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## **General Motors Company: Restructured to Rediscover American Innovation**

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Through growth in sales and acquisitions, General Motors grew into a vast empire during the twentieth century. However, foreign competition, high labor and pension costs, ineffective management, and the worst recession since the Great Depression eventually led the company to the brink of insolvency. General Motors filed for Chapter 11 reorganization in June 2009 and, with funding partially provided by the U.S. government, emerged about a month later as, literally, a new company. The company has refocused its efforts and returned to profitability. Sales are up, especially in China. A government loan was repaid ahead of schedule, although the U.S. still owns a huge equity stake in the company. With the company so newly “reminted”, it remains to be seen what direction it will take in the future and if that direction will further the company’s recent successes. General Motors (GM) will refer to both the General Motors Company, incorporated in 2009, and the General Motors Corporation and its predecessors.

## ORIGINS

General Motors was founded in Flint, Michigan in 1908. It began as a holding company for Buick, but grew rapidly from there. In the first year of GM’s existence, it acquired Oldsmobile, Cadillac, Elmore, and Oakland (the precursor to Pontiac). In 1911, GM formed General Motors Truck (later GMC), and in 1918, it acquired Chevrolet Motor Company and launched GM of Canada. Over the next 10 years, GM expanded into several more countries, including South Africa, Australia, New Zealand, Japan, Egypt, and India. It also purchased Vauxhall Motors, a British company, and Adam Opel AG, a German company. In 1919, GM established General Motors Acceptance Company (GMAC) to aid in financing cars and trucks.<sup>1</sup> In 1929, GM bought a 40% interest in Fokker Aircraft Corporation, and entered the commercial aviation industry.<sup>2</sup>

World War II brought more change to General Motors. In 1942, GM supplied over \$12.3 billion in war material, including airplanes, engines, trucks, tanks, guns, and shells. It acquired Yellow Truck & Coach in the following year, and formed GMC Truck & Coach Division. This would be the last major acquisition for GM until the 1970s.<sup>3</sup>

In 1971, GM again pursued growth through acquisition by purchasing a 34.2% interest in Isuzu. A year later, it entered into a joint venture with Shinjin Motor to form General Motors Korea, which later became Daewoo Motor. Then, in 1981, GM entered into an agreement with Suzuki Motor Company to develop future supply and distribution arrangements. After celebrating the company’s 75<sup>th</sup> anniversary in 1983, GM acquired Electronic Data Systems Corporation (EDS), a leader in data processing and telecommunications. This marked a shift in the company’s acquisition and diversification strategies, which continued with the purchase of Hughes Aircraft, a defense electronics company, in 1985.<sup>4</sup> Growth continued through a joint venture with Volvo for heavy-duty trucks in North America in 1986. In 1989, GM purchased half of Saab Automobile AB, and a year later, it rolled out the first Saturn automobile.<sup>5</sup>

GM purchased the rights to the HUMMER brand from AM General Corporation in 1999. A year later, it purchased the remaining shares of Saab. In the same year, GM formed a strategic alliance with Fiat, creating several joint ventures to share technology. GM came away owning 20% of Fiat, but the alliance was short-lived.<sup>6</sup> Also in 2000, GM entered into a joint venture with Sony, NetZero, and America Online to enter the electronics business. In 2001, GM entered into a joint venture with AvtoVAZ to produce SUVs for the Russian market. In 2002, GM acquired Daewoo Motor and formed a new company called GM Daewoo Auto & Technology.<sup>7</sup> In 2005, GM received 26 awards in a J.D. Power and Associates Vehicle Dependability Study, more than any other original equipment manufacturer. In the same year, the company reported

sales of 9.17 million cars and trucks, the highest volume in 27 years, and set sales records in several foreign markets. In 2006, GM made significant investments in upgrading manufacturing plants, and continued a partnership with Toyota for technology collaboration. That same year, GM also agreed to sell 51% of GMAC to a consortium of investors, reduced its stake in Suzuki Motor Corp from 20.4% to 3.0%, and announced plans to completely divest its stake in Isuzu Motors Ltd. Further divestment occurred in 2007 with the sale of GM's Allison Transmission commercial and military business for about \$5.6 billion. In October of that year, GM invested \$73 million into the manufacturing facility for the HUMMER H3T, and a month later, it announced an agreement with Shanghai Automotive Industry Corporation Group (SAIC) to bring OnStar, its high tech electronics and communication system for automobiles, to North America.

### **The Fiat Alliance**

GM's alliance with Fiat began in 2000, with an agreement to share and jointly develop technology. One joint venture was formed to produce engines and gearboxes, and another was formed for the purchase of components. GM also paid \$2.4 billion for a 20% ownership stake in Fiat.<sup>8</sup> GM's strategy was based on a fear that rival DaimlerChrysler would purchase Fiat and take significant market share from GM's Opel and Vauxhall brands.<sup>9</sup> Part of the alliance agreement was an option that would have allowed Fiat to force GM to purchase Fiat. As Fiat and GM Europe continued to lose money, the partnership became contentious. GM argued that the option was invalid due to a breach of contract. Specifically, proceeds of a capital increase that halved GM's stake in Fiat were not properly used to restructure Fiat Auto. Instead, they were used to pay back debts between Fiat companies.<sup>10</sup>

Ultimately, GM and Fiat avoided litigation with a buyout. In February 2005, GM paid \$2 billion for Fiat to give up the option, and all joint ventures were dissolved. GM's publicity arm claimed success from the alliance, pointing to cost savings from a joint purchasing contract, a 50% share of a diesel engine factory in Poland, and acquisition of intellectual property rights in diesel technology.<sup>11</sup>

### **GM Daewoo**

General Motors helped rescue Daewoo Motors from bankruptcy by leading a group that purchased the company in 2002. At the time of purchase, GM held 42% of GM Daewoo.<sup>12</sup> By 2003, GM Daewoo was using Daewoo factories in Korea for multiple brands sold in overseas markets, including Chevrolet, and it had considered folding the Daewoo brand.<sup>13</sup>

However, in 2004, GM Asia-Pacific, which includes GM Daewoo, increased sales by 30.7% from 2003, and GM increased its holdings of GM Daewoo to 50.9%.<sup>14</sup> By 2006, Daewoo was seen as a bright spot in the GM portfolio. While GM was struggling to hold on to market share domestically, Daewoo grew rapidly. In that year, 32% of GM cars sold in China were manufactured at the Daewoo operation, and Chevrolet sales increased 26% in Europe, based on GM Daewoo products. GM Daewoo also surpassed Kia Motors as Korea's second-largest carmaker, only trailing Hyundai.<sup>15</sup> Nevertheless, the global recession led to liquidity trouble again for GM Daewoo, leading GM to raise its ownership stake to 70.1%.<sup>16</sup>

## LEADING UP TO CHAPTER 11

In 2005, GM reported a loss of \$8.6 billion, and in October of that year, Delphi, GM's largest supplier, declared bankruptcy.<sup>17</sup> Industry experts predicted a high probability of GM's eventual bankruptcy as early as November 2005.<sup>18</sup> The next few years continued to be difficult, culminating in net losses of \$38 billion in 2007 and \$31 billion in 2008. Prior to filing for Chapter 11 bankruptcy in 2009, GM adjusted its strategic map via a corporate-wide restructuring effort. GM recommitted itself to focus efforts on product excellence, technological innovation, cost efficiency/competitiveness, and the strengthening of its balance sheet.

### **Brand Realignment**

The entire automotive industry was impacted by a major recession in the US and Western Europe. In 2008, the deterioration of market conditions in these regions saw GM report its lowest per-capita levels of vehicle sales in the previous 50 years.<sup>19</sup> Following the issuance of the government bailouts, the United States Department of Treasury required GM to strategically review its brand as well as its dealership network. At the conclusion of the review, GM elected to restructure its resources to allow it to focus on its core brands: Chevrolet, Cadillac, Buick and GMC. Other brands, including HUMMER, Saab, and Saturn, were either phased out, spun-off, or sold. Saab and Saturn sales had struggled significantly in comparison to other models within the GM product portfolio. In fact, GM reported a \$1.1 billion average annual loss for the HUMMER, Saab, and Saturn brands.<sup>20</sup> Additionally, GM recognized that the HUMMER line simply did not fit with its renewed commitment to fuel efficiency and sustainability. In parallel with these actions, GM called for a 25% reduction in the number of vehicle nameplates from 48 in 2008 to 36 by 2012 and accelerated the reduction of its dealer network within its major markets, GM North America and GM Europe.<sup>21</sup>

Each of these strategic moves was designed to allow for a higher concentration of the R&D, capital, and marketing budgets to be spent on fewer models. Furthermore, the closure, consolidation, or relocation, of select dealerships would allow for the recruitment and retention of the best retail talent, generate more competitive dealerships, and allow for more effective local marketing initiatives.<sup>22</sup> Focused attention on GM's higher volume vehicles would solidify the renewed commitment to product excellence.

