. Therefore, buyer power is somewhat weakened as once the dealership has agreed to sell a particular manufacturer's cars, it is difficult to renege on that agreement. Buyers can attempt to negotiate their exit from the contract with the manufacturer or wait for the contract to expire. The cost of switching between manufacturers is high, due to the expense of rebranding and physically restocking the dealerships.

Manufacturers in this industry attempt to differentiate their products by offering new features (sat-nav, parking sensors, or a stop-start system). However, rival players generally offer a similar range of products, which reduces buyer power as undifferentiated products can spark a price war between players (and suppliers). Increasing concern for the environment will mean that hybrid and electric car manufacturers will grow in popularity. Players such as Tesla can appeal to this segment of the industry.

In 2018, Donald Trump authorized new tariffs on imported steel and aluminum, leading to a \$1bn increase in manufacturers' costs. In January 2020, it was announced that these tariffs would be extended from basic steel and aluminum to finished metal products, including car bumpers, steel nails, and wires. This will increase costs for manufacturers and these costs will eventually be passed onto the consumers. As the largest importer of cars across the globe, an increasingly protectionist US would result in foreign manufactured cars becoming less competitive in comparison to US-manufactured cars. This could disrupt the industry as players will inevitably have to increase the price of their cars, as a major reduction in sales will harm their economies of scale and profit margins.

President Trump has referred to imported automobiles and auto parts as a threat to national security. However, a revised trade deal with Canada and Mexico will protect existing US imports from these two countries.

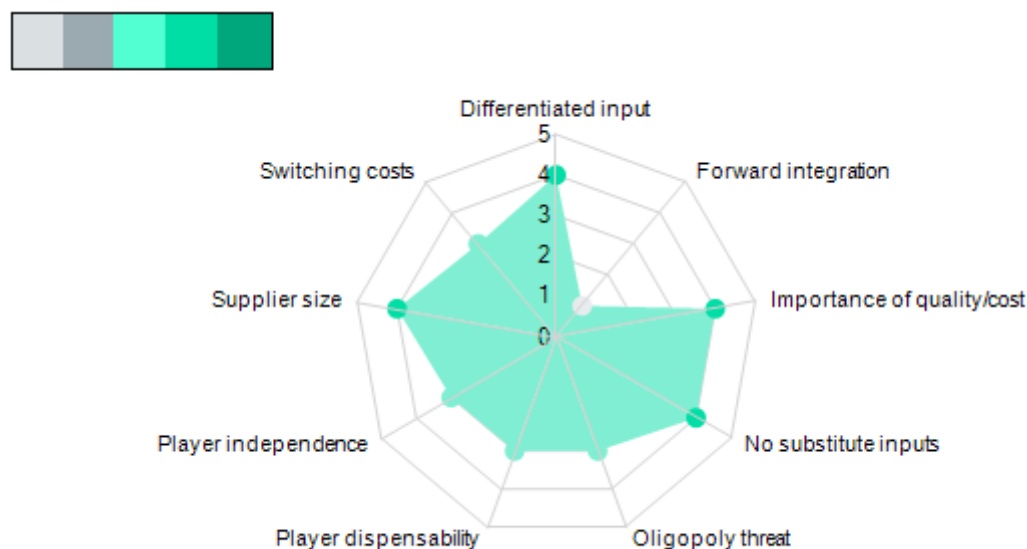
Customers in this industry tend not to be loyal. Although, customers buy cars from manufacturers they know and trust or have been recommended, the industry is largely feature driven. Buyers are part of a price-driven industry, which raises buyer power. Companies in this industry usually partner with multi-national corporations (industry players) that have large financial backing. While the profit margin on new cars tends to be low, buyer power is raised by selling in bulk or on a long-term deal (PCP deal). Conversely, buyer power is undermined, as while buyers are unlikely to backwards integrate due to a dependence on manufacturers, industry players can potentially forward integrate to

become retailers. Buyers in the car manufacturing industry are dependent on manufacturers' products as operations would halt without them, which also reduces buyer power.

Buyer power in the car manufacturing industry is assessed as weak overall.

### 6.3. Supplier power

Figure 8: Drivers of supplier power in the global car manufacturing industry, 2019



SOURCE: MARKETLINE

MARKETLINE

The power of suppliers is mitigated by the number of existing potential suppliers in this industry, but switching costs are high because establishing part designs and specifications requires a large initial investment. Additionally, the threat of forward integration from the suppliers is very unlikely. Auto manufacturers require many inputs: labor, parts, raw materials, and services. The cost of these inputs can have a significant effect on profitability, leading to extremely high entry barriers. These suppliers have to meet the requirements of players, which reduces supplier power.

Key inputs required by car manufacturers are typically commodity items, such as metals, along with various other inputs such as fabricated components or technical additions. These items are often produced by third parties, rather than being manufactured in-house, although some of the larger players do operate component production factories. Supplier power is decreased when players operate their own manufacturing plants as they have a direct tie to the manufacturer and can produce all the components specifically for their products, reducing the need for third party suppliers. Examples of such backwards integration reduce supplier power to some extent.

With fairly low differentiation of raw materials, there is often little to distinguish between suppliers, which reduces supplier power. This is further reduced by the ability of industry players to switch between suppliers, which could spark a price war. However, the importance of high quality raw materials and components (particularly in relation to safety standard concerns) can increase supplier power.

Globally, prices of primary raw materials (such as steel and aluminum) have been fluctuating in the past few years, placing pressure on manufacturers' margins. The prices for these raw materials will be further impacted globally by US President Donald Trump's decision to impose increased import tariffs on foreign aluminum and steel into the US. The importance of high quality steel and aluminum in the manufacturing process increases the supplier power of steel and aluminum producers.

The COVID-19 pandemic's disruption to industrial production is impacting the production of metals, including steel and aluminum. The automotive industry, a major steel consumer, has paused or slowed down production in many countries. Other industries will also be consuming less metals, which has the potential to lead to oversupply and lower prices.

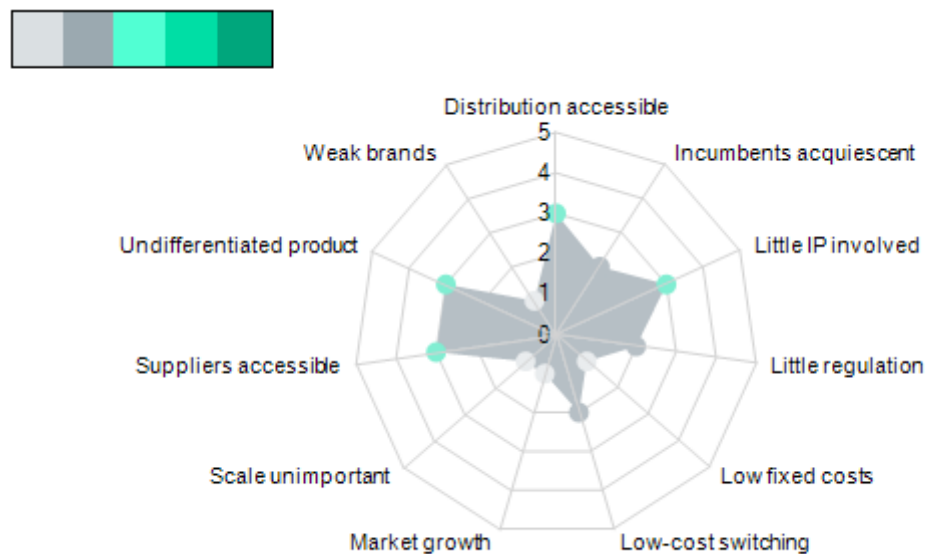
The upstream competitive landscape is relatively fragmented, although recent consolidation in the steel industry could boost supplier power, if there are fewer suppliers of specific materials. Typical suppliers are likely to sell to a

wide variety of manufacturing companies, with the car industry likely to account for only a small share of total supplier revenues. This strengthens the position of suppliers.

Overall, supplier power is moderate.

## 6.4. New entrants

Figure 9: Factors influencing the likelihood of new entrants in the global car manufacturing industry, 2019



SOURCE: MARKETLINE

MARKETLINE

Brand recognition and reputation are highly important in the global car manufacturing industry. As such, it is difficult for new players to directly enter the industry, particularly given the dominance of incumbents such as Toyota and Volkswagen. Due to the high fixed costs of car design and manufacture, as well as the economies of scale gained from mass production, new start-up companies are rare as the capital requirements for a manufacturing facility of feasible scale are simply too high. The global economic downturn has had a negative impact on car sales as consumers avoid expensive purchases, making new entrants to the industry even more difficult. Scale is vastly important within this industry, as high financial backing is required for new entrants.

The emergence of electric car technology and a push towards autonomous vehicles has recently given rise to the prospect of major new entrants. Tesla Motors, an electric vehicle manufacturer in the US that may expand elsewhere, has been a PR success for a number of years with a line of premium cars and it is looking to significantly increase its industry share following the successful pre-order release of its cheaper Model 3 in 2016. Despite this, Tesla has failed to meet a number of its delivery targets on the Model 3 due to difficulties in production, highlighting the complications and challenges that new entrants could face. Current industry players are also fighting for industry share within the new forms of technology; BMW, Jaguar, Nissan, and Audi are among a long list of established brands attempting to diversify their portfolio with electric cars, helping to mitigate the risk of new entrants.

The production of electric vehicles is relatively easier than fuel based engines, giving rise to a number of new entrants, although the capital requirements are still vast and incumbents are already diversifying into this segment. Players such as Volvo (Geely), General Motors, Aston Martin, and Jaguar Land Rover have all announced plans to switch over to manufacturing only electric or hybrid cars at some point within the coming decade, meaning that space for entry and growth in this segment is limited over the forecast period, reducing the threat of new entrants. Honda has set a goal for two thirds of the company's global sales to be accounted for by electric models by 2025, while Fiat Chrysler's goal is to electrify over 30 of its nameplates by the 2022 model year. Meanwhile, Toyota is aiming for half of its global sales to be accounted for by electric vehicles by 2025, five years ahead of its original 2030 target. Volkswagen has set a goal of 1.5 million electric vehicles sales in 2025. This means that space for entry and growth in this segment is limited over the forecast period, reducing the threat of new entrants.

Self-driving technology is seeing an abundance of new entrants within the industry. Google announced a partnership with Fiat Chrysler Automobiles in 2016, Uber partnered with Toyota in 2018 in a \$500m deal, and Amazon purchased self-driving car company Aurora in 2019. Apple has also been rumored to be lining up a car manufacturing project but this may only be in relation to infotainment systems for existing brands. The car manufacturing industry is semi-

differentiated due to the introduction of new technology and an increasing range of vehicles with varying levels of features, in which more expensive vehicles tend to have the most features. Evidently, there are a number of firms looking to capitalize on the industry, outside of the traditional industry players, thus increasing the risk of new entrants. However, the self-driving segment is not without its problems. A new company looking to enter this segment would require considerable capital in order to invest in R&D and the manufacture of a vehicle with self-driving technology. Despite considerable investment and a huge amount of effort from established brands such as General Motors, Google's Waymo, Toyota, and Honda, fully autonomous cars currently remain out of reach.

Increasing consolidation in the global car manufacturing industry serves to reduce the threat of new entrants as manufacturers tend to work with a small range of suppliers and these are usually tied together with contractual agreements that are costly to break. Mergers and acquisitions are also affecting the industry. France-based PSA, for instance, acquired the European arm of General Motors in 2017 in a deal worth \$1.9bn. The deal also saw UK-based Vauxhall and Germany-based Opel being acquired by the French company, consolidating the industry further. Moreover, car manufacturers will attempt to maintain their share of the industry, preventing access to distributors such as dealership networks, further reducing the threat of new entrants.

Intellectual property (IP) in the original car manufacturing industry is strong and relies on the ideas generated by design engineers. Financial protection is required to ensure designs and components are not copied unlawfully. The need for this financial backing serves to weaken the threat of new entrants.

