



The U.S. Motor Vehicle Industry: Confronting a New Dynamic in the Global Economy

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Summary

This report provides an in-depth analysis of the 2009 crisis in the U.S. auto industry and its prospects for regaining domestic and global competitiveness. It also analyzes business and policy issues arising from the unprecedented restructurings that occurred within the industry. The starting point for this analysis is June-July 2009, with General Motors Company (GM or new GM) and Chrysler Group LLC (or new Chrysler) incorporated as new companies, having selectively acquired many, but not all, assets from their predecessor companies.

The year 2009 was marked by recession and a crisis in global credit markets; the bankruptcy of General Motors Corporation and Chrysler LLC; the incorporation of successor companies under the auspices of the U.S. Treasury; hundreds of parts supplier bankruptcies; plant closings and worker buyouts; the cash-for-clunkers program; and increasing production and sales at year's end. This report also examines the relative successes of the Ford Motor Company and the increasing presence of foreign-owned original equipment manufacturers (OEMs), foreign-owned parts manufacturers, competition from imported vehicles, and a serious buildup of global overcapacity that potentially threatens the recovery of the major U.S. domestic producers. This report, which establishes a context for examining the industry and analyzes a unique but highly specific period in the U.S. automobile industry's history, will not be updated.

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Introduction

This report provides an in-depth analysis of the 2009 crisis in the U.S. auto industry and its prospects for regaining domestic and global competitiveness. It also analyzes business and policy issues arising from the unprecedented restructurings that occurred within the industry. The starting point for this analysis is June-July 2009, with General Motors Company (GM or new GM) and Chrysler Group LLC (or new Chrysler) incorporated as new companies, having selectively acquired many, but not all, assets from their predecessor companies. This report seeks to provide policymakers with an understanding of the U.S. light vehicle industry and its place in the global economy.

It could be argued that 2009 was the most tumultuous year in the history of the U.S. auto industry—a period marked by recession and a crisis in global credit markets; the bankruptcy of General Motors Corporation and Chrysler LLC; the incorporation of successor companies under the auspices of the U.S. Treasury; plant closings and worker buyouts; the cash-for-clunkers program; and increasing sales at year's end. This report also examines the relative successes of the Ford Motor Company and increasing domestic production by foreign-owned original equipment manufacturers (OEMs), foreign-owned parts manufacturers, competition from imported vehicles, and a serious buildup of global overcapacity that potentially threatens the recovery of the major U.S. domestic producers. This report, which establishes a context for examining the industry and analyzes a unique but highly specific period in the U.S. automobile industry's history, will not be updated.

Global Chaos as Credit Markets Tighten

In autumn 2008, the collapse of world credit markets and a growing economic recession combined to create the worst market for the production and sale of motor vehicles in decades. The demise of the subprime mortgage market helped trigger cascading loan defaults and bank failures. As a Ward's auto industry analyst said, "The easy-credit financing of everything from homes to vehicles that had been keeping the economy percolating evaporated virtually overnight."¹ The swift demise of credit markets alone would have precipitated a crisis for automakers because

- auto sales are heavily dependent on adequate financing for dealers and consumers, and
- General Motors and Chrysler were in a precarious financial state before the fall of 2008. The tightening of credit made it impossible for them to raise private funds to keep their operations afloat.²

But for the automakers, this perfect storm went beyond just financing problems. The world economy was slowing even before the credit crisis began in earnest, and this meant that consumers were pulling back on major purchases such as automobiles, regardless of the availability of credit. As unemployment began to ratchet up, and even those who were employed

¹ *Ward's Automotive Yearbook 2009*, "U.S. Market, Auto Makers Hammered by 2008 Financial Crisis," p. 163.

² Ford Motor Co. escaped this fate because of its decision in December 2006 to mortgage all its assets to obtain \$23.5 billion in private financing for a corporate restructuring, as well as sell its Jaguar and Land Rover brands. Such financing options were unavailable to Chrysler and GM by the fall of 2008.

feared that they might lose their jobs, auto showrooms emptied. On top of these considerations, U.S. gasoline prices rose steeply in 2008, to more than \$5 a gallon in some parts of the country. That caused consumers to cut back substantially on the number of miles they drove,³ and to rethink their love affair with SUVs and other vehicles that had relatively low fuel economy, but which had been the primary source of profits for the Detroit 3—GM, Ford and Chrysler—since the early 1990s. A heightened interest in fuel efficiency and fuel economy emerged, reshaping U.S. automakers' plans for new vehicles, particularly fuel-efficient ones, for 2009 and beyond. At the same time, many policymakers raised concerns about the volatility of energy markets, U.S. dependency on imported petroleum and gasoline, and concerns about climate change. In light of these converging factors, many industry observers believe that 2008 marked a seismic shift in the fortunes and futures of automakers in the United States and in most countries around the world.