### **Cost Reductions**

At the end of 2006, GM's obligation to provide healthcare for its 412,356 union members, retirees and surviving spouses was \$51 billion. This translated into more than a \$1,900 increase to the cost of every GM vehicle sold in the United States in 2006.<sup>23</sup> Toyota Motor Corporation, not GM or its labor unions, was establishing the standard for labor costs in the United States auto industry. The hourly wage cost gap between unionized plants operated by GM, and nonunion United States plants operated by foreign automakers was estimated between \$25-30.<sup>24</sup>

As a means of cost reduction, GM entered contract negotiations with both the UAW (officially the United Automobile, Aerospace and Agricultural Implement Workers of America) and CAW (officially the Canadian Autoworkers) unions. GM sought to ratify its agreement with the labor unions that would, in effect, restructure its obligation to cover health care for UAW and CAW retirees and create a mechanism for the buyout of thousands of workers. The overall goal was to work towards the alignment of the GMNA hourly pay-scale with that of the Asian and European

automakers.<sup>25</sup> Between 2006 and 2009, GM shed 66,000 jobs during a four-phased attrition plan that offered buyouts and early retirement to top tier workers (i.e., hourly employees earning wages and benefits in excess of \$70 an hour). The series of buyout exercises enabled GM to reposition itself with a younger, less expensive work force, especially for nonproduction positions.<sup>26</sup>

## **THE NEW GENERAL MOTORS**

In spite of these efforts, and billions in government bailout money, GM filed for Chapter 11 reorganization in June 2009. A newly formed company, NGMCO, bought the assets of GM and subsequently changed its name to General Motors Company.<sup>27</sup> The U.S. government provided \$30.1 billion in new loans, and received an approximately 60% ownership stake in the new company. Other owners include the Canadian government, existing bondholders, and a United Auto Workers trust fund.<sup>28</sup>

GM published four primary strategic elements to guide its intent for the post bankruptcy era:

- Develop a product portfolio of the world's best vehicles
- Globalize vehicle sales through targeted development in international markets
- Improve revenue realization and maintain a competitive cost structure
- Strengthen the balance sheet by reducing financial leverage<sup>29</sup>

### **Initial Public Offering**

On August 12, 2010, the newly restructured GM reported \$1.3 billion in quarterly net earnings, its second consecutive quarterly profit. In the same month, the company filed papers with the Securities and Exchange Commission to do an Initial Public Offering (IPO).<sup>30</sup> GM's IPO occurred in November, 2010, and raised \$18.1 billion, the second largest ever by an American company.<sup>31</sup> The IPO reduced the U.S. government's ownership stake from 61% to 33%.<sup>32</sup> As of December 31, 2011, the largest non-government shareholder, Brock Capital Group LLC, owned 10.24% of the outstanding shares. Including Brock Capital, seven institutions own enough stock to constitute more than 33% of all outstanding GM stock.<sup>33</sup>

### **Financial Performance Improvements**

Following Chapter 11 reorganization, General Motor's financial performance dramatically improved. GM's worldwide sales have seen moderate growth the past two years, with 12.2% growth from 2009 to 2010 and 7.6% growth from 2010 to 2011. The primary source of growth has been sales volume increases in the South American, North American and International markets.<sup>34</sup> The reorganization allowed the company to decrease long-term debt from \$29 billion in 2008 to \$5.6 billion in 2009, which has also helped net income by reducing interest expense. Since 2009, GM has experienced growth in net income, from a loss of \$3 billion in the last half of 2009, to a gain of \$9.2 billion in 2011 (see Exhibit 1 for detailed financial statements).

### **Management**

GM's most senior managers have a wealth of knowledge when it comes to the automotive industry, as well as experience when it comes to the financing and restructuring of a company as it emerges from a Chapter 11 filing (see Exhibit 2 for biographies of the top management team).

Leading these managers is Daniel F. Akerson, who assumed the position of Chief Executive Officer in September 2010. He was later appointed Chairman of GM's Board. Mr. Akerson also currently serves on the boards of the American Express Company and the U.S. Naval Academy Foundation.<sup>35</sup> Akerson was originally appointed to the GM Board by President Obama's auto task force on the basis of his reputation. Prior to joining GM, he held numerous management and board positions in the telecom and finance industries, including being former CEO and/or president of MCI, Nextel communications and XO Communications. Akerson is a graduate of the U.S. Naval Academy and served on the destroyer U.S.S. DuPont from 1970 to 1975.<sup>36</sup>

## **OPERATIONS**

GM designs, builds and sells cars, trucks and automobile parts worldwide. The company is headquartered in Detroit, Michigan, and employs 207,000 people across six continents, of whom 140,000 are hourly employees and 67,000 are salaried.<sup>37</sup> GM operates 158 facilities worldwide, and its employees speak more than 50 languages and live in 23 different time zones. The company produces brands to satisfy customers in more than 120 countries around the world.<sup>38</sup> GM is number one in the total number of vehicles sold in its two most important markets, the U.S. and China.<sup>39</sup>

The bulk of GM's operations reside within its North American division, most notably in the United States, where it owns and operates 30 manufacturing facilities (final assembly, stamping and powertrain) and 20 non-manufacturing facilities (parts distribution and warehousing). Its manufacturing operations are concentrated in the Midwest within the states of Michigan, Ohio, and Indiana, with the remaining facilities dispersed throughout Kentucky, Louisiana, Maryland, Missouri, New York, Tennessee and Texas.<sup>40</sup>

GM operates four main divisions to meet the automotive demands of its customers. These divisions are GM North America ("GMNA"), GM Europe ("GME"), GM International Operations ("GMIO"), and GM South America ("GMSA"). GM also helps its customers attain financing by the use of General Motors Financial Company, Inc. ("GM Financial").<sup>41</sup> Each of these divisions faces its own unique challenges and opportunities. Sales breakdowns by division are illustrated in Exhibit 3.

### **GMNA**

GMNA is the second highest producing division with regard to dollar sales volume and by far its most profitable.<sup>42</sup> In 2011, GMNA was responsible for the sales of 2.9 million vehicles, mostly through 5,068 authorized dealerships. This represents 32.40% of GM sales worldwide. GMNA increased its sales by about 200,000 vehicles in each of the previous years. In 2011, 2,504,000 vehicles were sold in the United States. Although the sales number in Canada and Mexico is much lower than in the United States, the market share in these countries is on par with the United States. GM has a market share of 19.2% in the United States compared to 15.0% in Canada and 18.0% in Mexico.<sup>43</sup> GMNA accounts for most of the GM's profits.

GMNA has to deal with certain issues that are distinct from other divisions and other areas of the world. First, GMNA's vehicles must comply with the United States Environmental Protection Agency ("EPA") requirements before the vehicles can be sold in the United States and Canada. Further, GMNA's vehicles must comply with the California Air Resources Board ("CARB")

requirements before being sold in California or any other state that has adopted California's requirements.

Second, Corporate Average Fuel Economy ("CAFÉ") is a federal program that regulates the fuel efficiency of three separate fleets of cars: domestically produced cars, imported cars, and light-duty trucks. GMNA's current product plan is expected to comply with CAFÉ regulations. Further, the future product plan projects compliance with CARB and the United States National Highway Transportation Safety Administration ("NHTSA") requirements set out for 2017–2025 model years. Canada has also implemented standards that mirror those of the United States.