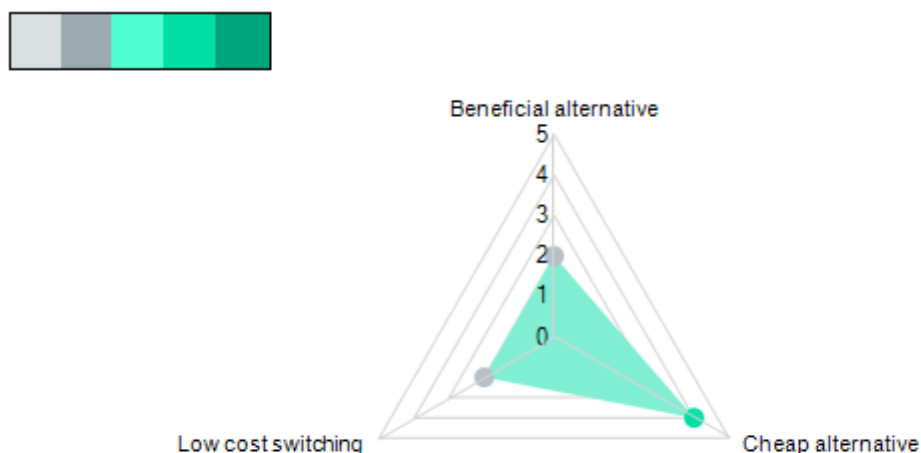
Another deterrent to new entrants is the industry's high level of concentration. Toyota, Volkswagen, Hyundai and Renault-Nissan Alliance account for almost 40% of the global car manufacturing industry's volume. The presence of such large players makes entry difficult, as these companies can engage in price wars. The fact that these huge players are also spread across several different segments makes entry even more difficult. Toyota, for example, manufactures luxury cars under the Lexus brand, alongside its core offering of more affordable vehicles. With incumbents so well spread throughout the industry, entry is extremely difficult.

Globally, the car manufacturing industry declined in both value and volume terms, which reduces the threat of new entrants. The COVID-19 pandemic has led to car production being suspended or reduced in many countries, which raises a huge barrier to entry at present.

Overall, the threat of new entrants is weak.

## 6.5. Threat of substitutes

Figure 10: Factors influencing the threat of substitutes in the global car manufacturing industry, 2019



SOURCE: MARKETLINE

MARKETLINE

Used cars are the main substitute to the car manufacturing industry. Car dealerships which sell both new and used cars are likely to have sold more of the latter during the global economic downturn as consumers avoided making big purchases. What's more, uncertain times are almost certainly ahead as the world faces the economic impact of the widespread outbreak of COVID-19. Recession in many countries is a very real possibility. Car manufacturers should be wary of the possibility of dealerships agreeing to sell cars from rival manufacturers. Car manufacturers that have long-standing contractual agreements with loyal car dealerships will be better protected from this threat. However, those with short-term contracts or those where agreements are close to expiry are more vulnerable.

It is, however, difficult for car dealers to switch between manufacturers due to the contractual agreements and the switching costs of completely re-branding the showroom and removing and replacing existing stock. Manufacturers can sometimes stipulate in contracts with dealers that only new cars may be sold, eliminating the threat posed by used cars. Initiatives such as scrappage schemes, which have been offered in many countries, have incentivized customers to purchase new cars. In the UK, Ford offered drivers up to GBP7,000 (\$9,451) in 2017, if customers traded in their old Ford vehicles, for a new Ford. This mitigating factor has the potential to reduce the threat posed by used cars, although it is only a short-term solution.

Increasing fuel prices have been pushing some urban drivers to use public transportation. Most vehicle owners still agree that the convenience of using a personal vehicle offsets increases in fuel prices; however, if this trend continues and automobile manufacturers are not able to provide a more cost-efficient solution, this threat will increase.

A growing indirect threat to this industry is the growth of car sharing. Whilst car sharing companies utilize cars as their medium for operations, the sharing element results in a lower number of new cars being sold. According to a study conducted by UC Berkeley's Transportation Sustainability Research Center (TSRC), car2go car sharing reduced the number of cars in Washington DC seven cars for each car2go shared vehicle. The equivalent figure in Calgary is 11 cars, highlighting the strong substitution threat that car sharing poses to the car manufacturing industry. Globally, car sharing companies such as BlaBlaCar and Zipcar have also grown in popularity.

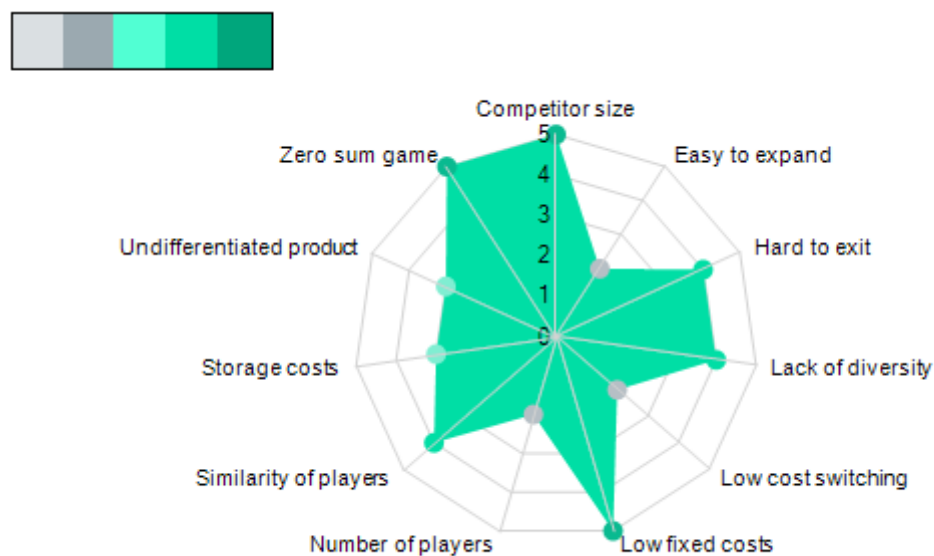
A secondary substitute to the car manufacturing industry is the recent implementation of finance packages such as PCP deals for new cars. These deals typically tie customers into a three-year deal, paying a monthly fee for the vehicle, with a lump sum payable at the end of the deal to purchase the vehicle or to renegotiate the deal for a newer vehicle. The ability to increase customer loyalty through long term deals increases the threat of this substitute, as customers may see the long-term deal as a more affordable option. However, at the end of the deal the customer will not own the vehicle, and has the ability to return it to the dealership. Dealerships are therefore able to continue re-leasing the

same vehicle to numerous customers (generally in the region of two to three different customers) increasing the possible profit margins per vehicle. PCP deals are offered by a range of car manufacturers such as Ford, General Motors, Renault, Toyota, and Fiat Chrysler, which serve a diverse range of countries globally.

Overall, the threat of substitutes is weak.

## 6.6. Degree of rivalry

Figure 11: Drivers of degree of rivalry in the global car manufacturing industry, 2019



SOURCE: MARKETLINE

MARKETLINE

With the rise of international competitors, rivalry in the automotive industry has become far more intense as firms compete on both price and non-price dimensions. Companies offer distinct incentives to differentiate themselves and to attract customers to purchase their own vehicles. The four major players in this industry, Toyota, Volkswagen, Hyundai and Renault-Nissan, accounted for over 38% of the global car manufacturing industry's volume in 2019.

Exit barriers for the industry players are high, making it difficult to leave, which increases rivalry. If a product fails, the heavy initial investment in research and design, alongside the production of the car, mean that it is extremely difficult to end the production and transition to a new product. Additionally, the production line is often taken up by a new model, which has incurred large costs to be achieved. The heavy investment and focus upon a single model further increases rivalry, as competitors cannot simply exit.

Offering extended warranties or service agreements with new cars is very common these days. To maintain low costs, companies consistently have to make manufacturing improvements to keep the business competitive. This requires additional capital expenditure which tends to eat up a company's earnings. On the other hand, if no one else offers the same products/services, then the company may enjoy a monopoly. For example, the Tata NANO enjoyed the monopoly of a small car which appealed to motorcyclists, of which there are no competitors in this segment. As such, the company was able to maintain the same model throughout its life span without having to invest a large chunk capital into research and development.

The ability of dealers to switch between manufacturers is an expensive prospect, reducing rivalry between players, as the costs associated with replacing physical stock and rebranding are likely to present a significant financial outlay.

Rivalry is reduced slightly by a degree of differentiation, as there are several segments within the industry, including luxury and budget. A number of companies service various segments, such as Nissan, which manufactures luxury cars under the Infiniti brand, alongside its core offering of more affordable vehicles. A lack of diversity and similarity between players raises rivalry.

The UK's decision to leave the EU will cause disruption to the European and global car manufacturing industry. The UK is the largest export market for German manufactured vehicles, and the potential imposition of tariffs could make it difficult for manufacturers to compete with British manufactured cars in the UK market. However, the inverse is also true and since the Brexit vote, Nissan is seeking trade assurances before instigating its next UK investment. This may open up the industry to other rivals to stimulate an increase in rivalry. The arrival of new large players is unlikely to

have a large impact on rivalry as PSA has acquired a UK based player (Vauxhall) and German based player (Opel) which already have an established position in their respective industries.

Many of the major car brands in the global car manufacturing industry have a long history in the countries in which they based their main operations and are unlikely to want to leave these industries. Fiat Chrysler in Italy, SEAT in Spain, Hyundai in South Korea, or Volvo (Geely) in Sweden will therefore remain in these countries unless circumstances change significantly. This reduces the degree of rivalry as players have carved out significant shares in their domestic industries.

Global value and volume decline in the last couple of years has intensified the level of rivalry. The COVID-19 pandemic will ensure that 2020 is a difficult year for the car manufacturing industry. Declining sales and the potential for economic recession will increase rivalry, as the auto industry is highly cyclical.

Overall, the degree of rivalry is assessed as strong.

## 7. Competitive Landscape

The global car manufacturing industry is fairly consolidated with the four leading players, Volkswagen, General Motors, Toyota, and Hyundai, accounting for a combined 38.2% share of the production volume in 2019. The leading players in this industry are tapping into the growing demand for hybrid & electric vehicles, while alliances within the industry are a common strategy. The Covid-19 pandemic has halted production in many countries, as well as disrupting the supply chain, and as such the leading players will be negatively impacted.

### 7.1. Market share

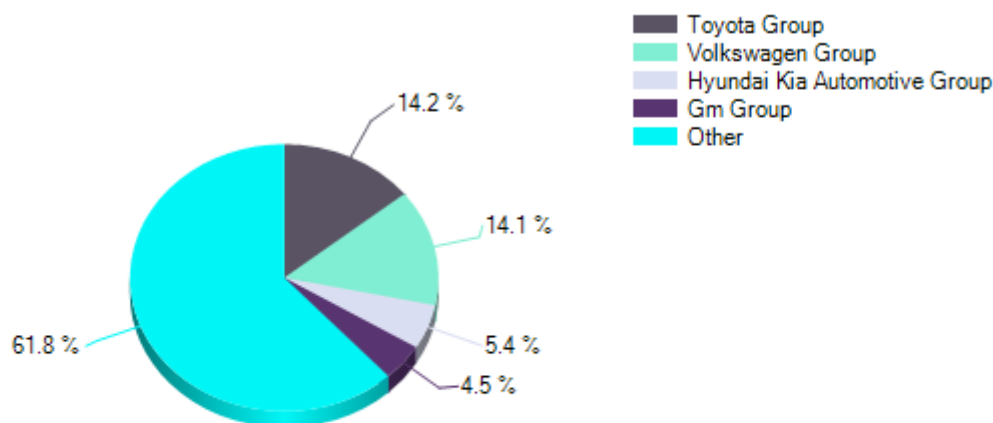
Table 6: Global car manufacturing industry share: % share, by volume, 2019

| Company                      | % Share |
|------------------------------|---------|
| Toyota Group                 | 14.2%   |
| Volkswagen Group             | 14.1%   |
| Hyundai Kia Automotive Group | 5.4%    |
| Gm Group                     | 4.5%    |
| Other                        | 61.8%   |
| Total                        | 100%    |

SOURCE: MARKETLINE

MARKETLINE

Figure 12: Global car manufacturing industry share: % share, by volume, 2019



SOURCE: MARKETLINE

MARKETLINE

### 7.2. Who are the leading players?

Toyota Group is the leading player in this industry, accounting for 14.2% of all cars produced globally in 2019. The company is headquartered in Japan but has manufacturing facilities throughout the Americas, Europe, and Asia.