The decline in U.S. motor vehicles sales accelerated in late 2008, with monthly sales running more than 30% lower than the same month the year before. Americans bought 13.2 million cars and light trucks in 2008, below the 16.1 million units sold in 2007, and well below the peak of the 17.8 million sold in 2000. For the full year, the Detroit 3 were the hardest hit, with 2008 sales falling by 30.3%, 22.7% and 20.3% for Chrysler, GM, and Ford, respectively.⁴ Until 2009, the United States was the world's largest car market. But a recession-led decline in U.S. sales and a parallel surge in Chinese purchases have, for now, made that country the world's largest single auto market.

State of the Economy: Auto Production and Sales Outlook

U.S. auto manufacturing takes place primarily along a north-south axis that runs from Michigan south to Alabama, Georgia, Mississippi, and Texas, dubbed Auto Alley by some observers. Its backbone is comprised of the north-south interstate highways, which form a latticework with east-west interstate routes through much of the Midwest and South. The efficient manufacturing and shipping of parts and finished cars along these routes is key to the economic success of Auto Alley.

The geography of auto-making is shown in **Figure 1**. Canada and Mexico are part of a highly integrated industry of final assemblers located in North America (e.g., GM, Honda, and others), and thousands of parts suppliers (e.g., Leer, American Axle, and Borg Warner, among others). This network of auto assembly and parts-making crosses the borders into both Canada and Mexico. A list of all North American auto assembly plants is in **Appendix A**. In the United States, auto-making employment accounted for nearly 7% of all manufacturing and employed more than 880,000 auto assembly and auto parts manufacturing workers in 2008.⁵ In **Figure 1**, the parts

³ According to the Federal Highway Administration, the number of vehicle-miles traveled in 2008 declined by 104 billion miles (-3.4%) from the previous year, the first such decline in vehicle-miles traveled since 1974, when motorists drove 18.6 billion fewer miles (-1.4%) than in 1973. U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information. *Traffic Volume Trends*. December 2009. p. 2 and *Historical Monthly VMT Report, 1970-2008*.

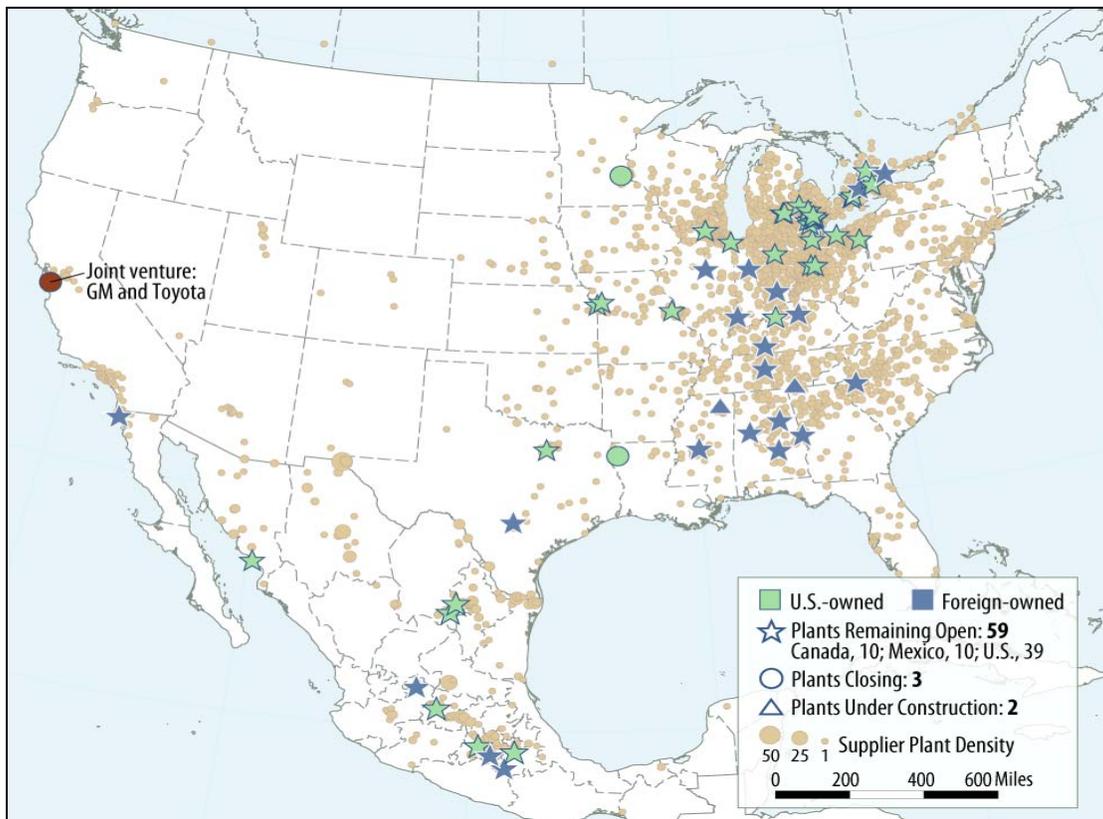
⁴ Ward's, *Motor Vehicle Facts and Figures*, 2009.