Third, governmental agencies in both the United States and Canada have introduced regulations and legislation related to the selection and use of safer chemical alternatives, green chemistry and product stewardship initiatives. These initiatives will give broad regulatory authority to ban or restrict the use of certain chemical substances and potentially affect automobile manufacturers' responsibilities for vehicle life-cycle including chemical substance selection for product development and manufacturing. These emerging regulations will potentially lead to increases in cost and supply chain complexity.<sup>44</sup>

## **GME**

GME is the third largest division based on sales volume, with 1.7 million units sold in 2011. However, the company has a long history of problems in Europe. Following Chapter 11 reorganization, GM announced plans to sell off assets in Europe due to recurring losses. In 2009, GM reached an agreement with Magna, along with the German and U.S. governments, to sell GM Europe, which includes German-based Opel and UK-based Vauxhall. However, in November of that year, the deal was called off, with GM announcing plans to keep its European division.<sup>45</sup>

GM also began seeking a buyer for Saab in 2009. After negotiations with Swedish luxury maker Koenigsegg were ended in December 2009, GM entered into discussions with Spyker Cars. In January 2010, GM announced that a sale could not be concluded, and announced plans to phase out the Saab brand.<sup>46</sup> A public backlash led GM to reverse course, and in March 2010, the sale of Saab to Spyker was completed.<sup>47</sup> In June 2011, the Wall Street Journal reported that GM was again open to selling its Opel division. A major overhaul of the operation failed to bring Opel back to profitability, and there was increased competition in the European market from Volkswagen, Ford, and even GM's own Chevrolet models. A potential buyer has not been identified.<sup>48</sup>

GME posted huge losses in 2010 and 2011.<sup>49</sup> However, the sluggish performance may say more about the European car market than it does about GM. Europe's car market is brutally competitive and over supplied. With so many manufacturers and low profit margins, it is imperative to keep costs down. GM has responded recently by aligning itself with Peugeot, the French car manufacturer. While, the two companies will continue to compete against one another, they will leverage their \$125 billion of purchasing power to pressure suppliers and keep costs down. This alliance is estimated to save a combined \$2 billion a year within five years.<sup>50</sup> GME faces environmental challenges in its European operations that are somewhat similar to what the company faces in North America. Two entities regulate emissions in Europe: the European Commission (EC) and the United Nations Economic Commission for Europe (UNECE). The EC regulations apply to all countries that are in the European Union, while the

UNECE regulations apply to the other countries. The EC implemented the Euro 5 standards in 2009, and the EC will implement the Euro 6 standards in 2014. The Euro 6 regulations will have a particular focus on reducing emissions of diesel engines. This will likely increase the costs of these engines, which are already more expensive than their gas counterparts. In order to comply with the Euro 6 requirements, automobiles will have to utilize technologies similar to those used in the United States.<sup>51</sup>

The EU has passed legislation to phase in a sales-weighted fleet average emission per kilometer standard between 2012 and 2015. Automobile manufacturers can earn super-credits for sales volume with an emission per kilometer rating of less than 50 grams of carbon dioxide per kilometer. The tax breaks are aimed at stimulating the early introduction of ultra-low emission vehicles such as the Chevy Volt and Opel Ampera. Lastly, the EU has passed legislation to regulate the emissions of light commercial vehicles. This will require light commercial vehicle emissions to be less than 175 grams of carbon dioxide per kilometer. This regulation will begin phasing in at the beginning of 2014, with full compliance occurring in 2016.<sup>52</sup>

## **GMIO**

GM's international division, GMIO, is the company's fastest growing division, with unit sales of 3.3 million in 2011. GMIO experienced explosive growth from 2009 to 2010 with sales increasing by 25.3%. GMIO followed this with growth of 7.5% from 2010 to 2011.<sup>53</sup> Sales in China, in particular, are growing rapidly. While international operations are profitable, they are much less profitable on a per unit basis compared to the company's North American operations, largely due to much lower vehicle prices.<sup>54</sup> However, given the specific rate of growth in the Chinese market, GM has placed its Chinese operations at the forefront of its global growth strategy.<sup>55</sup> The company plans to release 16 new models and/or major upgrades in China over the next five years (2012 to 2016), including its Baojun brand, a low-cost alternative that recently debuted in showrooms throughout the country.<sup>56</sup>

In an effort to combat the negative stigma associated with the long-time financial troubles of the Daewoo Group in Korea, GM Daewoo recently announced that the Daewoo name would be dropped, and the company's name would change to GM Korea.<sup>57</sup> Most new cars produced by GM Korea will now carry the Chevrolet name. In the first seven months after the name change, GM Korea's domestic sales were 21 percent higher than the same period in the previous year.<sup>58</sup>

China trails the Western countries with regards to its environmental regulations. Presently, China only requires the equivalent of Euro 4 standards throughout the entire nation. Beijing is a little more advanced. It is expected that Beijing will require many aspects of the Euro 5 regulations beginning in 2012, with more Euro 5 upgrades coming in 2014. South Korea has implemented Euro 5 standards for diesel engines and CARB standards for gasoline engines.<sup>59</sup>

China has implemented Phase 3 standards for fuel-economy that will supplement its existing Phase 2 standards based on curb weight. These standards will be implemented between 2012 and 2015. It is also expected that China will implement Phase 4 standards between 2016 and 2020. Korea is also working on new standards. These standards will be more stringent than those in the United States, but will be less stringent than those existing in Europe. Australia will begin implementing standards in 2015.<sup>60</sup>



## **GMSA**

The South American GMSA division sold a little over a million units in 2011, making it the smallest division. GMSA also sustained an operating loss.<sup>61</sup> However, sales grew 22.1% from 2009 to 2011.<sup>62</sup> While profit margins are slimmer in emerging markets, the opportunity for growth is enormous.<sup>63</sup> Also, economic growth in South America has created increased demand for automobiles. With the rise of the middle class, the demand for motor vehicles also rises.<sup>64</sup> GM has increased its manufacturing presence in Brazil and Argentina in an attempt to sell 1.4 million vehicles a year in South America by 2015.<sup>65</sup>

South America is much less uniform in its environmental regulations than North America and Europe. This is because some of the South American countries follow the United States' regulations, while others follow the Euro standards. While these countries follow one or the other, they are not as advanced in their regulations, and trail the United States and Euro regulations. For example, in Argentina, the implementation of Euro 5 regulations was pushed back from 2012 to 2013.<sup>66</sup>

## **GM Financial**

GM Financial Company was acquired by GM in 2010 for \$3.5 billion in cash. It formerly had been operated since 1992 as AmeriCredit Corp. Services include credit or lease financing, vehicle insurance and extended service contracts.<sup>67</sup> Many of its contracts originate from consumers purchasing new and used vehicles from GM dealerships.<sup>68</sup> In April of 2011, GM Financial acquired FinanciaLinx, an independent auto lease provider in Canada, which enabled it to offer lease financing for new GM vehicles purchased at its franchised Canadian dealerships. In the future, GM hopes to leverage its FinanciaLinx acquisition to offer wholesale and commercial lending for GM dealerships in the United States and Canada.<sup>69</sup> Approximately 3,000 people work for GM Financial.

## **Manufacturing**

GM has adopted a number of innovations to reshape its manufacturing operations. An innovation called the GM agile machining fixture introduced a process known as flexible manufacturing that enables power train facilities to run different engine or transmission families across common machining lines. This manufacturing technology allows for a significant reduction to the setup and tooling costs that are typically incurred during product changeover. Prior to this innovation, each GM plant was only capable of processing one specific product because the fixtures that held vehicle parts could not accommodate more than one application at a time. GM announced in November of 2011 that it would invest a total of \$244 million to reopen its assembly plant in Spring Hill, Tennessee as a flexible manufacturing facility, capable of building any GM car or crossover on the basis of customer demand or manufacturing need. Spring Hill is GM's largest United States facility at about 6.9 million square feet and is situated on 2,100 acres of land just south of Nashville, Tennessee.<sup>70</sup>

Other innovations include a computer-based vision system, known as the Video Variance Monitor, and web-based software called the Variation Reduction Adviser. The introduction of these applications enables GM body assembly plants to quickly diagnose and resolve quality issues. Employees at the plant view and analyze body shop operations in real-time and share problem-solving data on a variety of issues within the plant and across all GM's assembly centers.<sup>71</sup>

An example of a plant that best embodies GM's updated manufacturing process is its Lansing-Delta Township facility in Lansing, Michigan. The facility is GM's newest plant, and its 3,954 employees make the plant the largest collection of GM employees worldwide. It is comprised of two plants, a new vehicle assembly plant, including a paint shop, body shop, and assembly building, as well as, a regional stamping plant. The LDT plants were built on GM's Global Manufacturing System (GMS), a globally integrated lean manufacturing model that is being infused into all GM plants, old and new, to standardize the vehicle assembly sequence. In addition, it is a flexible manufacturing facility that's capable of making a variety of GM vehicles.<sup>72</sup>