Volkswagen is a leading player globally, accounting for 14.1% of all cars produced in 2019. The company is headquartered in Germany but has 124 production plants in 20 European countries and a further 11 countries in the Americas, Asia and Africa.

Hyundai Motor Co is a leading player in this industry, accounting for 5.4% of global car manufacturing output in 2019. The company produces vehicles under its Hyundai and Kia brands.

General Motors (GM) was a leading company in the global car manufacturing industry in 2019. The company accounted for 4.5% of cars produced in 2019. The company is headquartered in the US but operates globally.

### 7.3. How are strategic alliances used by the leading companies?

Strategic partnerships are a common strategy in this industry as companies share technology and intellectual property and achieve greater economies of scale. Globally many players in the car manufacturing industry have already established alliances that help them fend off outside threats and ensure safe avenues of growth for the alliance members.

Toyota is an industry player that has been open to developing alliances with other companies. The company has previously stated that the principle of such alliances is to "respect each other's strengths in technological development, production engineering, and sales networks". The company has alliances with Subaru, Mazda, and Suzuki, with the object of these being to become increasingly competitive and create better cars. In August 2019, Toyota and Suzuki announced that they had deepened their alliance with a Capital Alliance Agreement, to establish a long-term collaboration in new fields including autonomous vehicles. It is hoped that the combined strengths of the companies will enable faster and more successful development. Toyota has also joined Mazda and Denso to create a company called EV C.A. Spirit. The focus of this is the development of technology for manufacturing electric vehicles. Meanwhile the company collaborates with Uber Technologies in an attempt to bring to market autonomous ride-sharing as a mobility service.

Up until 2017, Toyota and Tesla had a strategic partnership, with Toyota acquiring a 1.43% stake in the company in 2010 for \$50m. Toyota also sold a shuttered Californian factory to Tesla for \$42m. The two companies then started to jointly develop RAV4 electric vehicles in Canada in 2011 and later sold about 2,500 units over three years. However, Toyota sold its shares in Tesla and set up its own electric cars division in 2016, instead becoming a rival.

In January 2019, Ford and Volkswagen entered into an alliance to build vans and pick-ups, with this being extended in July 2019 to include autonomous and electric cars. Volkswagen and Ford's collaborative strategy has shown only limited areas of firm cooperation, but there is plenty of speculation that it could go further over the next 3-5 years as pressures for industrial consolidation and defensive strategies rise. The two have signed a memorandum of understanding and are exploring "a strategic alliance designed to strengthen each company's competitiveness and better serve customers globally". The automakers are exploring potential projects across a number of areas including developing a range of commercial vehicles together to better serve the evolving needs of customers.

In 2018, Honda entered into a partnership with General Motors (GM) to develop autonomous vehicles. This involved Honda investing \$2.75bn in GM's Cruise Automation technology. The car manufacturers have since deepened their existing partnership through the joint development of two new electric vehicles, with these expected to be on the market by 2024.

As car manufacturing costs have increased in recent years an increasing number of players within the industry have sought to intensify the movement of manufacturing facilities towards Asia, especially since growth in the wider car manufacturing industry has been the strongest on this continent in recent years. A growing number of major global car manufacturing players have therefore sought to enter into joint ventures (JVs) with local Asian players to manufacture their vehicles in more cost efficient manufacturing facilities in Asia. This includes Hyundai which has agreed to establish a JV with local conglomerate Nishat Group located in Pakistan.

## 7.4. How is new technology opening up competition?

Technology within the car manufacturing industry has been evolving rapidly. With the advent of commercially viable electric cars, hydrogen technology and now autonomous vehicles, many impressive advances have been made in the automotive industry. Self-driving technology is seeing a lot of investment from many car manufacturers, although fully autonomous cars remain out of reach at present. Many of the world's leading automotive manufacturers are in a race to create the first fully autonomous car that can be sold to the public. However, tech giants including Apple and Google have now entered the industry and are putting the leading players under pressure.

Arguably the current industry leader is Google's Waymo. It is building a self-driving fleet in preparation for commercial service. In December 2018, it became the first company to launch a limited commercial robotaxi service in Phoenix, Arizona – stealing a march over Cruise and similar rivals. That said, the service is still in the testing stages and makes use of safety drivers. The might of Google's financial and technical resources mean Waymo can make developments faster than the current mainstream industry leaders, and purchase the vehicles, components and facilities needed to support its operations.

The rapid technological change is also forcing a shift in traditional supply chain relationships in the industry. The need for ever-more advanced on-board software has seen software developers, telecommunications and telematics service providers jostling to become Tier 1s. At the same time, OEMs and traditional Tier 1s are seeking alliances to rethink the way their systems are designed, developed and brought to market.

## 7.5. How are leading players progressing in the hybrid & electric cars segment?

Players operating within the car manufacturing industry have been facing greater pressure in recent years to become more environmentally friendly. In response, car manufacturers from all over the world have made significant promises to deliver only hybrid and electric vehicles in the future. The hybrid & electric cars market globally grew with a compound annual growth rate (CAGR) of 23.5% between 2015 and 2019, compared to a compound annual rate of change (CARC) of -0.4% seen in the overall car manufacturing industry over the same period. As such, the switch to hybrid & electric vehicles not only pacifies growing environmental concerns, but it also makes good business sense to tap into a growing market.

Toyota is currently investing heavily in its hybrid & electric vehicle offering aiming for half of its global sales to be accounted for by hybrid & electric vehicles by 2025, five years ahead of its original 2030 target. The company has been focusing on affordable hybrids, in which it has pioneered low-cost hybrid technology (Hybrid Synergy Drive) since the introduction of the Prius in 1997. It has sought to expand the range since then, adding the Corolla Hybrid and RAV4 Hybrid among others. Moreover, with a starting price of \$24,000 for its Prius hybrid and \$35,000 for its RAV4 hybrid SUV, Toyota has remained competitive even against conventional cars. Nearly 15% of Toyota's annual global sales are hybrids (1.6 million hybrids in 2019) more than the 1.6 million all-battery electric cars sold by Tesla and all other manufacturers combined. The company has plans to release its first electric vehicles in 2020.

For Volkswagen, an automaker devoted to the legacy of internal combustion engines, the shift to electrified cars has been a forced choice rather than option given tighter regulations in Europe and its competitive weakness in producing fuel-efficient cars that could put its future as a leading automaker at risk. Volkswagen released its first wave of its electrified vehicles through its Audi premium brand in the early 2010s with the electric version of the Audi A1 and the A3 Sportback plug-in and electric, while the subcompact e-Up and the e-Golf, electric versions of its existing VW brand models, followed in 2012-13. But the overhaul on its strategy towards fully electric vehicles came after 2015 – shortly after the Dieselgate emission scandal. In 2017-18, its new Audi models A6, A7 and A8 were offered in mild hybrid or plug-in hybrid variants. But up until 2018, electrified cars accounted for less than 1% of Volkswagen Group's total sales, with BEVs accounting for less than 0.3%. The success of updated versions of city cars e-Golf and e-Up in the last two years, were followed by the release of the Audi e-tron SUV and Porsche Taycan in 2019. Most recently, following the recent success of the premium VW Passat GTE plug-in, Volkswagen made the step to tap into the mass-market demand for electric cars with the release of the VW ID.3, a family-size affordable car with a range of between around 200 and 340 miles, and a starting price of less than \$34,000. The VW ID brand family is set to be the flagship model of

Volkswagen in its new era, aiming at a mass-market breakthrough as an affordable family car, similar to its conventional car predecessors.

GM's focus has been on the sub-compact and compact market with Chevy Bolt and Volt models respectively, but it has targeted the upper-medium end of the market with starting prices slightly above \$30,000. The Chevy Bolt has a range of 250 miles – based on its new updated battery – among the highest for its class.

Hyundai is one of the few car manufacturers that develops all types of electrified vehicles, from hybrid and plug-in hybrid to all-electric. Hyundai has mainly focused on producing relatively affordable sub-compact and compact cars; its first plug-in, the Hyundai Sonata compact sedan, was followed by the electric mass-market Hyundai IONIQ compact – also available as a PHEV – followed by the most recent Hyundai Kona, all with starting prices around \$30,000-35,000. Although these offerings have been more price competitive to similar models in the market, their electric range has been relatively smaller, something which Hyundai has sought to improve by launching updates of its existing models. The Hyundai Kona electric SUV was the company's breakthrough in this field with a range of up to 280 miles. Most recently, Hyundai has decided to shift towards full electrification of its models, and aims to expand its range across all class-sizes so it can tailor its supply to local demand in key markets. In terms of market positioning, the company aims to target younger demographics and enterprise customers with affordable battery electric vehicles.

## 7.6. What impact could the Covid-19 pandemic have on leading players?

The 2020 global Covid-19 pandemic is having a huge impact on the automotive industry globally. There has been severe disruption in the production of Chinese parts and widespread manufacturing plant closures. Automakers throughout the world have enforced temporary shutdowns at automotive production plants. While some manufacturing has restarted in some countries, all of the leading players in this industry will be negatively impacted by the pandemic, with some likely to be more severely hit than others. Volkswagen and GM are likely to experience a severe negative impact due to their reliance on the US and China. The other leading players may fare slightly better due to having a greater presence elsewhere.

## 8. Company Profiles

### 8.1. General Motors Company

#### 8.1.1. Company Overview

General Motors Company (GM or 'the company') is engaged in the design, development, production, and marketing of cars, trucks, and automobile parts. The company also provides automotive financing services. The company operates through five business segments, GM North America (GMNA), GM Europe (GME), GM International Operations (GMIO), GM South America (GMSA), and GM Financial. It operates globally with major presence in North America, Europe, and South America. It is headquartered in Detroit, Michigan.

The company reported revenues of (US Dollars) US\$147,049 million for the fiscal year ended December 2018 (FY2018), an increase of 1% over FY2017. In FY2018, the company's operating margin was 3%, compared to an operating margin of 5.9% in FY2017. The net profit of the company was US\$8,014 million in FY2018, compared to a net loss of US\$3,864 million in FY2017. The company reported revenues of US\$36,060.0 million for the second quarter ended June 2019, an increase of 3.4% over the previous quarter.

#### 8.1.2. Key Facts

**Table 7: General Motors Company: key facts**

|                      |                                                        |
|----------------------|--------------------------------------------------------|
| Head office:         | 300 Renaissance CenterDetroit, Michigan, United States |
| Number of Employees: | 173000                                                 |
| Website:             | www.gm.com                                             |
| Financial year-end:  | December                                               |
| Ticker:              | GM                                                     |
| Stock exchange:      | New York Stock Exchange                                |

**SOURCE:** COMPANY WEBSITE

MARKETLINE

#### 8.1.3. Business Description

General Motors Company (GM or 'the company') designs, manufactures, and markets automotive products worldwide. The company and its partners produce vehicles in 35 countries. In FY2018, GM sold around 10 million under the range of brands, including Chevrolet, Buick, GMC, Cadillac, Baojun, Holden, Jiefang, Alpheon, and Wuling. The company also has significant equity stakes in major joint ventures in China, including SAIC-GM, SAIC-GM-Wuling, FAW-GM, and GM Korea. As of December 2018, the company operated 12,509 authorized dealerships globally. GM operates in more than 35 countries worldwide with major presence in the US, Canada, Brazil and Korea.

The company operates through five business segments, GM North America (GMNA), GM International (GMI), GM Cruise, GM Financial and Corporate.

In FY2018, GMNA operated a network of 4,793 authorized dealers. GMNA primarily meets the demands of customers in North America with vehicles developed, manufactured and marketed under the Buick, Cadillac, Chevrolet, and GMC brands. In FY2018, the GMNA segment reported revenues of US\$ 113,792 million, which accounted for 77.4% of the company's total revenue.

GMI operated a network of 7,716 authorized dealers. In FY2018, the GMI segment reported revenues of US\$ 19,148 million, which accounted for 13% of the company's total revenue.

The demands of customers outside North America are primarily met with vehicles developed, manufactured and/or marketed under the Buick, Cadillac, Chevrolet, GMC and Holden, brands. The company also has equity ownership stakes directly or indirectly in entities through various regional subsidiaries, primarily in Asia. These companies design, manufacture, and market vehicles under the Alpheon, Baojun, Buick, Cadillac, Chevrolet, Jiefang, and Wuling brands.