⁵ U.S. Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) program, including all employees at manufacturing establishments in North American Industry Classification System (NAICS) categories 3361, 3362, and 3363.

suppliers are shown by tan dots. Current plants of both the Detroit 3 and foreign-owned manufacturers are shown separately, as are the two new plants under construction in Mississippi (Toyota) and Tennessee (Volkswagen).⁶ European and Asian automakers generally prefer to invest in lower-cost, right-to-work states in the South, and have located their plants there during the past 25 years. As the auto sector embraced Just-in-Time (JIT)⁷ inventory management, these new plants attracted auto suppliers to the South as well, broadening the auto industry's impact on local economies well beyond the traditional Great Lakes region.⁸

Figure 1. Geography of North American Auto Production

Showing Existing, New, and Closing Plants



Source: Thomas Klier, Senior Economist, Federal Reserve Bank of Chicago, September 2009.

Notes: Plant closings are those announced post GM and Chrysler bankruptcies and which will close in 2010 or later. They are: NUMMI, a GM-Toyota joint venture in Fremont, CA; Ford's Twin Cities, St. Paul, MN; GM Shreveport, LA; and GM Moraine, OH. For a list of all North American auto assembly plants, see **Appendix A**.

⁶ The new plants will open after 2010.

⁷ JIT is a strategy and system of inventory management “in which raw materials and components are delivered from the vendor or supplier immediately before they are needed in the manufacturing process,” thereby cutting costs and reducing waste in the production process. *InvestorWords.com*. http://www.investorwords.com/2688/just_in_time.html

⁸ For more information on employment trends in the auto sector and the impact of foreign investment, see CRS Report R40746, *The U.S. Automotive Industry: National and State Trends in Manufacturing Employment*, by Michaela D. Platzer and Glennon J. Harrison, August 3, 2009.

Industry Hits Bottom in 2009

The decline in production and sales of motor vehicles accelerated in the winter and spring of 2009. This section analyzes the factors behind the nosedive in U.S. auto sales and production during the past year and near-term projections for a possible revival of auto sales and production. It also discusses the fallout of the recession in the auto industry on auto suppliers and the unions that represent Detroit 3 auto workers, primarily the United Auto Workers (UAW).⁹

Motor Vehicle Production

In 2009, U.S. motor vehicle production declined dramatically, as shown in **Table 1**, with overall U.S. output of cars and light trucks dropping by 34% from the previous year. Chrysler and GM sales dropped by 57% and 48%, respectively. Toyota, BMW, and Honda each fell by over 25%. Ford's performance, with sales dropping by only 13% year over year, was better than other automakers.

Table 1. U.S. Auto Production Declines

Major Manufacturers, in thousands of units

Company	U.S. Production 2009	U.S. Production 2008	Percent Change
Chrysler	483	1,122	-57
Ford	1,321	1,510	-13
General Motors	1,186	2,286	-48
BMW	122	171	-29
Honda	721	987	-27
Hyundai-Kia	199	237	-16
Mercedes-Benz	102	153	-33
Nissan	374	544	-31
Toyota	542	755	-28
Other	704	973	-28
Total U.S. Production	5,754	8,738	-34

Source: *Automotive News*, "North American Car and Truck Production," January 11, 2010.

Notes: Data include production of both cars and light trucks.