In addition to the efficiencies gained through the manufacturing innovations above, GM operations have also benefited from a company-wide energy saving initiative. Employing tactics such as benchmarking energy use, automating shut-down of equipment, upgrading to energy-efficient lighting, and adopting more efficient heating and cooling systems, GM reduced energy use of its global facilities by over 30% between 2005 and 2010. Collectively, GM's manufacturing facilities avoided 3.34 million metric tons of greenhouse gas, saving GM millions of dollars in energy costs. Furthermore, GM produces 30 megawatts of solar energy at seven facilities, with its Zaragoza, Spain facility featuring the world's largest industrial rooftop solar installation. Finally, GM is using landfill gas as a source of energy at four of its United States facilities and its Flint Engine facility in Flint, Michigan is 100% landfill free, sending zero of its plant's waste to landfills. The combination of these and other accomplishments earned GM the 2012 Energy Star Partner of the Year award from the United States Environmental Protection Agency (EPA) in its motor vehicle category.<sup>73</sup>

## **Research and Development**

The top research priority within GM is to continue to advance its alternative propulsion strategy, consistent with a business strategy that emphasizes energy diversity and environmental leadership.<sup>74</sup> At the core of this development strategy stands the GM Global Alternative Propulsion Center (GAPC) in Honeoye Falls, N.Y. where GM conducts the bulk of its research on alternative fuels and propulsion systems.

GM's primary objective within this strategic initiative is to become the recognized leader in fuel efficiency. To accomplish this feat, it elected to concentrate on improving the fuel economy of its entire fleet, pursuing advancements in alternative fuel vehicles, extending its hybrid vehicle lineup, as well as developing its Plug-in Electric (PEV) and hydrogen fuel technologies.<sup>75</sup> This plan is designed to keep GM vigilant as it prepares to surpass the 2016 fuel-economy standards required by all United States automakers (39 miles per gallon for passenger vehicles, and 30 miles per gallon for light trucks).<sup>76</sup> Currently, there are United States government proposals in place to tighten these standards, requiring the combined fleet to achieve 49.6 miles per gallon by 2025.<sup>77</sup> While GM has taken strides to position itself for the successful achievement of this aggressive goal, it remains motivated to excel in all areas of its propulsion strategy.

GM is putting a lot of emphasis on energy diversity and environmental leadership. The company rolled out enhancements to its OnStar Vehicle Diagnostics in 2006 to permit real-time readout of vehicle tire pressure, location of E85 ethanol stations, emissions data and oil-life predictions to assist subscribers with reducing fuel consumption. In 2008, GM initiated the world's largest market test using its Chevrolet Equinox fuel cell prototype. The Equinox fuel cell uses GM's fourth-generation hydrogen technology.<sup>78</sup> Hydrogen can be domestically produced, thus reducing reliance on petroleum imports and, when used in fuel cells, emits no air pollutants or greenhouse gases. With regards to alternative fuel, GM's 2012 lineup boasted 20 Flex-Fuel models that run using a mixture of gasoline and ethanol fuels.<sup>79</sup>

Additionally, in 2010 GM launched its extended range electric vehicle, the Chevy Volt, an affordable, entirely electric car that utilizes lithium-ion battery technology. In its 2011 annual report, GM said it would continue to invest heavily in 2012 to further development, production and expansion of its hybrid and plug-in vehicle offerings, and has plans to introduce the Chevrolet Spark to its North American lineup in 2013. GM currently offers a variety of hybrid vehicles equipped with two unique hybrid systems, the GM Hybrid and GM Two-Mode Hybrid, which allows more customers the opportunity to own a hybrid vehicle.<sup>80</sup>

CEO Daniel Akerson believes there is a sustainable advantage in using alliances to fill technology gaps and lower costs. In 2010, GM established a venture capital fund to assist in the pursuit of technological partnerships and resumed talks with France's Renault SA and Japan's Nissan Motor Co. to structure a deal that would foster the joint development of engine and environmental technologies.<sup>81</sup>

## **MARKETING**

GM's product mix varies by country. In the U.S the company currently offers a lineup of 63 different vehicle models, spread among nine different product areas. These product areas include coupe, sedan, hatchback/wagon and sport/convertible cars, as well as, sports utility, crossover vehicles and pick-up trucks. In addition, GM also offers vans and hybrid/electric vehicles.

As of 2012, the GM brand portfolio was made up of seven primary brand names. Its core brands in North America are Buick, Cadillac, Chevrolet and GMC. GM's other brands throughout the world include Holden, Opel, Vauxhall and Wuling.<sup>82</sup> Chevrolet and Opel have a presence in most of the world. The Chevrolet brand is not used in Australia and New Zealand. In these regions, GM operates through its subsidiary, GM Holden, Ltd., which offers its own line of products in addition to rebranded Chevrolet and Vauxhall vehicles. Opel, on the other hand, does not have a presence in either the United States or the United Kingdom. Cadillac, while not considered a global brand, is available on four of the six continents in which GM operates, namely, Africa, Asia, Europe, and North America. The final two core brands, Buick and GMC, are not marketed globally. Buick is restricted to mostly North America and Asia (China and Taiwan), whereas, GMC is marketed only in North America and the Middle East.

Wuling is a joint venture between GM SAIC and Liuzhou Wuling Motors Co., Ltd. of China. Wuling produces mainly commercial vehicles, which are sold primarily within China and to select countries in Africa, the Middle East, and South America. The SAIC-GM-Wuling partnership recently started producing the Baojun 630 automobile in China to compete with other Chinese domestic auto manufacturers. Finally, Vauxhall is a UK automotive company that is owned by GM. A large number of the Vauxhall branded Opel vehicles that are sold in the UK are designed and produced by GM's German subsidiary, Opel.

As part of its brand re-alignment and cost reduction efforts at the corporate level, GM has recently embarked on a series of adjustments at the business level to help improve the efficiency of certain elements of its marketing operations. The company recently consolidated its global media-buying and planning accounts with Aegis Group's Carat unit of London in January of 2012. Previously these accounts were spread among 40 agencies worldwide.<sup>83</sup> In April of 2012, Chevrolet, GM's largest and most successful brand, selected the Detroit-based Commonwealth to reorganize the development of its creative advertising campaign. Commonwealth, formed through a joint venture between two of GM's largest advertising agencies, San Francisco-based Goodby, Silverstein & Partners, and New York-based McCann Erickson, eliminated 70 global agencies that GM once used to perform the same job. Through global hubs in Detroit, Milan, Mumbai and Sao Paulo, the firm intends to consolidate GM's creative advertising effort and ensure consistent global branding across all GM's local markets.

Joel Ewanick, GM's Vice President and Global Chief Marketing Officer, estimated the reduction in the number of marketing partners through the actions above would save GM \$2 billion in expenses over the next five years.<sup>84</sup> According to its 2011 Annual report, GM's advertising expense was \$3.58 billion in 2009, \$4.26 billion in 2010, and \$4.48 billion in 2011. According to Advertising Age, GM's annual outlay leads the automotive industry. Toyota is a distant second, spending \$3.72 billion in 2010 and \$3.27 billion in 2009.<sup>85</sup>

## COMPETITION

The global automobile industry has three primary product segments: cars, vans, and pickup trucks and sport utility vehicles (SUVs). The car segment includes small, medium, large, luxury and all other cars such as hybrid electric and flexible-fuel cars. Market share of small and hybrid electric vehicles has steadily increased due to the heightened demand for improved fuel efficiency and lower emissions resulting from worldwide attention on issues such as pollution and a limited global oil supply. Furthermore, consumer preference has shifted away from SUVs and pickup trucks. Emerging economies tend to produce smaller vehicles and much of the growth in the industry (in unit sales) is occurring in these economies.<sup>86</sup>

With respect to production volumes, North Asia was the world's largest producer of vehicles in 2011 at 40%, with Japan, China and South Korea leading the way. The disproportionately high percentage of production in this region is a direct reflection of China's above-average growth and the high level of exports from Japan. Europe and North America have the next highest production volumes at 26% and 17.1%, respectively.<sup>87</sup>

Analysts believe that the key success factors for this industry going forward are cost flexibility, establishment of export markets, the development and utilization of efficient work practices, effective control systems, access to the latest technology, and the ability to maximize capacity utilization.<sup>88</sup> The auto manufacturing industry is fiercely competitive at the global and domestic levels. The five largest competitors hold less than half of the global market in terms of sales volume (see Exhibit 3).