Apart from consumer retail sales, the company sells cars and trucks to fleet customers, including daily rental car companies, commercial fleet customers, leasing companies and governments. GM also provides wide range of after sale vehicle services and products through its dealer network, such as maintenance, light repairs, collision repairs, vehicle accessories, and extended service warranties.

In FY2018, the company sold a total of 1,218,000 vehicles, including 740,000 vehicles in North America and 478,000 vehicles sales in other international operations. GM Financial is the company's captive automotive finance company. GM Financial provides consumer lending, both loan and lease, across the credit spectrum. Additionally GM Financial offers commercial products to dealer customers that include new and used vehicle inventory financing, inventory insurance, working capital, capital improvement loans, fleet financing and storage center financing. GM Financial has 39 facilities of which 26 are located in the US. In FY2018, the GM Financial segment reported revenues of US\$14,016 million, which accounted for 9.5% of the company's total revenue.

In FY2018, corporate segment reported revenue US\$203 million, which accounted for 0.1% of the company's revenue.

The company's wholly-owned subsidiary, OnStar provides subscription-based and complementary services to approximately 20 million connected vehicles globally. OnStar provides connected safety, security and mobility solutions and advanced information technology. OnStar's key services include automatic crash response, stolen vehicle assistance, remote door unlock, turn-by-turn navigation, vehicle diagnostics, hands-free calling and 4G LTE wireless connectivity.

Geographically, the company classifies its operations into two segments, namely the US and the non-US. In FY2018, the US accounted for 79.3% of the company's total revenues, followed by the non-US with 20.7%.

Table 8: General Motors Company: Annual Financial Ratios

| Key Ratios                          | 2014    | 2015   | 2016    | 2017              | 2018   |
|-------------------------------------|---------|--------|---------|-------------------|--------|
| <b>Growth Ratios</b>                |         |        |         |                   |        |
| Sales Growth %                      | -12.96  | 9.92   | -2.41   | 1.00              | -6.67  |
| Operating Income Growth %           | 245.67  | 45.08  | -0.29   | -48.68            | 23.31  |
| EBITDA Growth %                     | 245.67  | 45.08  | -0.29   | -48.68            | 23.31  |
| Net Income Growth %                 | 145.30  | -2.68  | -140.99 |                   | -16.00 |
| EPS Growth %                        | 205.42  | 2.56   | -11.21  | 24.33             | -24.53 |
| Working Capital Growth %            | -110.07 | 396.30 | -9.27   | -14.76            | 42.76  |
| <b>Equity Ratios</b>                |         |        |         |                   |        |
| EPS (Earnings per Share) USD        | 5.89    | 6.01   | 5.21    | 5.44              | 4.57   |
| Dividend per Share USD              | 1.38    | 1.52   | 1.52    | 1.52              | 1.52   |
| Dividend Cover Absolute             | 4.27    | 3.95   | 3.43    | 3.58              | 3.01   |
| Book Value per Share USD            | 26.58   | 29.22  | 25.00   | 27.76             | 29.85  |
| <b>Profitability Ratios</b>         |         |        |         |                   |        |
| Gross Margin %                      | 12.84   | 12.76  | 12.52   | 9.59              | 10.18  |
| Operating Margin %                  | 4.41    | 5.82   | 5.95    | 3.02              | 3.99   |
| Net Profit Margin %                 | 7.14    | 6.32   | -2.65   | 5.45              | 4.91   |
| Profit Markup %                     | 14.73   | 14.62  | 14.31   | 10.60             | 11.33  |
| PBT Margin (Profit Before Tax) %    | 6.17    | 8.05   | 8.15    | 5.81              | 5.42   |
| Return on Equity %                  | 24.30   | 21.51  | -11.04  | 20.62             | 16.11  |
| Return on Capital Employed %        | 4.86    | 6.36   | 6.39    | 3.06              | 3.83   |
| Return on Assets %                  | 5.21    | 4.53   | -1.78   | 3.64              | 2.96   |
| Return on Working Capital %         | 9.64    |        |         |                   |        |
| Operating Costs (% of Sales) %      | 95.59   | 94.18  | 94.05   | 96.98             | 96.01  |
| Administration Costs (% of Sales) % | 8.76    | 6.93   | 6.57    | 6.56              | 6.19   |
| <b>Liquidity Ratios</b>             |         |        |         |                   |        |
| Current Ratio Absolute              | 0.97    | 0.89   | 0.89    | 0.92              | 0.88   |
| Quick Ratio Absolute                | 0.78    | 0.76   | 0.76    | 0.80              | 0.76   |
| Cash Ratio Absolute                 | 0.33    | 0.29   | 0.31    | 0.33              | 0.27   |
| <b>Leverage Ratios</b>              |         |        |         |                   |        |
| Debt to Equity Ratio Absolute       | 1.58    | 1.71   | 2.69    | 2.70              | 2.47   |
| Net Debt to Equity Absolute         | 1.20    | 1.43   | 2.25    | 2.16              | 2.02   |
| Debt to Capital Ratio Absolute      | 0.61    | 0.63   | 0.73    | 0.73              | 0.71   |
| <b>Efficiency Ratios</b>            |         |        |         |                   |        |
| Asset Turnover Absolute             | 0.73    | 0.72   | 0.67    | 0.67              | 0.60   |
| Fixed Asset Turnover Absolute       | 3.15    | 2.52   | 1.99    | 1.82              | 1.67   |
| Inventory Turnover Absolute         | 8.63    | 10.49  | 11.74   | 12.98             | 12.20  |
| Current Asset Turnover Absolute     | 1.77    | 2.05   | 2.01    | 2.04              | 1.83   |
| Capital Employed Turnover Absolute  | 1.10    | 1.09   | 1.07    | 1.01              | 0.96   |
| Working Capital Turnover Absolute   | 8.68    |        |         |                   |        |
| <b>SOURCE: COMPANY FILINGS</b>      |         |        |         | <b>MARKETLINE</b> |        |

Table 9: General Motors Company: Key Employees

| Name                 | Job Title                                                                        | Board                  |
|----------------------|----------------------------------------------------------------------------------|------------------------|
| Alan S. Batey        | Executive Vice President North America                                           | Senior Management      |
| Alan S. Batey        | President North America                                                          | Senior Management      |
| Ann Cathcart Chaplin | Chief Compliance Officer                                                         | Senior Management      |
| Ann Cathcart Chaplin | Deputy General Counsel                                                           | Senior Management      |
| Barry L. Engle       | Executive Vice President Americas                                                | Senior Management      |
| Barry L. Engle       | President Americas                                                               | Senior Management      |
| Carol M. Stephenson  | Director                                                                         | Non Executive Board    |
| Christopher T. Hatto | Chief Accounting Officer                                                         | Senior Management      |
| Christopher T. Hatto | Controller                                                                       | Senior Management      |
| Christopher T. Hatto | Vice President                                                                   | Senior Management      |
| Ciprian Suta         | Managing Director Russia                                                         | Senior Management      |
| Craig B. Glidden     | Executive Vice President                                                         | Senior Management      |
| Craig B. Glidden     | General Counsel                                                                  | Senior Management      |
| Craig Buchholz       | Senior Vice President Global Communications                                      | Senior Management      |
| Dane Parker          | Chief Sustainability Officer                                                     | Senior Management      |
| Daniel E. Berce      | Chief Executive Officer GM Financial                                             | Senior Management      |
| Daniel E. Berce      | President GM Financial                                                           | Senior Management      |
| Daniel E. Berce      | Senior Vice President GM Financial                                               | Senior Management      |
| Deborah Wahl         | Chief Marketing Officer                                                          | Executive Board        |
| Devin Wenig          | Director                                                                         | Non Executive Board    |
| Dhivya Suryadevara   | Chief Financial Officer                                                          | Executive Board        |
| Dhivya Suryadevara   | Executive Vice President                                                         | Executive Board        |
| Doug Parks           | Executive Vice President Global Product Development, Purchasing and Supply Chain | Senior Management      |
| Everett Eissenstat   | Senior Vice President Global Public Policy                                       | Senior Management      |
| Francisco Macedo     | General Manager                                                                  | Senior Management      |
| Gerald Johnson       | Executive Vice President Global Manufacturing                                    | Senior Management      |
| Harry Sze            | Director Design Design Studio, Shanghai                                          | Senior Management      |
| Hector Villarreal    | President General Motors Southeast Asia                                          | Senior Management      |
| Jane L. Mendillo     | Director                                                                         | Non Executive Board    |
| Jeffrey Massimilla   | New Vehicle Safety Chief                                                         | Operational Management |

SOURCE: COMPANY FILINGS

MARKETLINE

Table 10: General Motors Company: Key Employees Continued

| Name              | Job Title                                                           | Board               |
|-------------------|---------------------------------------------------------------------|---------------------|
| John P. Roth      | Managing Director GM Africa and Middle East operations              | Senior Management   |
| John P. Roth      | President GM Africa and Middle East operations                      | Senior Management   |
| Joseph Jimenez    | Director                                                            | Non Executive Board |
| Julian Blissett   | Executive Vice President                                            | Senior Management   |
| Julian Blissett   | President GM China                                                  | Senior Management   |
| Kelly MacDonald   | Chief Marketing Officer Africa and the Middle East                  | Senior Management   |
| Kimberly Brycz    | Senior Vice President Global human resources                        | Senior Management   |
| Linda R. Gooden   | Director                                                            | Non Executive Board |
| Mark L. Reuss     | President                                                           | Senior Management   |
| Mary T. Barra     | Chairman                                                            | Executive Board     |
| Mary T. Barra     | Chief Executive Officer                                             | Executive Board     |
| Matthew Tsien     | Chief Technology Officer                                            | Senior Management   |
| Matthew Tsien     | Executive Vice President                                            | Senior Management   |
| Patricia F. Russo | Director                                                            | Non Executive Board |
| Randall D. Mott   | Chief Information Officer                                           | Senior Management   |
| Randall D. Mott   | Senior Vice President Global Information Technology                 | Senior Management   |
| Rocky Gupta       | Treasurer                                                           | Senior Management   |
| Rocky Gupta       | Vice President Investor Relations                                   | Senior Management   |
| Sigal Cordeiro    | Vice President Urban Mobility and Maven Car Sharing                 | Senior Management   |
| Steve Carlisle    | President Cadillac                                                  | Senior Management   |
| Steve Carlisle    | Senior Vice President                                               | Senior Management   |
| Steve Kiefer      | President General Motors South America and International Operations | Senior Management   |
| Steve Kiefer      | Senior Vice President                                               | Senior Management   |
| Sumito Ishii      | Managing Director Thailand operations                               | Senior Management   |
| Theodore M. Solso | Director                                                            | Non Executive Board |
| Thomas M. Schoewe | Director                                                            | Non Executive Board |
| Wesley G. Bush    | Director                                                            | Non Executive Board |

SOURCE: COMPANY FILINGS

MARKETLINE

## 8.2. Volkswagen AG

### 8.2.1. Company Overview

Volkswagen AG (Volkswagen or 'the group') is one of the world's leading automobile manufacturers and the largest car manufacturer in Europe. The group markets its vehicles under multiple brands, including Audi, SEAT, Skoda, Bentley, Bugatti, Lamborghini, Porsche, Ducati, Volkswagen Commercial Vehicles, MOIA, Scania, and MAN. Volkswagen conducts its business through four segments namely, Passenger Cars; Financial Services; Commercial Vehicles; and Power Engineering. The group performs operations across North and South America, Europe, Asia-Pacific and the Middle East. The group is headquartered in Wolfsburg, Germany.

The company reported revenues of (Euro) EUR235,849 million for the fiscal year ended December 2018 (FY2018), an increase of 2.7% over FY2017. In FY2018, the company's operating margin was 5.9%, compared to an operating margin of 6% in FY2017. In FY2018, the company recorded a net margin of 5.1%, compared to a net margin of 5% in FY2017. The company reported revenues of EUR65,185.0 million for the second quarter ended June 2019, an increase of 8.6% over the previous quarter.

