

# MOTOR VEHICLES INDUSTRY ASSESSMENT

## FY 2010

### **Background**

The motor vehicle industry is comprised of companies engaged in manufacturing passenger vehicles (automobiles, vans with not more than 15 passenger capacity, sport and cross utility vehicles, and pickups; rated at no more than 10,000 pounds of gross vehicle weight) and medium/heavy duty trucks in the United States.

In addition to manufacturing, auto manufacturers conduct extensive research and development (R&D) activities.

### *Key Products/Services*

The major components of the motor vehicle industry are:

- Automobiles
- Light trucks and utility vehicles
- Heavy duty trucks

Automobile manufacturing comprises establishments primarily engaged in:

(1) manufacturing complete motor vehicles (i.e., body and chassis or unibody), including passenger cars, electric cars for highway use, and hearses, or (2) manufacturing automobile chassis only.

Light truck and utility vehicle manufacturing comprises establishments primarily engaged in: (1) manufacturing complete light trucks and utility vehicles (i.e., mostly body and chassis), or (2) manufacturing light truck and utility vehicle chassis only. Vehicles made include light duty vans, pick-up trucks, motor homes, minivans, and sport utility vehicles.

Heavy duty truck manufacturing comprises establishments primarily engaged in:

(1) manufacturing heavy duty truck chassis and assembling complete heavy duty trucks, buses, heavy duty motor homes, and other special purpose heavy duty motor vehicles for highway use, or (2) manufacturing heavy duty truck chassis only.

### *North American Industry Classification System (NAICS)*

The main NAICS codes are as follows:

<u>NAICS</u>	<u>Industry Heading</u>
336111	Automobiles
336112	Light Trucks and Utility Vehicles
33612	Heavy Duty Trucks

### **Industry Overview and Global Competitiveness**

#### *Global production/sales and U.S. production/sales*

The U.S. automotive market has traditionally been the largest single automotive market in the world. However, with the dramatic sales decline in 2009 and the continuing rise of China, the

United States lost this distinction. In 2009, U.S. passenger vehicle sales reached only 10.4 million units, down 21 percent from 2008's total (13.2 million units) and 35 percent from 2007's total (16.1 million units). China experienced growth of almost 53 percent with passenger vehicle sales of 10.33 million units due to economic growth, tax cuts, and other government stimulus measures. However, total Chinese vehicle sales (including commercial vehicles) reached 13.6 million units in 2009, far higher than the U.S. total of 10.6 million units. China may not sustain that level of growth, but the country has already become a major market with increasingly competitive automakers, both domestic and international.

There are thirteen companies manufacturing passenger vehicles in the United States, including BMW, Chrysler, Daimler, Ford, General Motors (GM), Honda, Hyundai, Kia, Mazda, Mitsubishi, Nissan, Subaru, and Toyota (Kia started operations in late 2009 and VW plans to start manufacturing in 2011). Of these, Ford, GM and Chrysler also produce medium and/or heavy-duty trucks in the United States. There are also seven additional producers of medium/heavy duty vehicles. While the Detroit 3 (GM, Ford, and Chrysler) are headquartered in the Detroit, Michigan area with the majority of their U.S. plants located in the Great Lakes region, the Asian and German auto companies' U.S. plants are primarily located in southern states.

The U.S. auto companies are competitive in both the U.S. and global markets. Over the past year, GM and Toyota have been battling for global sales leadership. Toyota took first place in 2008 by a margin of 600,000 vehicles, due primarily to GM's large declines in the U.S. market. (While global sales numbers for 2009 are not yet available, it is likely that Toyota held onto the top slot for the year). The Detroit 3's reliance on global markets is increasing. For example, nearly 70 percent of Ford vehicles sold in 2007 were sold outside the United States. Foreign markets accounted for 64 percent of GM's total sales in 2008. The Detroit 3 are successfully accessing some foreign markets, particularly China, by increased foreign manufacturing. However, given the general global downturn in sales in 2009, U.S. exports suffered. In 2009, total new U.S. passenger vehicle exports stood at 1.1 million units, valued at \$25 billion, a decrease of almost 40 percent. Imports for the year totaled four million units, valued at \$86 billion, a decrease of approximately 35 percent.