### **Toyota Motor Corporation**

Toyota, based in Japan, has a sales volume market share of 10.3% in the global automobile market and a U.S. market share of 12.6%.<sup>89</sup> GM regained the top spot in global unit production in 2011, although it still lags in revenues because its cars are less expensive. Toyota was founded in 1937, and its major brands include Toyota, Lexus, and Daihatsu. The company has consolidated its production in North America into Toyota Motor Manufacturing North America, based in Cincinnati. Toyota controls approximately three quarters of the United States hybrid car market, and unlike GM, Toyota currently makes a profit selling hybrids. This is due to having the popular Prius on the market since 1997.<sup>90</sup> The 2011 earthquake disaster in Japan significantly hurt Toyota. Many of Toyota's suppliers were affected, and the company was forced to halt domestic production temporarily.<sup>91</sup> The company was also hit particularly hard by the recession, due to aggressive expansion that led to excess capacity.<sup>92</sup>

### **Volkswagen AG**

Volkswagen AG, based in Germany, has a 7.5% global market share based on sales volume, although it holds less than a 3% market share in the United States.<sup>93</sup> Founded in 1937, its brands include Volkswagen, Audi, Bentley, Lamborghini, and Bugatti. The European Union is Volkswagen's core market, although the company now has a strong market share in China as well.<sup>94</sup> In December 2009, Volkswagen formed a long-term partnership with Suzuki. In the same month, it bought a 49.9% stake in Porsche AG, a jointly owned subsidiary, and announced a plan to formally merge with Porsche SE (the parent company) in 2011.<sup>95</sup> However, the plan was called off in September 2011 due to financial risks. Instead of a full-scale merger, Volkswagen decided to only take over Porsche's car factories. This decision was a major setback in Volkswagen's ambitious plan to become the largest automobile group in the world.<sup>96</sup>

### **Ford Motor Company**

The Ford Motor Company is GM's largest domestic competitor, with 16.6% of the United States market.<sup>97</sup> and 6.1% globally.<sup>98</sup> Its brands include Ford, Lincoln, and Mercury. Ford also holds a minority interest in Mazda.<sup>99</sup> Ford was the only one of the three United States automakers to neither receive bailout money from the government nor enter bankruptcy. Its ability to avoid negative publicity during 2009 led to an increase in domestic market share by 1%, while GM and Chrysler each lost over 2% during the same period.<sup>100</sup>

Beginning in 1987, Ford pursued a global strategy focusing on luxury European brands. It acquired Aston Martin, Jaguar, Volvo, and then Land Rover. After being hit by the global recession, Ford decided to focus more on the core business, and from 2007 to 2010, it sold each of the aforementioned brands. Ford's new strategy is called "One Ford", whereby a small number of common platforms will form the basis for all of the company's models worldwide.<sup>101</sup>

## **Honda Motor Company, Ltd.**

Honda, based in Japan, holds a 9.1% share of the U.S. market<sup>102</sup> and 5.5% globally.<sup>103</sup> Honda is also the world's largest motorcycle manufacturer. The company was formed in 1937, and it specializes in small vehicles and engines. Honda manufactures vehicles under the Honda and Acura brands, along with motorcycle brands Gold Wing, Shadow, and Valkyrie.<sup>104</sup> In 2000, Honda developed the Insight, the first hybrid car commercially available in the United States, but it was not intended for mass-market appeal, and it was not as successful as the Toyota Prius, which was brought to the United States shortly after. However, Honda has had global success with other innovative platforms and designs that focus on simplicity and frugality.<sup>105</sup> Like Toyota, Honda was negatively affected by the 2011 Japan earthquake. Honda was also hurt by fluctuating currency rates.<sup>106</sup>

## **Chrysler Group LLC**

The Chrysler Group is GM's second largest domestic competitor. It currently holds 10.6% of market share in the U.S.,<sup>107</sup> but only an estimated 2.0% globally (#11).<sup>108</sup> Chrysler manufactures vehicles using the Chrysler, Dodge, and Jeep brands.<sup>109</sup> Chrysler was founded in 1925 and operated independently until 1998, when it was purchased by Daimler-Benz. Due to financial troubles, DaimlerChrysler sold 80.1% of Chrysler in 2007 to a buyout group led by Cerberus Capital Management, a private equity firm. In 2008, the newly renamed Daimler AG reported that it held no remaining stake in Chrysler.<sup>110</sup> Following a series of bailout payments from the United States government, Chrysler filed for bankruptcy in 2009.<sup>111</sup> At that time, the owners of Chrysler were the UAW trust, Fiat, the United States government, and its creditors.<sup>112</sup> In June 2011, Fiat bought the remaining shares owned by the United States government to increase its ownership stake to 52.0%.<sup>113</sup>

Chrysler has continued to struggle as consumer tastes have tended towards smaller cars. Unlike its competitors, Chrysler does not have access to a large amount of alternative fuel and hybrid technology, and it does not offer small car options. In 2008, less than 1.0% of Chrysler's sales came from hybrid vehicles, well below other automakers.<sup>114</sup> Hopes for the future depend on Fiat's expertise in small car design and in corporate turnarounds, due to its near collapse in 2004.<sup>115</sup>

## **Other Competitors**

There are several other global players in the automotive industry. Nissan Motors, based in Japan, holds 8.2% of the United States market share<sup>116</sup> and 4.7% globally.<sup>117</sup> The company manufactures vehicles under the Nissan and Infiniti brand names. The core business for Nissan is its small cars, including the low cost, high gas mileage Versa.<sup>118</sup> Nissan went through bankruptcy proceedings in 1999, and it was saved by a partnership with Renault, which now owns 45% of the company. Nissan's current growth strategy is focused on emerging markets, including China, Russia, and India.<sup>119</sup>

Hyundai Motor Company, based in Korea, owns a large stake of Kia Motors, and holds 9.1% of the United States market share<sup>120</sup> and 4.6% globally.<sup>121</sup> The remainder of the top ten global manufacturers list includes PSA Peugeot Citroen SA (France), China FAW Group Corporation (China), and Daimler AG (Germany), which produces Mercedes-Benz vehicles.<sup>122</sup>

### **NEXT MOVES**

GM has returned to profitability and has regained some of its foothold in the global auto maker market. The company has consolidated its operations, has become leaner, and is now run much more efficiently than it was prior to the reorganization. It has realigned itself with other manufacturers to leverage market power and reduce costs. It has started rebranding itself in all of its markets around the world. However, have all these strategic moves been successful? Will reorganization, consolidation, realignment and rebranding efforts enable GM to regain a competitive advantage and sustain that advantage for the long-term? When the Japanese automobile companies return in full force following the 2011 disaster will GM be affected? Will GM continue to run lean or return to a conglomeration of brands and lines that result in increased costs? Will GM continue to commit itself to continuous innovation and create vehicles for the future, ones with higher fuel efficiency and lower emissions? These are some of the key questions that face GM executives as they lead GM into a new and exciting frontier for the company.