⁹ For an analysis of the unfolding crisis in the auto industry during the fall of 2008 and the first half of 2009 and the congressional response, see CRS Report R40003, *U.S. Motor Vehicle Industry: Federal Financial Assistance and Restructuring*, coordinated by Bill Canis.

In January 2009, U.S. automobile production bottomed out. In that month, U.S. production at a seasonally adjusted annual rate (SAAR)¹⁰ fell to only 3.7 million vehicles (cars and light trucks), compared to a SAAR of 10.7 million units in January 2008. Production in the first two quarters of 2009 fell by more than 50%, compared to 2008 levels.¹¹ The U.S. “cash for clunkers” program, which began on July 24, 2009, increased the production of vehicles in July and August to 6.2 and 5.9 million SAAR, respectively. After the clunkers program ended, many automakers faced depleted inventories. Increased production in the fall resulted in a 1.2% increase in production during the fourth quarter of 2009 over the same quarter in 2008. For all of 2009, 5.8 million vehicles were produced.¹² According to IHS Global Insight, U.S. production performance in 2009 was the lowest in nearly 50 years, with the previous production low having been recorded in 1961, when 5.5 million light vehicles were manufactured (in a United States with a population of 179 million).¹³

U.S. production is forecast to rise by nearly 23% to 6.9 million in 2010, to reach 8.1 million in 2011, and climb thereafter to reach more than 10 million light vehicles in 2014, for the first time in nearly a decade.¹⁴ In the near term, production will remain below pre-recession levels. As automakers have moved to rebuild depleted inventory, new production plans have emerged. GM, Ford, and others raised their production levels during the fourth quarter of 2009. For the Detroit 3, SUVs and pickup trucks remain a staple of their business plans. In 2009, 82% of Ford’s U.S. production and 83% of Chrysler’s was light trucks (i.e., pickup trucks and SUVs). By contrast, 44% of Honda’s and 37% of Toyota’s 2009 production in the United States was light trucks.¹⁵ While neither Honda nor Toyota are generally perceived to be dependent on SUV and light truck sales, these vehicles are rapidly becoming a large part of their businesses, demonstrating how potent the market for these products can be.

Motor Vehicle Sales

In addition to the slide in production, the first months of 2009 were the low point in motor vehicle sales: the seasonally adjusted annual rate (SAAR) of car sales bottomed out in February 2009, at 9.11 million units. But the cash for clunkers program in summer 2009 and strong sales in December 2009 helped cushion results for the year, with greater than expected sales of 10.4 million vehicles in 2009. Still, for 2009, GM’s U.S. sales fell by 30%, Chrysler’s by 36%, and Toyota’s and Honda’s by 20% each. (See **Table 2**.) Toyota posted its first annual net loss since 1950.

¹⁰ SAAR is “a rate adjustment used for economic or business data that attempts to remove the seasonal variations in the data. Most data will be affected by the time of the year. Adjusting for the seasonality in data means more accurate relative comparisons can be drawn from month to month all year. The SAAR is calculated by dividing the unadjusted annual rate for the month by its seasonality factor and creating an adjusted annual rate for the month.” Source: Investopedia.com.

¹¹ Similar trends were afoot in Europe, although the earlier enactment of cash for clunkers programs in most European markets raised production there and sustained it throughout the spring and summer. November and December car registrations in Europe were up by 27% and 16%, year over year, respectively, while full year sales were down by 2% over 2008. *Automotive News* website, viewed March 14, 2010.

¹² *IHS Global Insight*, “U.S. Industry and Production Outlook—Light Vehicles,” January 26, 2010.

¹³ *Ibid.*; Department of Commerce, Bureau of the Census. *Statistical Abstract of the United States, 1964*. p. 5, 565.

¹⁴ *IHS Global Insight*, “U.S. Industry and Production Outlook—Light Vehicles,” January 26, 2010.

¹⁵ *Automotive News*, “North American Car and Truck Production,” January 11, 2010.