The Detroit 3 have seen their share of the U.S. light vehicle market tumble in a long-term decline. In 2007, Toyota overtook Ford for the first time to become the second largest automaker – a position they continued to hold in 2008 and 2009. In 2009, Honda overtook Chrysler to claim the number four spot for U.S. sales volume. GM continued its place at top of the U.S. sales chart but its lead over Toyota declined from 740,000 units in 2008 to only 300,000 units in 2009. Over the last ten years, the Detroit 3 lost over 25 points of U.S. market share, declining from 71.1 percent of the market in 1998 to only 44.8 percent of the market in 2009. Japanese brands have made strong headway during the ten-year period, climbing from 24 percent to 43 percent. German brands have picked up over three points of share, rising from 3.8 percent of the market to 7.3 percent of the market. Korean brands have also moved up, climbing from 1.1 percent in 1998 to 7.1 percent in 2009. Hyundai and Kia made large strides in 2009 as they were among the few automakers to increase their sales in the down U.S. market. Decreased sales by the Detroit 3 can be partially attributed to their reductions in sales to daily rental fleets.

Given the global nature of the industry, the pool of major competitors is based throughout the world, though it is drawn primarily from the established, mature markets of the United States, the European Union (EU), Japan and Korea. This is apparent when looking at the top five global producers (2007 latest available) are Toyota (Japan-based), GM (U.S.-based), Ford (U.S.-based), Volkswagen (EU-based), and Hyundai/Kia (Korea-based). It isn't until reaching number seventeen on the list that a new region appears, with the listing of Russia's Autovaz. China's two largest companies, Shanghai Automotive Industry Corp and First Auto Works (both of which have partnerships with top global firms), are listed at numbers 19 and 23. Other firms are competitive on a limited basis in their home markets, such as Proton in Malaysia or Tata Motors in India.

### *Export Markets*

Given the heavy investment by the U.S. automakers in foreign markets, they are less focused on export activity than they otherwise would be. However, they still export to round out product line-ups and fill certain niches in the mature markets, and also rely on exports to supply growing developing markets. In addition, the increasing number of Free Trade Agreements (FTAs) between the United States and foreign partners will improve opportunities to export U.S.-made vehicles. Key markets for exports for the future will likely include our established export markets of Canada and Mexico, as well as Western Hemisphere FTA partners, Australia and growing markets such as the major ASEAN markets (Thailand, the Philippines, Malaysia and Indonesia) and of course, China.

### **Domestic Environment**

#### *Regulatory Environment*

The automotive industry is one of the most heavily regulated industries in the world. In the United States, the National Highway Traffic Safety Administration (NHTSA, under the Department of Transportation/DOT) has the congressionally mandated responsibility to regulate motor vehicles from the standpoint of safety and occupant protection. NHTSA has historically administered the Corporate Average Fuel Economy (CAFE) program, which mandates fleet averages for required levels of fuel economy. In addition, under the Clean Air Act, the Environmental Protection Agency (EPA) has the mandate to regulate emissions. The EPA's ruling that heat trapping gases are a danger to the U.S. environment now makes CAFE a joint mission. The two agencies issued harmonized rules that require automakers to attain a fleet-wide average of 35.5 miles per gallon in 2016. The rules have been applied according to vehicle architecture so that the smallest vehicles must attain much higher mileage than the largest, though the mandates ensure that manufacturers will apply advanced technologies across their product lines.

The U.S. safety and environmental regulations are among the most stringent in the world. Safety standards are based on a self-certification system (Federal Motor Vehicle Safety Standards: FVMSS) while emission standards are based on the requirements contained in the Clean Air Act. U.S. regulations are not widely applied internationally, but are accepted by our NAFTA partners (Canada and Mexico), and a few other countries around the world. Standards harmonization remains a major concern of the U.S. auto companies because of the added cost. Given that this industry is truly global, a closer harmonization of safety and emissions standards would save the global automotive industry and consumers a great deal of money.