### 8.2.2. Key Facts

**Table 11: Volkswagen AG: key facts**

|                      |                                                                |
|----------------------|----------------------------------------------------------------|
| Head office:         | Berliner Ring 2Wolfsburg, Niedersachsen, Germany               |
| Telephone:           | 49536190                                                       |
| Fax:                 | 495361928282                                                   |
| Number of Employees: | 665260                                                         |
| Website:             | <a href="http://www.volkswagenag.com">www.volkswagenag.com</a> |
| Financial year-end:  | December                                                       |
| Ticker:              | VOW3                                                           |
| Stock exchange:      | XETRA                                                          |

**SOURCE:** COMPANY WEBSITE

MARKETLINE

### 8.2.3. Business Description

Volkswagen AG (Volkswagen or 'the group'), the parent company of the Volkswagen Group, manufactures passenger, commercial vehicles and trucks. The group is also active in other fields of business, including manufacturing large-bore diesel engines for marine and stationary applications, turbo chargers, turbo compressors and chemical reactors. In FY2018, the group delivered 10.8 million vehicles.

Volkswagen operates under four business segments: Passenger Cars; Financial Services; Commercial Vehicles; and Power Engineering.

The Passenger Cars segment is engaged in the development of vehicles and engines, production and sale of passenger cars, and genuine parts business. The group sells its vehicles under various brands, including: Volkswagen Passenger Cars; Audi; Skoda; Porsche; SEAT and Bentley. The segment's each brand operates as an independent entity in the market. In FY2018, Volkswagen delivered 10,101,297 passenger cars to customers worldwide. It also includes the Ducati brand's motorcycle business. In FY2018, the Passenger Cars segment reported revenues of EUR171,028 million, which accounted for 72.5% of the group's revenue.

The Volkswagen Financial Services segment comprises dealer and customer financing, leasing, banking and insurance activities, as well as mobility services and fleet management in 51 countries. The principal companies in this segment include Volkswagen Bank GmbH, Volkswagen Leasing GmbH, and Volkswagen Versicherungsdienst GmbH in Europe;

and VW CREDIT, INC. in North America. As of December 2018, the total contracts stood at 17.8 million. In FY2018, the Financial Services segment reported revenues of EUR31,592 million, which accounted for 13.5% of the group's revenue.

In the Commercial Vehicle segment, the group offers buses, pick-ups and heavy trucks. The commercial vehicle segment includes the operations of Volkswagen Commercial Vehicles, Scania and MAN brands. The segment is primarily engaged in the development, production and sale of light commercial vehicles, trucks and buses, its related genuine parts business and related services. In FY2018, Volkswagen delivered 732,715 commercial vehicles, trucks and buses to customers worldwide. In FY2018, the Commercial Vehicles segment reported revenues of EUR29,388 million, which accounted for 12.5% of the group's total revenue.

The group's Power Engineering segment is engaged in the development and production of large-bore diesel engines, turbo machinery, as well as the production of special gear units, propulsion components and testing systems. The power engineering segment includes the operations of MAN power engineering. In FY2018, the Power Engineering segment reported revenues of EUR3,605 million, which accounted for 1.5% of the group's total revenue.

During FY2018, the group delivered 10,101,297 vehicles, including 6,244,869 units of Volkswagen passenger vehicles, 1,812,485 Audi vehicles, 1,253,741 Skoda vehicles, 517,627 SEAT vehicles, 10,494 Bentley vehicles, 5,750 Lamborghini's, 256,255 Porsche vehicles and 76 Bugatti. In addition, the group delivered 732,715 commercial vehicles, including 499,723 Volkswagen Commercial vehicles, 96,475 Scania vehicles and 136,517 MAN vehicles.

Geographically, the group classifies its operations into four geographies, namely Europe/Other, Asia Pacific, North America and South America. In FY2018, Europe/Other accounted for 61.1% of the group's total revenues, followed by Asia Pacific with 18.4%; North America with 16.1%; and South America with 4.4%.

Table 12: Volkswagen AG: Annual Financial Ratios

| Key Ratios                          | 2014    | 2015   | 2016   | 2017              | 2018   |
|-------------------------------------|---------|--------|--------|-------------------|--------|
| <b>Growth Ratios</b>                |         |        |        |                   |        |
| Sales Growth %                      | 5.35    | 1.86   | 5.65   | 2.74              | 7.12   |
| Operating Income Growth %           | -132.05 |        | 94.54  | 0.74              | 21.84  |
| EBITDA Growth %                     | -132.05 |        | 94.54  | 0.74              | 21.84  |
| Net Income Growth %                 | -112.47 |        | 113.28 | 5.97              | 14.42  |
| EPS Growth %                        | -9.75   | 26.22  | 32.24  | -7.16             | -2.36  |
| Working Capital Growth %            | -883.33 | 602.55 | -98.73 | -5720.22          | 25.51  |
| <b>Equity Ratios</b>                |         |        |        |                   |        |
| EPS (Earnings per Share) EUR        | -3.16   | 10.26  | 22.30  | 23.59             | 26.62  |
| Dividend per Share EUR              | 0.17    | 2.06   | 3.96   | 4.86              | 6.56   |
| Dividend Cover Absolute             | -18.56  | 4.98   | 5.63   | 4.85              | 4.06   |
| Book Value per Share EUR            | 175.66  | 184.90 | 217.13 | 233.63            | 242.93 |
| <b>Profitability Ratios</b>         |         |        |        |                   |        |
| Gross Margin %                      | 16.55   | 19.50  | 19.49  | 20.15             | 19.78  |
| Operating Margin %                  | -1.91   | 3.27   | 6.02   | 5.90              | 6.71   |
| Net Profit Margin %                 | -0.64   | 2.47   | 4.99   | 5.15              | 5.50   |
| Profit Markup %                     | 19.83   | 24.22  | 24.20  | 25.23             | 24.66  |
| PBT Margin (Profit Before Tax) %    | -0.61   | 3.36   | 5.96   | 6.63              | 7.27   |
| Return on Equity %                  | -1.56   | 5.79   | 10.52  | 10.36             | 11.40  |
| Return on Capital Employed %        | -1.74   | 3.06   | 5.28   | 4.80              | 5.30   |
| Return on Assets %                  | -0.37   | 1.36   | 2.75   | 2.76              | 2.94   |
| Return on Working Capital %         |         |        |        | 89.41             | 86.80  |
| Return on Working Capital %         | 3206.31 |        |        |                   |        |
| Operating Costs (% of Sales) %      | 101.91  | 96.73  | 93.98  | 94.10             | 93.29  |
| Administration Costs (% of Sales) % | 14.84   | 14.26  | 12.89  | 12.67             | 11.58  |
| <b>Liquidity Ratios</b>             |         |        |        |                   |        |
| Current Ratio Absolute              | 0.98    | 0.88   | 1.00   | 1.09              | 1.12   |
| Quick Ratio Absolute                | 0.74    | 0.66   | 0.75   | 0.82              | 0.84   |
| Cash Ratio Absolute                 | 0.31    | 0.27   | 0.29   | 0.34              | 0.33   |
| <b>Leverage Ratios</b>              |         |        |        |                   |        |
| Debt to Equity Ratio Absolute       | 1.65    | 1.67   | 1.50   | 1.63              | 1.61   |
| Net Debt to Equity Absolute         | 1.42    | 1.46   | 1.33   | 1.38              | 1.40   |
| Debt to Capital Ratio Absolute      | 0.62    | 0.63   | 0.60   | 0.62              | 0.62   |
| <b>Efficiency Ratios</b>            |         |        |        |                   |        |
| Asset Turnover Absolute             | 0.58    | 0.55   | 0.55   | 0.54              | 0.53   |
| Fixed Asset Turnover Absolute       | 2.72    | 2.47   | 2.46   | 2.41              | 2.34   |
| Inventory Turnover Absolute         | 5.35    | 4.73   | 4.66   | 4.37              | 4.38   |
| Current Asset Turnover Absolute     | 1.54    | 1.44   | 1.45   | 1.37              | 1.36   |
| Capital Employed Turnover Absolute  | 0.91    | 0.94   | 0.88   | 0.81              | 0.79   |
| <b>SOURCE: COMPANY FILINGS</b>      |         |        |        | <b>MARKETLINE</b> |        |

Table 13: Volkswagen AG: Annual Financial Ratios (Continued)

| Key Ratios                        | 2014   | 2015 | 2016 | 2017  | 2018  |
|-----------------------------------|--------|------|------|-------|-------|
| Working Capital Turnover Absolute |        |      |      | 15.15 | 12.93 |
| Working Capital Turnover Absolute | 511.26 |      |      |       |       |

SOURCE: COMPANY FILINGS

MARKETLINE

Table 14: Volkswagen AG: Key Employees

| Name                    | Job Title                                               | Board               |
|-------------------------|---------------------------------------------------------|---------------------|
| Alexander Hitzinger     | Director Commercial vehicles division                   | Senior Management   |
| Andreas Renschler       | Chief Executive Officer TRATON AG                       | Senior Management   |
| Andreas Salewsky        | Head Component site, Salzgitter                         | Senior Management   |
| Axel Andorff            | Executive Vice President Research and Development, SEAT | Senior Management   |
| Bernd Althusmann        | Director                                                | Non Executive Board |
| Birgit Dietze           | Director                                                | Non Executive Board |
| Bjorn Goerke            | Chief Technology Officer Car.Software organization      | Senior Management   |
| Bram Schot              | Chief Executive Officer AUDI AG                         | Senior Management   |
| Christian Bleiel        | Head Component Production, Group brand SKODA AUTO       | Senior Management   |
| Dirk GroBe-Loheide      | Director Procurement                                    | Executive Board     |
| Fabian Simmer           | Head Product and Events Communications                  | Senior Management   |
| Frank Engel             | Executive Vice President Components, Logistics, Quality | Senior Management   |
| Frank Fischer           | Chief Executive Officer Tennessee plant                 | Senior Management   |
| Frank Witter            | Director Finance and IT                                 | Senior Management   |
| Gunnar Kilian           | Director Human Resources                                | Executive Board     |
| Gurpratap Boparai       | Managing Director SKODA Auto India Private Ltd          | Senior Management   |
| Hans Dieter Potsch      | Chairman                                                | Non Executive Board |
| Hans-Peter Fischer      | Director                                                | Non Executive Board |
| Heiner Lanze            | Head Procurement                                        | Senior Management   |
| Herbert Diess           | Chief Executive Officer                                 | Senior Management   |
| Hessa Sultan Al-Jaber   | Director                                                | Non Executive Board |
| Hiltrud Dorothea Werner | Director Integrity and Legal Affairs                    | Executive Board     |
| Johan de Nysschen       | Chief Operating Officer North America                   | Senior Management   |
| Jorg Hofmann            | Deputy Chairman                                         | Non Executive Board |
| Kurt Leitner            | General Manager Singapore                               | Senior Management   |
| Manfred Kantner         | Head Sales, Europe                                      | Senior Management   |
| Matthias Rabe           | Chief Technology Officer Volkswagen Passenger Cars      | Senior Management   |
| Oliver Blume            | Chief Executive Officer Dr. Ing. h.c. F. Porsche AG     | Senior Management   |
| Saad Chehab             | Chief Marketing Officer the US                          | Senior Management   |
| Stephan Beyse           | Head Procurement, Genuine Parts, Kassel                 | Senior Management   |

SOURCE: COMPANY FILINGS

MARKETLINE

Table 15: Volkswagen AG: Key Employees Continued

| Name            | Job Title                     | Board             |
|-----------------|-------------------------------|-------------------|
| Ulrich Eichhorn | Head Research and Development | Senior Management |

SOURCE: COMPANY FILINGS

MARKETLINE

## 8.3. Hyundai Motor Company

### 8.3.1. Company Overview

Hyundai Motor Company (Hyundai or 'the company') is one of the largest automobile manufacturers in the world. The company is specialized in the production and sale of automobiles, including passenger cars, sports utility vehicles (SUVs), buses, and trucks. It offers its vehicles under the brands: Centennial / Equus, Creta, Genesis, Veloster, Azera, Sonata, i40, Elantra, Accent, ix35 Fuel Cell, Sonata Hybrid, County, Aero Town, Super Aero City Santa Fe, Tucson / ix35 and Universe. It has manufacturing presence in the US, China, India, Czech Republic, Turkey, Brazil, and Russia, besides South Korea. The company is headquartered in Seoul, South Korea.