## EXHIBIT 1: GM Financial Statements

### Income Statement The General Motors Company

	Fiscal Year End 12/31 (in Millions)					
	2007	2008	2009 (-/7/10)	2009 (>7/10)	2010	2011
Automotive Sales & Revenue	\$179,984	\$148,979	\$47,115	\$57,474	\$135,311	\$148,866
GM Financial Revenue	\$0	\$0	\$0	\$0	\$281	\$1,410
<b>Total Net Sales &amp; Revenue</b>	<b>\$179,984</b>	<b>\$148,979</b>	<b>\$47,115</b>	<b>\$57,474</b>	<b>\$135,592</b>	<b>\$150,276</b>
Cost of Goods Sold	\$165,573	\$149,257	\$55,814	\$56,316	\$118,768	\$130,386
<b>Gross Profit</b>	<b>\$14,411</b>	<b>(\$278)</b>	<b>(\$8,699)</b>	<b>\$1,158</b>	<b>\$16,824</b>	<b>\$19,890</b>
GM Financial operating and other expenses	\$0	\$0	\$0	\$0	\$152	\$785
Automotive selling, general, and administrative expenses	\$14,412	\$14,253	\$6,161	\$6,006	\$11,446	\$12,105
Other automotive expenses	\$4,308	\$6,699	\$1,235	\$15	\$118	\$58
Goodwill impairment charges	\$0	\$0	\$0	\$0	\$0	\$1,286
<b>Operating Profit</b>	<b>(\$1,309)</b>	<b>(\$21,230)</b>	<b>(\$16,095)</b>	<b>(\$4,863)</b>	<b>\$5,108</b>	<b>\$5,656</b>
Disposition of interest in Ally Financial	(\$1,245)	(\$6,183)	\$1,380	\$0	\$0	\$0
Automotive interest expense	\$3,076	\$2,525	\$5,428	\$694	\$1,098	\$540
Interest income and other non-operating income	\$2,284	\$424	\$852	\$375	\$1,531	\$851
Gain (loss) on extinguishment of debt	\$0	\$43	(\$1,088)	(\$101)	\$196	\$18
Reorganization gains	\$0	\$0	\$128,155	\$0	\$0	\$0
<b>Earnings Before Taxes</b>	<b>(\$6,346)</b>	<b>(\$29,471)</b>	<b>\$107,776</b>	<b>(\$5,283)</b>	<b>\$5,737</b>	<b>\$5,985</b>
Income Taxes	\$36,883	\$1,766	(\$1,166)	(\$1,000)	\$672	(\$110)
Equity income, net of tax and gain on disposal of investments	\$524	\$186	\$61	\$497	\$1,438	\$3,192
Income from discontinued operations	\$4,549	\$0	\$0	\$0	\$0	\$0
<b>Net Income</b>	<b>(\$38,136)</b>	<b>(\$31,051)</b>	<b>\$109,003</b>	<b>(\$3,786)</b>	<b>\$6,503</b>	<b>\$9,287</b>
Net (income) loss attributable to noncontrolling interests	(406)	108	115	(511)	(331)	(97)
Net income (loss) attributable to stockholders	(\$38,542)	(\$30,943)	\$109,118	(\$4,297)	\$6,172	\$9,190
Net income (loss) attributable to common stockholders	(\$38,542)	(\$30,943)	\$109,118	(\$4,428)	\$4,668	\$7,585

Sources: General Motors 2010 & 2012 Annual Reports



## Balance Sheet (Assets)

The General Motors Company

Fiscal Year End 12/31 (in Millions)	2008	2009	2010	2011
<b>Assets</b>				
<b>Automotive Current Assets</b>				
Cash & cash equivalents	\$14,053	\$22,679	\$21,061	\$15,499
Marketable securities	\$141	\$134	\$5,555	\$16,148
Restricted cash & marketable securities	\$672	\$13,917	\$1,240	\$206
Accounts & notes receivable	\$7,918	\$7,518	\$8,699	\$9,949
Inventories	\$13,195	\$10,107	\$12,125	\$14,324
Equipment on operating leases	\$5,142	\$2,727	\$2,568	\$2,464
Other current assets and deferred taxes	\$3,146	\$2,165	\$1,805	\$1,657
<b>Total Current Assets</b>	<b>\$44,267</b>	<b>\$59,247</b>	<b>\$53,053</b>	<b>\$60,247</b>
<b>Automotive Non-current Assets</b>				
Restricted cash & marketable securities	\$1,917	\$1,489	\$1,160	\$912
Equity in net assets of nonconsolidated affiliates	\$2,146	\$7,936	\$8,529	\$6,790
Property	\$39,665	\$18,687	\$19,235	\$22,957
Goodwill	\$0	\$30,672	\$30,513	\$27,741
Intangible assets	\$265	\$14,547	\$11,882	\$10,013
Other assets and deferred taxes	\$2,779	\$3,717	\$3,594	\$2,900
<b>Total Non-Current Assets</b>	<b>\$46,772</b>	<b>\$77,048</b>	<b>\$74,913</b>	<b>\$71,313</b>
<b>Total Automotive Assets</b>	<b>\$91,039</b>	<b>\$136,295</b>	<b>\$127,966</b>	<b>\$131,560</b>
<b>GM Financial Assets</b>				
Finance receivables	\$0	\$0	\$8,197	\$9,162
Restricted cash	\$0	\$0	\$1,090	\$1,115
Goodwill	\$0	\$0	\$1,265	\$1,278
Other assets	\$0	\$0	\$380	\$1,488
<b>Total GM Financial Assets</b>	<b>\$0</b>	<b>\$0</b>	<b>\$10,932</b>	<b>\$13,043</b>
<b>Total Assets</b>	<b>\$91,039</b>	<b>\$136,295</b>	<b>\$138,898</b>	<b>\$144,603</b>

*Sources: General Motors 2010 & 2012 Annual Reports*

## Balance Sheet (Liabilities & Equity)

The General Motors Company

Fiscal Year End 12/31 (in Millions)				
Liabilities and Shareholders' Equity	2008	2009	2010	2011
<b>Automotive Current Liabilities</b>				
Accounts Payable	\$22,259	\$18,725	\$21,497	\$24,494
Short-term debt and current portion of long-term	\$16,920	\$10,221	\$1,616	\$1,682
Accrued liabilities	\$36,429	\$23,489	\$24,044	\$22,756
<b>Total Current Liabilities</b>	<b>\$75,608</b>	<b>\$52,435</b>	<b>\$47,157</b>	<b>\$48,932</b>
<b>Automotive Non-current Liabilities</b>				
Long-term debt	\$29,018	\$5,562	\$3,014	\$3,613
Postretirement benefits other than pensions	\$28,919	\$8,708	\$9,294	\$6,836
Pensions	\$25,178	\$27,086	\$21,894	\$25,075
Other liabilities and deferred taxes	\$17,392	\$13,549	\$13,021	\$12,336
<b>Total Non-current Liabilities</b>	<b>\$100,507</b>	<b>\$54,905</b>	<b>\$47,223</b>	<b>\$47,860</b>
<b>Total Automotive Liabilities</b>	<b>\$176,115</b>	<b>\$107,340</b>	<b>\$94,380</b>	<b>\$96,792</b>
<b>GM Financial Liabilities</b>				
Securitization notes payable	\$0	\$0	\$6,128	\$6,938
Credit facilities	\$0	\$0	\$832	\$1,099
Other liabilities	\$0	\$0	\$399	\$783
<b>Total GM Financial Liabilities</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,359</b>	<b>\$8,820</b>
<b>Total Liabilities</b>	<b>\$176,115</b>	<b>\$107,340</b>	<b>\$101,739</b>	<b>\$105,612</b>
<b>Equity</b>				
Preferred stock, \$0.01 par value, 2 billion shares:				
Series A (276,101,695 shares issued)	\$0	\$5,536	\$5,536	\$5,536
Series B (100,000,000 shares issued)	\$0	\$1,462	\$4,855	\$4,855
Common stock	\$1,017	\$5	\$15	\$16
Capital surplus (principally addl paid-in capital)	\$16,489	\$24,050	\$24,257	\$26,391
Retained earnings	(\$70,727)	(\$4,394)	\$266	\$7,183
Accumulated other comprehensive income	(\$32,339)	\$1,588	\$1,251	(\$5,861)
<b>Total stockholder's equity</b>	<b>(\$85,560)</b>	<b>\$28,247</b>	<b>\$36,180</b>	<b>\$38,120</b>
	\$484	\$708	\$979	\$871
<b>Total Equity</b>	<b>(\$85,076)</b>	<b>\$28,955</b>	<b>\$37,159</b>	<b>\$38,991</b>
<b>Total Liabilities &amp; Equity</b>	<b>\$91,039</b>	<b>\$136,295</b>	<b>\$138,898</b>	<b>\$144,603</b>

*Sources: General Motors 2010 & 2012 Annual Reports*

## **EXHIBIT 2: GM KEY EXECUTIVES**

### **Chief Executive Officer: Daniel F. Akerson**

Daniel F. Akerson assumed the position of Chief Executive Officer in September 2010. He was later appointed Chairman of GM's Executive Committee in January 2011. Mr. Akerson also currently serves on the boards of the American Express Company and the U.S. Naval Academy Foundation. Akerson was originally appointed to the GM Board by President Obama's auto task force on the basis of his reputation. Prior to joining GM, he held numerous management and Board positions in the telecom and finance industries, including being former chief executive officer and/or president of MCI, Nextel communications and XO Communications. Akerson is a graduate of the U.S. Naval Academy and served on the destroyer U.S.S. DuPont from 1970 to 1975.