Under the UNECE's World Forum for Harmonization of Vehicle Regulations (WP29) and the 1998 Global Agreement momentum is building to develop true global technical regulations (GTRs). To date, there are nine approved GTRs.<sup>1</sup> Several GTR candidates are also under consideration, with most officially listed in the UN depository.<sup>2</sup>

In addition, collaborative regulatory efforts are underway in the Transatlantic Economic Council (TEC), which is focusing on industry priorities and the development of potential future regulations. In 2009 work focused on emission regulations and pedestrian protection regulations. Longer-term work will continue on regulations for hydrogen fuel-powered vehicles and testing devices for vehicle crash worthiness.

### *Domestic Business Environment*

Complying with the energy legislation mentioned above as well as other federal and state regulations directly impacts the industry's R&D expenditures and its ability to plan and design future products (a new vehicle takes approximately 2-3 years to develop and bring to market). The new fuel economy requirements (as well as uncertain gas prices) particularly affect the future product mix of the Detroit 3, which historically relied on profitable, higher-mileage truck and SUV sales for over a decade. Innovations and new vehicle designs will need to meet consumer's demands in addition to complying with regulations, particularly in the growth areas of powertrain technology, safety features, and electronic/infotainment products. Determining how much consumers will be willing to pay for these costly new features will be a challenge.

However, in 2009, the Detroit 3's top concern was corporate survival. The market, which fell 18 percent in 2008, experienced another severe decline in 2009. Sales levels dropped to only 10.4 million vehicles, over 20 percent lower than 2008's sales level and more than one third below 2007's sales of 16.1 million units. GM and Chrysler were both forced into managed bankruptcies, relying on loans from the U.S. Government (to date, topping \$85 billion collectively some of which has already been repaid) to stay afloat as they began large-scale downsizing and restructuring efforts. Chrysler was unable to survive as a stand-alone entity and took on Fiat as a controlling partner. The UAW was forced to make major concessions, particularly in areas of job cuts and of funding for the recently (2007) created health-care VEBAs, agreeing to take contributions of equity in the companies to make up a large part of the companies' contributions to those plans. The combination of government loans and these equity contributions to the VEBAs left the companies owned by the USG and the unions. GM's ownership is now divided as follows: 60.8 percent U.S. Government; 17.5 percent UAW VEBA; 11.7 percent Canadian and Ontario governments; 10 percent old GM bondholders. Chrysler's

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<sup>1</sup> GTR1 was notified to the Secretariat on 9/21/05 and involves door locks; GTR2 notified 10/4/05: motorcycle emissions; GTRs3-5 notified on 2/2/07; GTR3: motorcycle brake systems; GTR4: natural gas and liquid petroleum gas engine emissions; GTR5: on-board diagnostics for road vehicles; GTR6: safety glazing materials.; GTR7: head restraints; GTR8: electronic stability control systems; GTR 9 pedestrian protection.

<sup>2</sup> Candidate GTRs include a ten-item listing ranging from heavy-duty engine and vehicle standards (item 1) to regulations for road vehicles in Japan regarding hydrogen and fuel cell vehicles (item 10).. The entire listing can be found at: [http://www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29glob\\_candidate.html](http://www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29glob_candidate.html) Moreover, discussion is also progressing on the electronic stability control (ESC) regulation, as well as the world side impact dummy (WorldSID).

ownership is now divided as follows: 55 percent UAW VEBA; 20 percent Fiat; 8 percent U.S. Government; 2 percent Canadian and Ontario governments.

Ford managed to escape the year without needing government aid, and is now appears to be benefitting in the marketplace by drawing on its image as the company that didn't need government support. Ford increased its share of the U.S. market from 14.7 percent in 2008 to 15.9 percent in 2009. Ford and GM are forecasting a return to profitability in 2011.