The company reported revenues of (Won) KRW96,812,609 million for the fiscal year ended December 2018 (FY2018), an increase of 0.5% over FY2017. In FY2018, the company's operating margin was 2.3%, compared to an operating margin of 4% in FY2017. In FY2018, the company recorded a net margin of 1.6%, compared to a net margin of 4.2% in FY2017. The company reported revenues of KRW23,987,079.0 million for the first quarter ended March 2019, a decrease of 4.9% over the previous quarter.

### 8.3.2. Key Facts

**Table 16: Hyundai Motor Company: key facts**

|                      |                                                                            |
|----------------------|----------------------------------------------------------------------------|
| Head office:         | 12 Heolleung-ro, Seocho-gu, Seoul, Seoul , Republic of Korea (South Korea) |
| Number of Employees: | 122217                                                                     |
| Website:             | www.hyundai.com                                                            |
| Financial year-end:  | December                                                                   |
| Ticker:              | 005380                                                                     |
| Stock exchange:      | Korea Stock Exchange                                                       |

**SOURCE:** COMPANY WEBSITE

MARKETLINE

### 8.3.3. Business Description

Hyundai Motor Company (Hyundai or 'the company') is a Korea based company that is engaged in the design, development, and manufacturing of automobiles. The company is part of the Hyundai Group, which includes companies with diverse market range, including steel, construction, auto parts, finance and services, information technology and software, and logistics. Hyundai primarily operates in Korea, North America, Europe, Asia, and other countries.

The company operates through three business segments: Vehicle, Finance, and Others.

The Vehicle segment is engaged in the design, development, manufacturing and sales of automobiles. The company's passenger vehicles include passenger cars and sports utility vehicles (SUVs). The company also offers commercial vehicles, including cargo, dump, mixer, and tractor trucks. Its commercial vehicles also include buses, trucks and special vehicles. The company sells its passenger cars under Centennial, Equus, Genesis, Veloster, Azera, Sonata, i40, Elantra, Accent, i30, i20, ix20, i10, Eon, and HB20 brand names. The company markets its SUVs under Creta, Santa Fe, Tucson, and ix35 brand names. The segment also offers bare chassis for customers. In FY2018, the Vehicle segment reported revenues of KRW75,265,414 million, which accounted for 77.7% of the company's revenue.

Hyundai has three factories in South Korea, including Ulsan, Asan, and Jeonju factories. The Asan factory is a produces high-quality midsize and full-size cars, such as Sonata and Azera (Grandeur), every year. The Jeonju factory is the world's biggest production center for commercial vehicles with an annual capacity to produce 100,000 vehicles per year. The Jeonju factory specializes in the production of commercial vehicles such as trucks, buses, and specially equipped vehicles.

The company also operates manufacturing bases outside South Korea, including the US, China, India, Czech Republic, Turkey, Brazil, and Russia. The Indian plant is manufacturing base for strategic vehicles such as EON, i10, and i20. The Czech plant manufactures Europe market focuses on strategic vehicles such as i-series. The Russia plant manufactures strategic model Solaris (Accent) focused on the local market. Hyundai Motor's Brazil plant manufactures local market focused strategic vehicle, HB20.

The company's Finance segment operates vehicle financing, credit card processing and other financing activities. In FY2018, the Finance segment reported revenues of KRW14,958,204 million, which accounted for 15.5% of the company's revenue.

The Other segment includes the research and development (R&D), train manufacturing, and other activities of the company. In FY2018, the Others segment reported revenues of KRW6,588,991 million, which accounted for 6.8% of the company's revenue.

Geographically, the company classifies its operations into five segments, namely Korea, North America, Europe, Asia, and Others. In FY2018, Korea segment accounted for 38% of the company's revenues, followed by North America with 31.7%; Europe with 17.7%; Asia with 9.6%; and Others with 3%.

Table 17: Hyundai Motor Company: Annual Financial Ratios

| Key Ratios                          | 2015      | 2016      | 2017      | 2018              | 2019      |
|-------------------------------------|-----------|-----------|-----------|-------------------|-----------|
| <b>Growth Ratios</b>                |           |           |           |                   |           |
| Sales Growth %                      | 3.03      | 1.84      | 2.91      | 0.45              | 9.23      |
| Operating Income Growth %           | -14.98    | -19.02    | -24.57    | -43.21            | 61.58     |
| EBITDA Growth %                     | -14.98    | -19.02    | -24.57    | -43.21            | 61.58     |
| Net Income Growth %                 | -12.65    | -15.75    | -25.41    | -62.60            | 97.60     |
| EPS Growth %                        | -12.55    | -13.73    | -16.94    | -61.81            | 81.05     |
| Working Capital Growth %            | -11.83    | 9.59      | 6.85      | -23.51            | -3.40     |
| <b>Equity Ratios</b>                |           |           |           |                   |           |
| EPS (Earnings per Share) KRW        | 23878.72  | 20133.12  | 15011.27  | 5650.43           | 11327.56  |
| Dividend per Share KRW              | 4000.00   | 4000.00   | 4000.00   | 4000.00           | 4000.00   |
| Dividend Cover Absolute             | 5.97      | 5.03      | 3.75      | 1.41              | 2.83      |
| Book Value per Share KRW            | 230858.83 | 250098.18 | 257221.96 | 256422.29         | 267549.00 |
| <b>Profitability Ratios</b>         |           |           |           |                   |           |
| Gross Margin %                      | 19.85     | 18.89     | 18.24     | 15.64             | 16.70     |
| Operating Margin %                  | 6.94      | 5.52      | 4.05      | 2.29              | 3.38      |
| Net Profit Margin %                 | 6.98      | 5.77      | 4.18      | 1.56              | 2.82      |
| Profit Markup %                     | 24.77     | 23.29     | 22.31     | 18.54             | 20.04     |
| PBT Margin (Profit Before Tax) %    | 9.20      | 7.80      | 4.61      | 2.61              | 3.94      |
| Return on Equity %                  | 10.35     | 8.05      | 5.84      | 2.22              | 4.25      |
| Return on Capital Employed %        | 5.14      | 3.82      | 2.89      | 1.69              | 2.53      |
| Return on Assets %                  | 4.11      | 3.14      | 2.26      | 0.84              | 1.59      |
| Return on Working Capital %         | 24.25     | 17.92     | 12.65     | 9.39              | 15.71     |
| Operating Costs (% of Sales) %      | 93.06     | 94.48     | 95.95     | 97.71             | 96.62     |
| Administration Costs (% of Sales) % | 11.93     | 12.25     | 12.41     | 11.98             | 12.07     |
| <b>Liquidity Ratios</b>             |           |           |           |                   |           |
| Current Ratio Absolute              | 1.64      | 1.66      | 1.71      | 1.48              | 1.43      |
| Quick Ratio Absolute                | 1.42      | 1.42      | 1.48      | 1.26              | 1.21      |
| Cash Ratio Absolute                 | 0.59      | 0.64      | 0.68      | 0.54              | 0.48      |
| <b>Leverage Ratios</b>              |           |           |           |                   |           |
| Debt to Equity Ratio Absolute       | 0.90      | 0.96      | 0.90      | 0.90              | 0.99      |
| Net Debt to Equity Absolute         | 0.93      | 0.98      | 0.91      | 0.94              | 1.05      |
| Debt to Capital Ratio Absolute      | 0.47      | 0.49      | 0.47      | 0.47              | 0.50      |
| <b>Efficiency Ratios</b>            |           |           |           |                   |           |
| Asset Turnover Absolute             | 0.59      | 0.54      | 0.54      | 0.54              | 0.56      |
| Fixed Asset Turnover Absolute       | 2.24      | 1.93      | 1.90      | 1.91              | 2.00      |
| Inventory Turnover Absolute         | 8.87      | 7.70      | 7.58      | 7.78              | 7.87      |
| Current Asset Turnover Absolute     | 1.39      | 1.34      | 1.32      | 1.32              | 1.42      |
| Capital Employed Turnover Absolute  | 0.74      | 0.69      | 0.71      | 0.74              | 0.75      |
| Working Capital Turnover Absolute   | 3.49      | 3.25      | 3.13      | 4.11              | 4.64      |
| <b>SOURCE: COMPANY FILINGS</b>      |           |           |           | <b>MARKETLINE</b> |           |

Table 18: Hyundai Motor Company: Key Employees

| Name                 | Job Title                                                           | Board               |
|----------------------|---------------------------------------------------------------------|---------------------|
| Albert Biermann      | Director                                                            | Executive Board     |
| Albert Biermann      | President RandD Division                                            | Executive Board     |
| Angela Zepeda        | Chief Marketing Officer Hyundai Motor America                       | Senior Management   |
| Ashley Boaden        | Business Development Manager, Hyundai Motor UK                      | Senior Management   |
| Bang Sun Jeong       | Vice President Middle East and Africa Region                        | Senior Management   |
| Brian K. Latouf      | Chief Strategy Officer North America                                | Senior Management   |
| Byung Kook Lee       | Director                                                            | Non Executive Board |
| Chi-Won Yoon         | Director                                                            | Non Executive Board |
| Claudia Marquez      | Chief Executive Officer Hyundai Motor Mexico                        | Senior Management   |
| Dong Kyu Lee         | Director                                                            | Non Executive Board |
| Eon Tae Ha           | Director                                                            | Executive Board     |
| Eon Tae Ha           | Vice President                                                      | Executive Board     |
| Eugene M. Ohr        | Director                                                            | Non Executive Board |
| Eui Sun Chung        | Vice Chairman                                                       | Executive Board     |
| Eun Soo Choi         | Director                                                            | Non Executive Board |
| J. Scott Drennan     | Vice President Urban Air Mobility Division                          | Senior Management   |
| Jaiwon Shin          | Executive Vice President                                            | Senior Management   |
| Jaiwon Shin          | Head Urban Air Mobility Division                                    | Senior Management   |
| Jose Munoz           | Chief Operating Officer                                             | Senior Management   |
| Juho Suh             | Head Hyundai Design Innovation Group                                | Senior Management   |
| Juho Suh             | Vice President                                                      | Senior Management   |
| Kwang-guk Lee        | Head China Operations                                               | Senior Management   |
| Kwang-guk Lee        | President China Operations                                          | Senior Management   |
| Mark Del Rosso       | Chief Executive Officer Genesis US operations                       | Senior Management   |
| Mong Koo Chung       | Chairman                                                            | Executive Board     |
| Sang-Seung Yi        | Director                                                            | Non Executive Board |
| Simon Loasby         | Head Hyundai Styling Group, Hyundai Design Center, Korea            | Senior Management   |
| Steve Gehring        | Director Safety Regulations and Policy, Hyundai Motor North America | Executive Board     |
| Sungwoo Lee          | Managing Director Europe                                            | Senior Management   |
| Sven Mirko Patuschka | Head Hyundai Motor Technology and Engineering Center, China         | Senior Management   |

SOURCE: COMPANY FILINGS

MARKETLINE

**Table 19: Hyundai Motor Company: Key Employees Continued**

| <b>Name</b>          | <b>Job Title</b>                                                      | <b>Board</b>      |
|----------------------|-----------------------------------------------------------------------|-------------------|
| Sven Mirko Patuschka | Vice President Hyundai Motor Technology and Engineering Center, China | Senior Management |
| William Lee          | Global Head, Genesis Division                                         | Senior Management |
| Won Hee Lee          | Chief Executive Officer                                               | Executive Board   |
| Won Hee Lee          | Director                                                              | Executive Board   |
| Won Hee Lee          | President                                                             | Executive Board   |

**SOURCE:** COMPANY FILINGS

MARKETLINE

## 8.4. Toyota Motor Corporation

### 8.4.1. Company Overview

Toyota Motor Corporation (Toyota or 'the company') is one of the leading auto manufacturers in the world. It is engaged in the manufacture and sale of motor vehicles. The company's products include mid-size, luxury, sports and specialty cars, recreational and sport-utility vehicles, pickup trucks, minivans, trucks and buses. Toyota provides financial services including retail financing retail leasing, wholesale financing, credit cards and insurance services. It also offers intelligent transport systems, information technology and telecommunications, and housing. The company has operations in Japan, North America, Europe, and Asia. The company is headquartered in Toyota City, Aichi, Japan.