### **Vice Chairman of Corporate Strategy: Stephen J. Girsky**

Stephen J. Girsky, a member of GM's Board since 2009, was promoted to GM's Vice Chairman of Corporate Strategy in February of 2010. Mr. Girsky holds an M.B.A. from the Harvard Business School, and has 25 years of experience in the automotive industry. A former managing director and senior equities analyst with the Morgan Stanley Global Automotive and Auto Parts Research Team (1995-2005), Girsky was originally brought to GM in an advisory role by former CEO Rick Wagoner in 2006. He also served as president of a private investment firm, Centerbridge Industrial Partners, LLC, from 2006 to 2009. During this period, Girsky worked with the United Auto Workers (UAW) to advise its president on the possible bankruptcy of GM and Chrysler Group LLC, and established his own, independent, advisory firm, S.J. Girsky & Company.

### **Senior Vice President and Chief Financial Officer: Daniel Ammann**

Daniel Ammann was named as Senior Vice President and Chief Financial Officer in April 2011. He was Managing Director and Head of Industrial Investment Banking for Morgan Stanley from 2004 until joining GM as Vice President, Finance and Treasurer in 2010. During his 11 years at Morgan Stanley, his assignments included mergers, acquisitions, raising capital and restructuring, including advising GM during its 2009 restructuring. Ammann holds a Bachelor of Management Studies in Economics and Finance from the University of Waikato in New Zealand.

### **Vice President and President, South America: Jaime Ardila**

Jaime Ardila was named as the Vice President and President, South America in June of 2010. This was a new position that was created as GM reorganized its divisions. Prior to this appointment, Jaime was President and General Manager of GM Mercosur. In this position Mr. Adila was responsible for operations in Brazil, Argentina, Uruguay, Paraguay, Chile, Bolivia and Peru. He has been employed by GM since 1984.

### **Senior Vice President, Global Product Development: Mary T. Barra**

Mary T. Barra was tapped for Senior Vice President, Global Product Development at the beginning of 2011. Ms. Barra is an engineer and previously headed up GM's Human Resource Department starting in 2009 as part of the government-funded restructuring. She has held a number of positions within GM since starting as a co-op student in 1980. These roles have included plant manager, head of internal communications, and vice president of global manufacturing and engineering.

### **Vice President and President, International Operations: Timothy E. Lee**

Timothy E. Lee was named as Vice President and President, International Operations in December 2009. He has been employed by General Motors Corporation since 1969. He had been Group Vice President, Global Manufacturing and Labor since October 2009. He was named GM North America Vice President, Manufacturing in January 2006.

### **Vice President and President, Europe: Karl-Friedrich Stracke**

Karl-Friedrich Stracke assumed his position on January 1, 2012, replacing the retiring David N. Reilly. He had been appointed to take over as Chief Executive Officer of Opel Vauxhall in March of 2011. Prior to that, he served as Vice President Global Engineering since December 2009. He had served as Executive Director, Global Vehicle Integration, Safety and Virtual Development since February 2008 and Global Executive Director, Body Exterior, Interior and Dimensional Engineering from March 2006 to February 2008. He has been employed by General Motors Corporation since 1979.

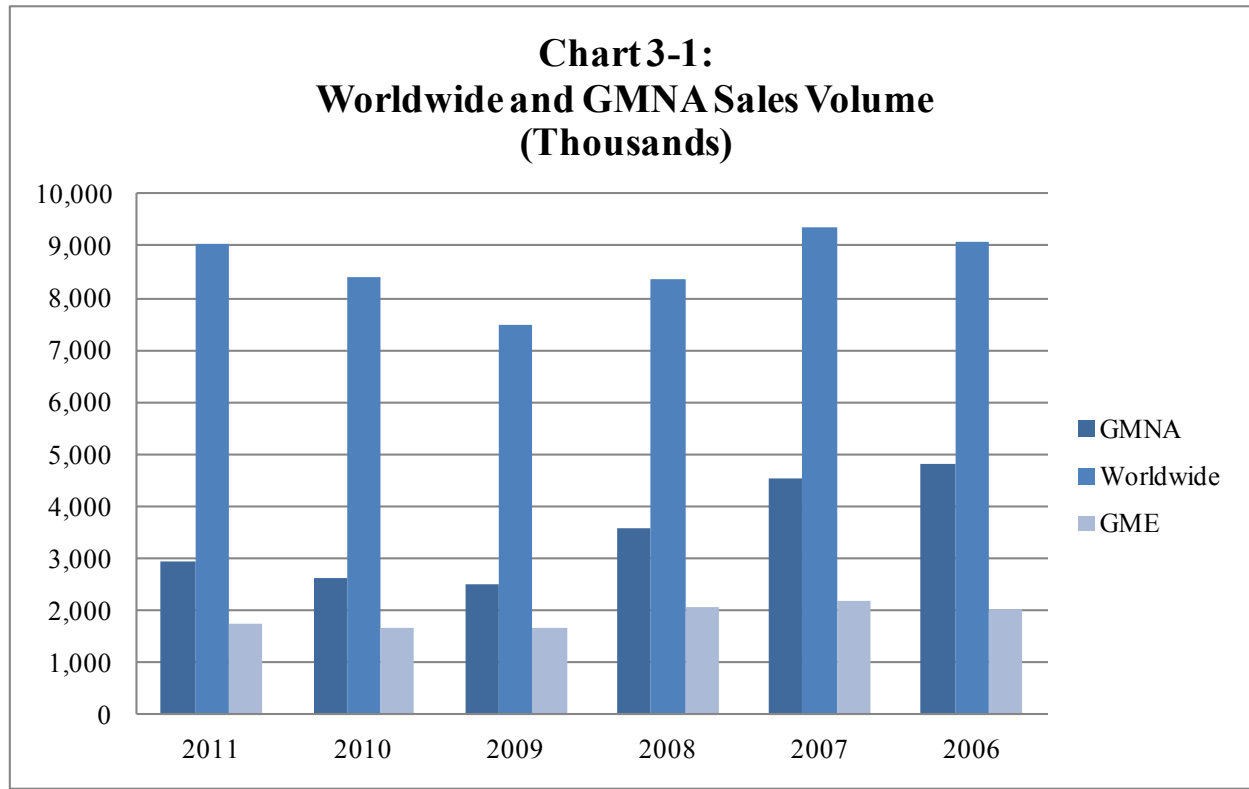
### **Vice President and President, North America: Mark L. Reuss**

Mark L. Reuss has been employed with GM since 1983. In March 2006, he held the position of Executive Director for GM's Global Vehicle Integration, Safety and Virtual Development. Reuss was named President and Managing Director of GM Holden, Ltd. in February of 2008, a position that he held until July 2009. Holden was Reuss' first international posting in GM following 25 years of service in various engineering roles. During his time in Australia and New Zealand, he was responsible for a deal that brought the production of the Chevrolet Caprice Police Patrol Vehicle to Holden's assembly plant in Elizabeth, South Australia. The plant had previously lost production of the Pontiac G8 due to cancellation of the program, and this move rekindled Holden's U.S. exports. Reuss was named to his current position in December 2009.