The automakers have made strides in sustainable manufacturing and making their plants more energy efficient. The Detroit 3 also have partnered with the U.S. Council for Automotive Research's Vehicle Recycling Partnership to make vehicles that are nearly 100 percent recyclable. Ford has already taken steps to increase the recyclable content of its products over the past few years. Currently, 85 percent of a Ford vehicle is recyclable. The automaker, as well as many other manufacturers, uses a significant amount of recycled content in its vehicles. This is only expected to grow as the issue of light-weighting vehicles accelerates with new fuel economy regulations, and more composite, recyclable materials are introduced and mainstreamed into the manufacturing process.

Downsizing and productivity gains made through lean manufacturing and increased automation by the Detroit 3 were spurred primarily by increased foreign competition in the North American market. The annual Harbour Report on manufacturing productivity reported that the gap between the six major North American automakers continues to narrow. The Detroit 3 have made tremendous gains in improving productivity in terms of hours per vehicle assembly time. Chrysler jumped from last place in 2003 to second place in 2007 (latest available). GM passed Toyota at 22.19 hours per vehicle, vs. Toyota's 22.35 hour per vehicle. Also, flexibility and productivity gains throughout the industry have contributed to fewer plants producing more vehicles and a wider variety of models.

U.S. auto companies are cautiously predicting the start of a recovery in 2010. Industry analysts forecast sales rising to between 11.5 to 12.5 million units. However, the success or failure of the U.S. auto industry is directly tied to the health of the overall U.S. economy which is still an unknown factor for 2010.

## **Trading Environment**

### *Key Opportunities and Industry Activity*

As mentioned above, the key opportunities for increased exports are in expanding developing-country markets, and/or in countries with which the United States has recently signed an FTA. These would include countries such as: the ASEAN markets (Indonesia, the Philippines, Thailand, and Malaysia), several Western Hemisphere countries, China, Australia, and eventually South Korea (FTA is still pending). The U.S. auto companies often expand their presence in foreign markets through investment, which in turn leads to increased exports.

### *Obstacles in Expanding U.S. Automotive Exports*

U.S. automotive exporters face barriers in a number of markets around the world. For a complete look at import requirements on a country-by-country basis, refer to "The World Motor Vehicle Import Requirements – July 2008" paper at:

[http://trade.gov/wcm/groups/internet/@trade/@mas/@man/@aai/documents/web\\_content/auto\\_reports\\_tradebarriers.pdf](http://trade.gov/wcm/groups/internet/@trade/@mas/@man/@aai/documents/web_content/auto_reports_tradebarriers.pdf)

The most often cited NTBs for the industry include:

- Safety and environmental standards problems: there are two main systems for motor vehicle regulations – the U.S. and the ECE regulations. U.S. manufacturers are fully capable of producing vehicles to either set of standards. However, when a country (usually a smaller developing country) chooses to require compliance with its own unique standard or standards, the U.S. automakers can be effectively cut out of the market. It simply is not cost-effective for the U.S. automaker to produce unique vehicles for the specific markets.
- Customs practices: U.S. companies continue to face problems with foreign customs regimes. Some problems stem from simple corruption. Aside from the problem presented by the corruption itself, U.S. manufacturers are often reluctant to work with the U.S. Government to combat corruption for fear of retaliation. Some countries also continue to implement customs valuation practices that are contrary to the WTO Customs Valuation Agreement.
- Equity ownership restrictions: Many countries do not permit foreign companies to wholly own their investments, and instead require the establishment of a joint venture or other partnership arrangement with a local company. In addition, while U.S. companies might seek a local partner on their own initiative, this can be problematic in countries with poor intellectual property right (IPR) protection.

#### *Impact of Domestic Regulations on Exports*

To address industry's desire for global automotive standards harmonization, the U.S. Government worked closely with the other major auto producing countries to create a system for harmonizing world auto standards, with a focus on the U.S. and UN/ECE regulations. This system has been codified as the "Agreement Concerning the Establishing of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts", also known as the Global Agreement, or the 1998 Agreement after the year the draft text was agreed upon. This agreement is administered by the United Nations' Working Party 29 (WP29), the recognized global center for automotive standards harmonization.