The company reported revenues of (Yen) JPY30,225,681 million for the fiscal year ended March 2019 (FY2019), an increase of 2.9% over FY2018. In FY2019, the company's operating margin was 7%, compared to an operating margin of 8.2% in FY2018. In FY2019, the company recorded a net margin of 6.2%, compared to a net margin of 8.5% in FY2018. The company reported revenues of JPY7,646,091.0 million for the first quarter ended June 2019, a decrease of 1.3% over the previous quarter.

### 8.4.2. Key Facts

**Table 20: Toyota Motor Corporation: key facts**

|                      |                                                                  |
|----------------------|------------------------------------------------------------------|
| Head office:         | 1 Toyota-cho, Toyota, Aichi, Japan                               |
| Number of Employees: | 369124                                                           |
| Website:             | <a href="http://www.toyota-global.com">www.toyota-global.com</a> |
| Financial year-end:  | March                                                            |
| Ticker:              | 7203                                                             |
| Stock exchange:      | Tokyo Stock Exchange                                             |

**SOURCE:** COMPANY WEBSITE

MARKETLINE

### 8.4.3. Business Description

Toyota Motor Corporation (Toyota or 'the company') is one of the largest automobile manufacturers in the world. The company is engaged in the design, manufacture and sale of sedans, minivans, compact cars, sports utility vehicles, trucks and related parts and accessories throughout the world. It also provides financing, vehicle and equipment leasing, and certain other financial services primarily to its dealers and their customers to support the sales of vehicles and other products manufactured by Toyota.

The company and its affiliates produce automobiles and related parts and components through 50 and above overseas manufacturing companies in 27 countries. Toyota sells its vehicles through approximately 169 distributors in more than 194 countries and regions.

Toyota operates through three segments: Automotive, Financial Services, and All Others.

Toyota's Automotive operations include the manufacture, design, assembly, and sale of passenger cars, minivans, and commercial vehicles such as trucks and related parts and accessories. The company's subsidiary, Daihatsu Motor, produces and sells mini-vehicles and compact cars. Another subsidiary, Hino Motors, produces and sells commercial vehicles such as trucks and buses. Toyota also manufactures automotive parts, components and accessories for its own use and for sale to others. Toyota's product line-up includes subcompact and compact cars, mini-vehicles, mid-size, luxury, sports and specialty cars, recreational and sport-utility vehicles (SUVs), pickup trucks, minivans, trucks and buses. The vehicles manufactured by Toyota, Daihatsu and Hino can be classified into three categories: hybrid vehicles, conventional engine vehicles, and fuel cell vehicles. Toyota offers hybrid cars under the brand name: Prius. The company also offers hybrid versions of its other brands, including IS300h, Corolla Axio HV/Corolla Fielder HV,

Harrier HV, Voxy HV/Noah HV, NX300h, RC300h, Esquire HV, Sienta HV, RX-HV, Prius, Alphard, and Vellfire. The company's subcompact and compact cars include the four-door Corolla sedan. Its other brands under this category include Vitz, Aygo, Corolla Axio/Fielder, Porte, Spade, Auris, Etios, Vios, AGYA, and Scion iA. The company's mid-size models include the Camry. Toyota's other mid-size models include REIZ, Avensis, and Mark X. In North America, Europe, Japan and other regions, Toyota's luxury lineup consists primarily of vehicles sold under the Lexus brand name. Lexus passenger car models include the LS, the GS, the ES, the HS, the IS, the CT, and the RC. Lexus models also include the LX, the GX, the RX, and the NX sold as luxury SUVs in the US. In addition, the company sells the Century limousine in Japan. In the sports and specialty, the company sells the Scion tC, a sports model with a front-mounted engine and rear-wheel drive. Toyota also offers the Lexus LFA brand as the high-performance sports model. In North America, the company offers SUVs under the brand names of Sequoia, 4Runner, RAV4, Highlander, FJ Cruiser and Land Cruiser, and pickup trucks under the brand names of Tacoma and Tundra. Toyota's other brands include Hilux. Toyota offers minivans and cabwagons under the brand names of Alphard, Vellfire, Corolla Verso, Wish, Estima, Noah, Voxy, Sienta, Isis, and Sienna. Hino Motors' product lineup includes large trucks with a gross vehicle weight of over 11 tons, medium trucks with a gross vehicle weight of between five and 11 tons, and small trucks with a gross vehicle weight of up to five tons. Its bus lineup includes medium to large buses used primarily as tour buses and public buses, small buses and micro-buses. In FY2019, the company produced a total of 8,985,186 vehicles. Out of the total sales, 2,226,177 vehicles were sold in Japan, 2,745,047 vehicles were sold in North America, 1,684,494 vehicles were sold in Asia (excluding Japan), 994,060 vehicles were sold in Europe, and 1,327,017 vehicles were sold in other regions, including Central and South America, Oceania, Africa, and the Middle East. In FY2019, the Automotive segment reported revenues of JPY27,034,492 million, which accounted for 89.4% of the company's revenue.

Toyota's Financial Services operations are handled by Toyota Financial Services (TFSC), a wholly-owned subsidiary of the company. Toyota currently operates financial services companies in 37 countries and regions, which support its automotive operations globally. The segment primarily provides financing to dealers and their customers for the purchase or lease of Toyota vehicles. TFSC also provide retail leasing through the purchase of lease contracts originated by Toyota dealers. The segment also provides retail financing, retail leasing, wholesale financing and insurance. The segment also includes Toyota Finance Corporation which provides a range of financial services, including retail financing, retail leasing and credit cards. During FY2019, the company had financing contracts in North America about 5,404; Europe with 1,220; Other with 890; Asia with 1,803; and Japan with 2,249. In FY2019, the Financial Services segment reported revenues of JPY2,120,343 million, which accounted for 7% of the company's revenue.

The company's All Other business segment includes the design and manufacture of prefabricated housing, information technology related businesses, including an e-commerce marketplace called GAZOO.com. It also includes sales. In FY2019, the All Other segment reported revenues of JPY1,070,846 million, which accounted for 3.5% of the company's revenue.

Toyota's research activities operates through Toyota and Toyota Central Research and Development Laboratories, Inc. in Japan, which works closely with Daihatsu Motor Co., Ltd., Hino Motors, Ltd., Toyota Auto Body Co., Ltd., Toyota Motor East Japan, Inc., and many other Toyota group companies. It aims to develop leading-edge technology and product development in areas such as energy, the environment, information technology, telecommunications and materials and reduce accidents and other impact on the environment. The company focus on improvements in hybrid technologies, including in functions and cost, and contributions to the environment through advancements; internal combustion engine fuel economy technology as well as improvement in technology in connection with more stringent emission standards; development of advanced safety technology designed to promote driving and vehicle safety; development of EVs, FCVs and other alternative fuel vehicles; automated driving technologies and connected car technologies. The company has research facilities across Japan, the US, China, Asia Pacific and Europe regions. In FY2019, the company incurred JPY1,048,882 million on research activities.

Geographically, Toyota classifies its revenue into five segments: Japan, North America, Europe, Asia and Other. In FY2019, the Japan segment accounted for 31.5% of its total revenue followed by 35% from North America, 10.1% from Europe, 16% from Asia and 7.4% from Others.

Table 21: Toyota Motor Corporation: Annual Financial Ratios

| Key Ratios                          | 2015    | 2016    | 2017    | 2018              | 2019    |
|-------------------------------------|---------|---------|---------|-------------------|---------|
| <b>Growth Ratios</b>                |         |         |         |                   |         |
| Sales Growth %                      | 6.00    | 4.29    | -2.84   | 6.46              | 2.88    |
| Operating Income Growth %           | 20.00   | 3.76    | -30.12  | 20.33             | -11.39  |
| EBITDA Growth %                     | 20.00   | 3.76    | -30.12  | 20.33             | -11.39  |
| Net Income Growth %                 | 19.21   | 6.41    | -20.82  | 36.20             | -24.50  |
| EPS Growth %                        | 14.30   | 6.93    | -18.51  | 38.98             | -12.56  |
| Working Capital Growth %            | 45.12   | 38.55   | -75.31  | -30.88            | 83.35   |
| <b>Equity Ratios</b>                |         |         |         |                   |         |
| EPS (Earnings per Share) JPY        | 687.67  | 735.36  | 599.22  | 832.78            | 645.11  |
| Dividend per Share JPY              | 200.00  | 210.00  | 210.00  | 220.00            | 220.00  |
| Dividend Cover Absolute             | 3.44    | 3.50    | 2.85    | 3.79              | 2.93    |
| Book Value per Share JPY            | 5334.96 | 5513.08 | 5887.88 | 6438.65           | 6830.92 |
| <b>Profitability Ratios</b>         |         |         |         |                   |         |
| Gross Margin %                      | 19.80   | 20.41   | 17.62   | 18.69             | 18.01   |
| Operating Margin %                  | 10.10   | 10.05   | 7.23    | 8.17              | 7.04    |
| Net Profit Margin %                 | 7.98    | 8.14    | 6.64    | 8.49              | 6.23    |
| Profit Markup %                     | 24.69   | 25.65   | 21.39   | 22.98             | 21.97   |
| PBT Margin (Profit Before Tax) %    | 10.62   | 10.50   | 7.95    | 8.92              | 7.56    |
| Return on Equity %                  | 12.95   | 13.43   | 10.17   | 12.97             | 9.49    |
| Return on Capital Employed %        | 8.79    | 9.12    | 6.35    | 7.38              | 6.31    |
| Return on Assets %                  | 4.87    | 4.86    | 3.81    | 5.04              | 3.68    |
| Return on Working Capital %         | 182.77  | 136.87  | 387.46  | 674.56            | 326.00  |
| Operating Costs (% of Sales) %      | 89.90   | 89.95   | 92.77   | 91.83             | 92.96   |
| Administration Costs (% of Sales) % | 9.70    | 10.36   | 10.39   | 10.52             | 9.85    |
| <b>Liquidity Ratios</b>             |         |         |         |                   |         |
| Current Ratio Absolute              | 1.09    | 1.13    | 1.03    | 1.02              | 1.04    |
| Quick Ratio Absolute                | 0.96    | 1.00    | 0.89    | 0.88              | 0.89    |
| Cash Ratio Absolute                 | 0.32    | 0.34    | 0.34    | 0.32              | 0.32    |
| <b>Leverage Ratios</b>              |         |         |         |                   |         |
| Debt to Equity Ratio Absolute       | 0.83    | 0.79    | 0.79    | 0.74              | 0.75    |
| Net Debt to Equity Absolute         | 0.99    | 0.89    | 0.90    | 0.85              | 0.84    |
| Debt to Capital Ratio Absolute      | 0.45    | 0.44    | 0.44    | 0.42              | 0.43    |
| <b>Efficiency Ratios</b>            |         |         |         |                   |         |
| Asset Turnover Absolute             | 0.61    | 0.60    | 0.57    | 0.59              | 0.59    |
| Fixed Asset Turnover Absolute       | 3.22    | 2.98    | 2.77    | 2.87              | 2.89    |
| Inventory Turnover Absolute         | 10.83   | 10.77   | 10.22   | 9.69              | 9.54    |
| Current Asset Turnover Absolute     | 1.62    | 1.57    | 1.53    | 1.63              | 1.63    |
| Capital Employed Turnover Absolute  | 0.87    | 0.91    | 0.88    | 0.90              | 0.90    |
| Working Capital Turnover Absolute   | 18.10   | 13.62   | 53.61   | 82.58             | 46.34   |
| <b>SOURCE: COMPANY FILINGS</b>      |         |         |         | <b>MARKETLINE</b> |         |