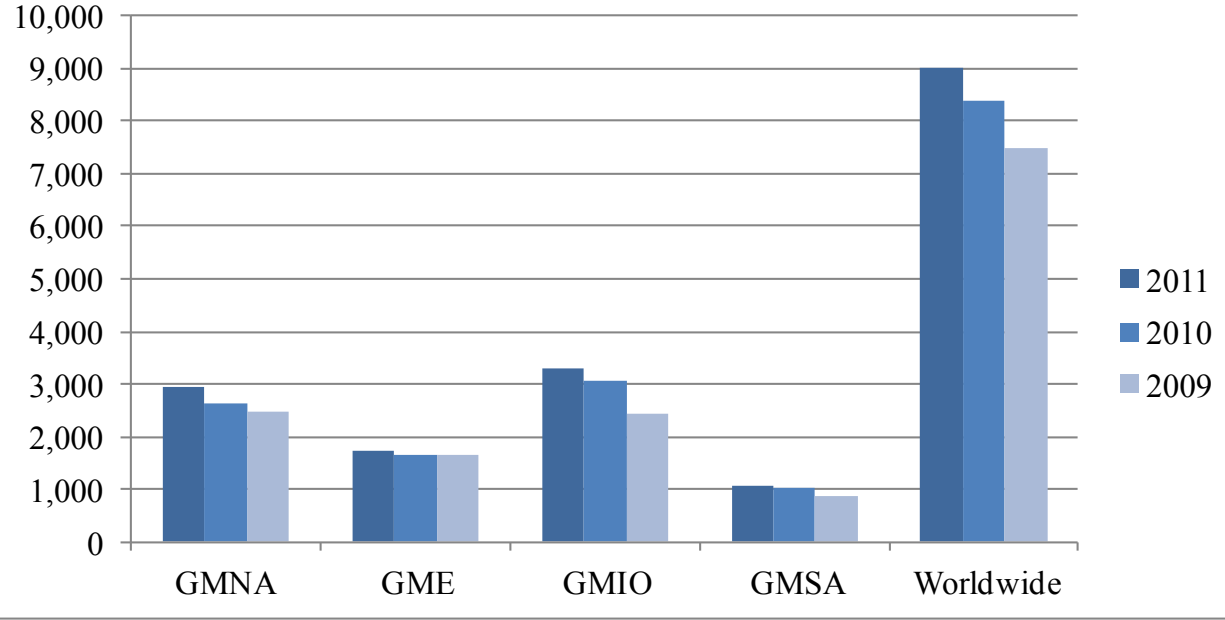
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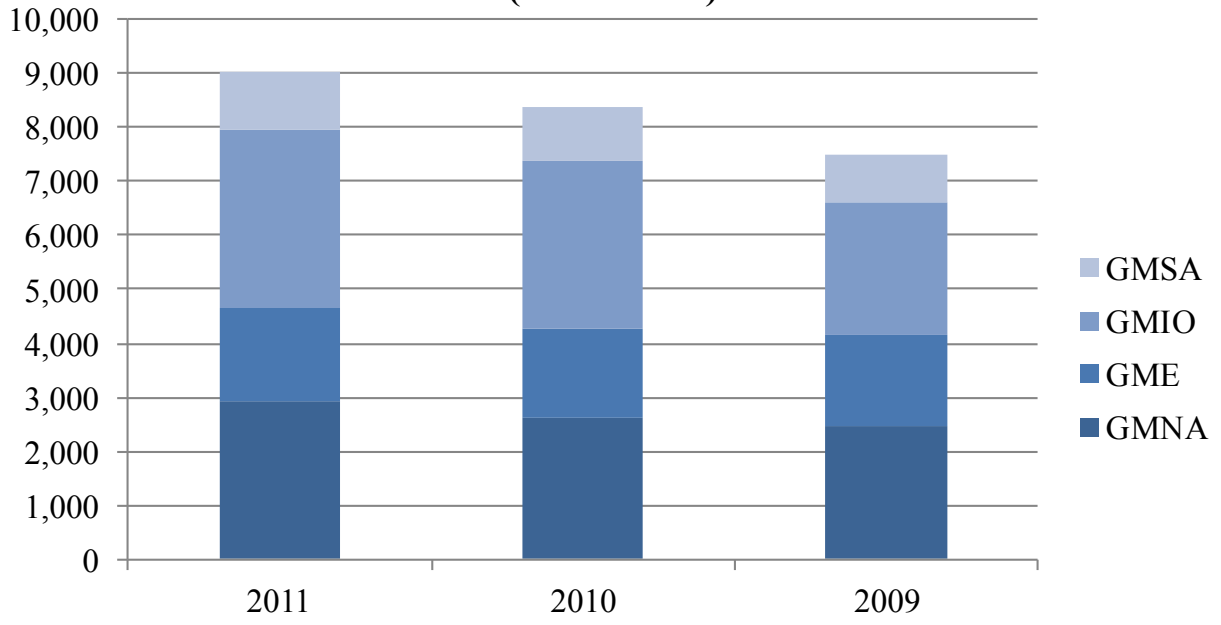
**EXHIBIT 3: Sales Charts for GM and Other Global Manufacturers**



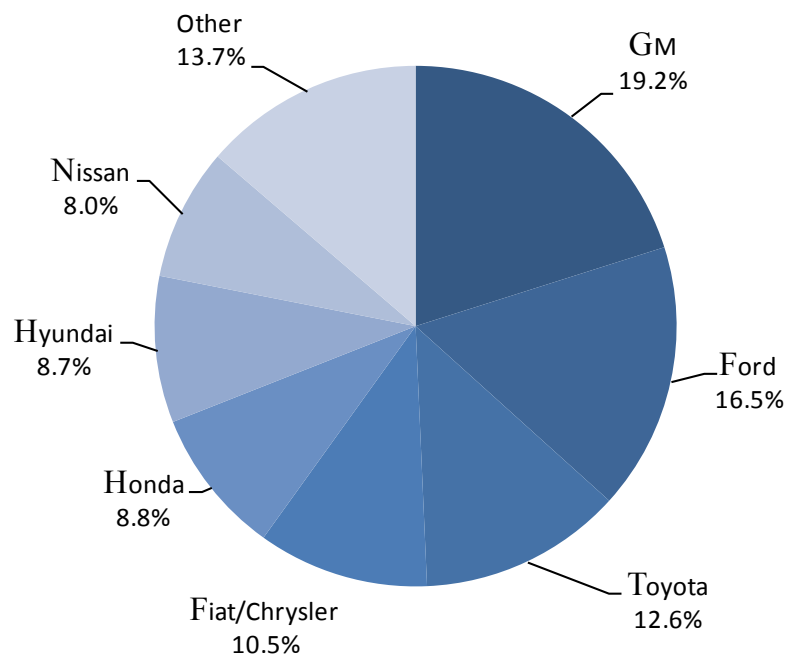
**Chart 3-2:  
2009 – 2011 GM Sales Volume by Division  
(Thousands)**



**Chart 3-3:  
2009 – 2011 GM Sales Volumes by Division  
(Thousands)**

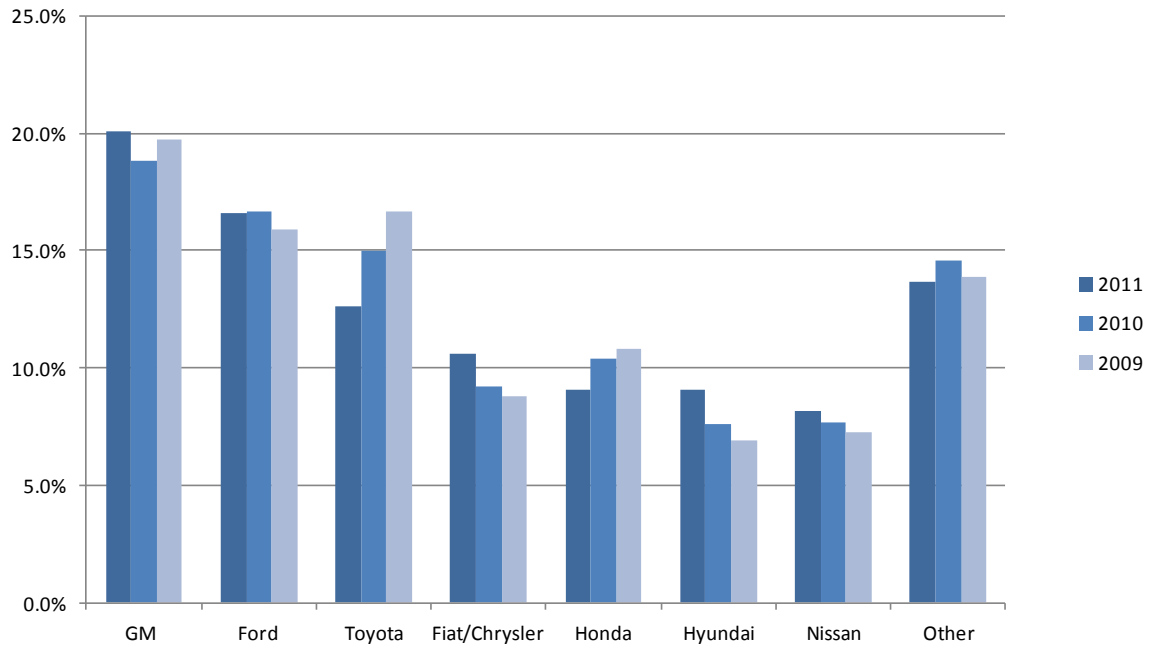


**Chart 3-4:  
United States Market Share of the Leading Automobile  
Manufacturers:**





**Chart 3-5:  
United States Market Share of Leading Automobile Manufacturers  
(2009-2011)**



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