Table 22: Toyota Motor Corporation: Key Employees

| Name               | Job Title                                                  | Board               |
|--------------------|------------------------------------------------------------|---------------------|
| Akio Toyoda        | Director                                                   | Executive Board     |
| Akio Toyoda        | President                                                  | Executive Board     |
| Didier Leroy       | Chief Competitive Officer                                  | Executive Board     |
| Didier Leroy       | Director                                                   | Executive Board     |
| Didier Leroy       | Executive Vice President                                   | Executive Board     |
| Didier Leroy       | President Business Planning and Operation                  | Executive Board     |
| Gill A. Pratt      | Chief Executive Officer Toyota Research Institute          | Senior Management   |
| Gill A. Pratt      | Executive Fellow- Advanced R&D and Engineering Company     | Senior Management   |
| Hayato Shibakawa   | Deputy Chief Executive Officer-China Region                | Senior Management   |
| Hayato Shibakawa   | Managing Officer                                           | Senior Management   |
| Hiroaki Nanahara   | Managing Officer                                           | Senior Management   |
| Hiroaki Okuchi     | Managing Officer                                           | Senior Management   |
| Hirohisa Kishi     | Managing Officer                                           | Senior Management   |
| Hiroki Nakajima    | Operating Officer                                          | Senior Management   |
| Hiroki Nakajima    | President Mid size Vehicle Company                         | Senior Management   |
| Hiroyoshi Ninoyu   | Chief Officer-Production Planning Group                    | Senior Management   |
| Hiroyoshi Ninoyu   | Managing Officer                                           | Senior Management   |
| Ikuro Sugawara     | Director                                                   | Non Executive Board |
| James E. Lentz     | Chief Executive Officer North America Region               | Senior Management   |
| James E. Lentz     | Senior Managing Officer                                    | Senior Management   |
| Johan van Zyl      | Chief Executive Officer Europe Region                      | Senior Management   |
| Johan van Zyl      | Senior Managing Officer                                    | Senior Management   |
| Kazuhiro Kobayashi | Chief Financial Officer                                    | Senior Management   |
| Kazuhiro Kobayashi | Chief Risk Officer                                         | Senior Management   |
| Kazuhiro Kobayashi | Executive Vice President                                   | Senior Management   |
| Kazuhiro Miyauchi  | President Toyota Compact Car Company                       | Senior Management   |
| Kazuhiro Miyauchi  | Senior Managing Officer                                    | Senior Management   |
| Kazuhiro Sato      | Senior Managing Officer                                    | Senior Management   |
| Kazunari Kumakura  | Concurrent General Manager, Purchasing Management Division | Senior Management   |
| Kazunari Kumakura  | Deputy Chief Officer, Purchasing Group                     | Senior Management   |

SOURCE: COMPANY FILINGS

MARKETLINE

Table 23: Toyota Motor Corporation: Key Employees Continued

| Name                  | Job Title                                                                                                          | Board             |
|-----------------------|--------------------------------------------------------------------------------------------------------------------|-------------------|
| Keiji Yamamoto        | Managing Officer                                                                                                   | Senior Management |
| Kelly McNeff          | Vice President Corporate Communications,<br>Toyota Motor North America                                             | Senior Management |
| Koji Kobayashi        | Chief Financial Officer                                                                                            | Executive Board   |
| Koji Kobayashi        | Chief Risk Officer                                                                                                 | Executive Board   |
| Koji Kobayashi        | Director                                                                                                           | Executive Board   |
| Koji Kobayashi        | Executive Vice President                                                                                           | Executive Board   |
| Leah Curry            | President Toyota Motor Manufacturing,<br>Indiana                                                                   | Senior Management |
| Mamoru Taguchi        | Deputy Chief Officer-Customer First<br>Promotion Group                                                             | Senior Management |
| Mamoru Taguchi        | Senior Managing Officer                                                                                            | Senior Management |
| Masahiko Maeda        | Chief Executive Officer Deputy China and<br>Asia Region, Toyota Daihatsu Engineering<br>and Manufacturing Co., Ltd | Senior Management |
| Masahiko Maeda        | President Emerging market Compact Car<br>Company, P.T. Toyota Motor Manufacturing<br>Indonesia                     | Senior Management |
| Masahisa Nagata       | Executive Vice President Toyota Compact Car<br>Company                                                             | Senior Management |
| Masayoshi Shirayanagi | Chief Officer-Accounting and Purchasing<br>Group                                                                   | Senior Management |
| Masayoshi Shirayanagi | Senior Managing Officer                                                                                            | Senior Management |
| Michinobu Sugata      | Managing Officer                                                                                                   | Senior Management |
| Mitsuru Kawai         | Chief Officer-Safety and Health Promotion<br>Division                                                              | Senior Management |
| Mitsuru Kawai         | Executive Vice President                                                                                           | Senior Management |
| Moritaka Yoshida      | Executive Vice President                                                                                           | Senior Management |
| Moritaka Yoshida      | President Vehicle Development Center and<br>Production Engineering Development Center                              | Senior Management |
| Nobuhiko Murakami     | Chief Executive Officer East Asia, Oceania<br>and Middle East Region                                               | Senior Management |
| Nobuhiko Murakami     | Senior Managing Officer                                                                                            | Senior Management |
| Seiya Nakao           | Managing Officer                                                                                                   | Senior Management |
| Shigeki Terashi       | Director                                                                                                           | Executive Board   |
| Shigeki Terashi       | Executive Vice President                                                                                           | Executive Board   |
| Shigeki Tomoyama      | Chief Information Security Officer                                                                                 | Senior Management |
| Shigeki Tomoyama      | Executive Vice President                                                                                           | Senior Management |
| Shigeki Tomoyama      | President GAZOO Racing Company                                                                                     | Senior Management |
| Shigeki Tomoyama      | Senior General Manager, GR Planning Field                                                                          | Senior Management |
| Shigeru Hayakawa      | Chief Sustainability Officer                                                                                       | Executive Board   |
| Shigeru Hayakawa      | Vice Chairman                                                                                                      | Executive Board   |

SOURCE: COMPANY FILINGS

MARKETLINE

Table 24: Toyota Motor Corporation: Key Employees Continued

| Name               | Job Title                                                                                                                                            | Board               |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Shuichi Murakami   | Managing Officer                                                                                                                                     | Senior Management   |
| Srini Matam        | President Toyota Motor Manufacturing, West Virginia                                                                                                  | Senior Management   |
| Steve St. Angelo   | Senior Managing Officer                                                                                                                              | Senior Management   |
| Takeshi Uchiyamada | Chairman                                                                                                                                             | Executive Board     |
| Tatsuro Takami     | Deputy Chief Executive Officer-Asia Region                                                                                                           | Senior Management   |
| Tatsuro Takami     | Managing Officer                                                                                                                                     | Senior Management   |
| Tatsuro Ueda       | Chief Executive Officer China and Asia Region                                                                                                        | Senior Management   |
| Tatsuro Ueda       | Operating Officer                                                                                                                                    | Senior Management   |
| Teiko Kudo         | Director                                                                                                                                             | Non Executive Board |
| Tetsuo Ogawa       | Senior Managing Officer                                                                                                                              | Senior Management   |
| Toshiyuki Isobe    | Managing Officer                                                                                                                                     | Senior Management   |
| Yasuhiko Sato      | Senior Managing Officer                                                                                                                              | Senior Management   |
| Yasutoshi Sugimoto | General Manager Business Planning Div                                                                                                                | Senior Management   |
| Yasutoshi Sugimoto | General Manager Emerging market Compact Car Company                                                                                                  | Senior Management   |
| Yoichi Miyazaki    | Chief Officer-Business Planning Division, Sales and Operation Planning Division, KD Business Planning Division, Sales and Marketing Support Division | Senior Management   |
| Yoichi Miyazaki    | Managing Officer                                                                                                                                     | Senior Management   |
| Yoji Matsuyama     | Deputy Chief Officer, Purchasing Group                                                                                                               | Senior Management   |
| Yoshihiro Sawa     | Senior Managing Officer                                                                                                                              | Senior Management   |
| Yoshihiro Uozumi   | Managing Officer                                                                                                                                     | Senior Management   |
| Yuji Maki          | Chief Officer-Sustainability Audit Department                                                                                                        | Senior Management   |
| Yuji Maki          | Managing Officer                                                                                                                                     | Senior Management   |
| Yumi Otsuka        | Chief Sustainability Officer Deputy                                                                                                                  | Senior Management   |

SOURCE: COMPANY FILINGS

MARKETLINE

Table 25: Toyota Motor Corporation: Key Employees Continued

| Name                    | Job Title | Board      |
|-------------------------|-----------|------------|
| SOURCE: COMPANY FILINGS |           | MARKETLINE |

## 9. Macroeconomic Indicators

### 9.1. Country data

Table 26: Global exchange rate, 2015–19

| Year | Exchange rate (€/€) |
|------|---------------------|
| 2015 | 1.1095              |
| 2016 | 1.1068              |
| 2017 | 1.1320              |
| 2018 | 1.1810              |
| 2019 | 0.8929              |

SOURCE: MARKETLINE

MARKETLINE

# Appendix

## Methodology

MarketLine Industry Profiles draw on extensive primary and secondary research, all aggregated, analyzed, cross-checked and presented in a consistent and accessible style.

**Review of in-house databases** – Created using 250,000+ industry interviews and consumer surveys and supported by analysis from industry experts using highly complex modeling & forecasting tools, MarketLine's in-house databases provide the foundation for all related industry profiles

**Preparatory research** – We also maintain extensive in-house databases of news, analyst commentary, company profiles and macroeconomic & demographic information, which enable our researchers to build an accurate market overview

**Definitions** – Market definitions are standardized to allow comparison from country to country. The parameters of each definition are carefully reviewed at the start of the research process to ensure they match the requirements of both the market and our clients

**Extensive secondary research** activities ensure we are always fully up-to-date with the latest industry events and trends

MarketLine aggregates and analyzes a number of secondary information sources, including:

- National/Governmental statistics
- International data (official international sources)
- National and International trade associations
- Broker and analyst reports
- Company Annual Reports
- Business information libraries and databases

**Modeling & forecasting tools** – MarketLine has developed powerful tools that allow quantitative and qualitative data to be combined with related macroeconomic and demographic drivers to create market models and forecasts, which can then be refined according to specific competitive, regulatory and demand-related factors

**Continuous quality control** ensures that our processes and profiles remain focused, accurate and up-to-date

## 9.2. Industry associations

### 9.2.1. International Organization of Motor Vehicle Manufacturers (OICA)

4 rue de Berri, 8<sup>ème</sup> arrondissement, Paris, FRA

Tel.: 33 1 4359 0013

Fax: 33 1 4563 8441

[www.oica.net](http://www.oica.net)

### 9.2.2. European Automobile Manufacturers' Association (Association des Constructeurs Européens d'Automobiles, ACEA)

Avenue des Nerviens 85, B-1040, Brussels, BEL

Tel.: 32 2 732 55 50

Fax: 32 2 738 73 10

[www.acea.be](http://www.acea.be)

### 9.2.3. Alliance of Automobile Manufacturers (Auto Alliance)

1401 Eye Street NW, Suite 900, Washington, DC 20005, USA

Tel.: 1 202 326 5500

Fax: 1 202 326 5598

[www.autoalliance.org](http://www.autoalliance.org)

### 9.2.4. Japan Automobile Manufacturers Association

Jidosha Kaikan 16-17F, Shiba Daimon 1-chome, Minato-ku, J Tokyo 105-0012, JPN

Tel.: 81 3 5405 6126

Fax: 81 3 5405 6136

[www.jama.or.jp](http://www.jama.or.jp)

## 9.3. Related MarketLine research

### 9.3.1. Industry Profile

Car manufacturers in Asia-Pacific

Car manufacturers in Europe

Car manufacturers in the United States

Car manufacturers in Germany

Car manufacturers in Japan

## About MarketLine

In an information-rich world, finding facts you can rely upon isn't always easy. MarketLine is the solution.

We make it our job to sort through the data and deliver accurate, up-to-date information on companies, industries and countries across the world. No other business information company comes close to matching our sheer breadth of coverage.

And unlike many of our competitors, we cut the 'data padding' and present information in easy-to-digest formats, so you can absorb key facts in minutes, not hours.

### **What we do**

Profiling all major companies, industries and geographies, MarketLine is one of the most prolific publishers of business information today.

Our dedicated research professionals aggregate, analyze, and cross-check facts in line with our strict research methodology, ensuring a constant stream of new and accurate information is added to MarketLine every day.

With stringent checks and controls to capture and validate the accuracy of our data, you can be confident in MarketLine to deliver quality data in an instant.

For further information about our products and services see more at: <http://www.marketline.com/overview/>

### **Disclaimer**

All Rights Reserved.

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher, MarketLine.

The facts of this report are believed to be correct at the time of publication but cannot be guaranteed. Please note that the findings, conclusions and recommendations that MarketLine delivers will be based on information gathered in good faith from both primary and secondary sources, whose accuracy we are not always in a position to guarantee. As such MarketLine can accept no liability whatever for actions taken based on any information that may subsequently prove to be incorrect.