Table 2 shows the change in auto sales by manufacturer in terms of year-over-year sales for 2008 to 2009 and for 2007 to 2009 (2007 was the last full year of sales before the recession hit the industry in 2008), and the shift in market share from 2008 to 2009. GM's share fell from 22.2% to 19.8%, while Ford's share rose to 15.5% and Hyundai/Kia's to more than 7%. The turmoil and bankruptcies of GM and Chrysler have likely been a boon to Ford. Federal ownership of GM and Chrysler became a distinguishing factor that apparently led to a preference for Ford among many buyers. Ford's top marketing executive said, "Ironically, the debate around the industry was the best thing that happened to Ford. We're finally relevant in North America."¹⁶ The attention on the Detroit 3 during 2009 also allowed Ford to introduce consumers to its new lines of trucks and automobiles and its new, more fuel-efficient engines. A national survey of online auto shoppers conducted during the summer of 2009 showed that 22% were actively looking at Ford vehicles, equal to the number looking for Toyotas.¹⁷ During the fourth quarter of 2009, Ford closed the gap with Toyota and during January and February 2010, sold 55,301 more vehicles than Toyota. February also marked the first time that Ford outsold GM since 1998.¹⁸

Hyundai's increase in market share demonstrates that a once little-known Asian automaker—whose early vehicles, introduced in the U.S. market 20 years ago, rated poorly in terms of quality—can transform itself. "For years, Hyundai enjoyed a protected home market in Korea. This ensured its prosperity there, but the lack of competition meant the company didn't develop the product quality or consistency to compete effectively in international markets. The result: Hyundai's initial U.S. success in 1986 was undercut quickly by quality problems."¹⁹ More recently, Hyundai opened a U.S. plant in Alabama and a nearby Kia plant in Georgia. It has also improved its product quality and offers one of the longest warranties in the business, which is luring new customers away from both U.S. and Japanese manufacturers.

The three automakers with the largest U.S. market shares in 2009 were GM, Toyota, and Ford. During 2009, Honda surpassed Chrysler to become the fourth-largest seller of vehicles in the United States. Hyundai's surge to a 7% market share placed it within striking range of Chrysler's diminished 8.9% share.

¹⁶ *Automotive News*, "Competitors' Bankruptcies Have Helped Ford," September 28, 2009.

¹⁷ *Ibid.*

¹⁸ *Automotive News*, Data Center, "U.S. Total Sales by Brand," 2009 and 2010; *Automotive News*, "After sales soar 43% in Feb., Ford cautiously raises output," March 2, 2010.

¹⁹ Commentary by Paul Ingrassia, *Wall Street Journal*, "Why Hyundai is an American Hit," September 13, 2009.

Table 2. U.S. Motor Vehicle Sales, 2008 and 2009

Percent change

Company	Change in Sales 2009 vs. 2008	Change in Sales 2009 vs. 2007	Market Share	
			2008	2009
General Motors	-30	-46	22.3	19.9
Ford	-16	-34	15.1	16.1
Chrysler	-36	-55	11.0	8.9
Toyota	-20	-33	17.0	16.7
Honda	-20	-26	10.8	11.0
Nissan	-19	-28	7.4	7.2
Hyundai-Kia	+9	-5	5.1	7.0
Daimler	-18	-19	1.9	2.0
BWM	-21	-28	1.9	1.9
VW	-5	-9	2.4	2.9

Sources: *Automotive News*, "U.S. Car and Light Truck Sales by Make—12 months 2009," January 5, 2010, and "U.S. Car and Light Truck Sales by Make—12 months 2008," January 12, 2009.

Cash for Clunkers: Impact on 2009 Sales

The cash for clunkers²⁰ program spurred July and August 2009 sales and dramatically reduced inventories.²¹ However, it was followed by a pullback in September, when buyers dwindled in showrooms. Analysts had forecast that the clunkers program would perhaps cause a major falloff in sales for the rest of 2009 and into 2010. In September 2009, GM and Toyota sales fell by 45% and 13%, both worse than what analysts expected,²² and Ford sales fell by 5%. But by October and November 2009, a new pattern for most automakers of modest sales growth was emerging: GM's sales rose 4.7% compared to October 2008; Ford's rose by 3.3% and Nissan's by 5.6%. Toyota's were flat and Honda's dropped by 0.4%. Only Chrysler continued to fall dramatically, by 30.4%, largely caused by a paucity of new product and continued concerns about the future of the new company.²³

Inventories for all automakers shrank to abnormally low levels after the bargains in the clunkers program. For example, GM and Ford dealers had about half the inventory on hand at the end of August 2009 that they did in the same month a year earlier. The clunkers surge and the slim

²⁰ CRS Report R40654, *Accelerated Vehicle Retirement for Fuel Economy: "Cash for Clunkers,"* by Brent D. Yacobucci and Bill Canis, March 3, 2010.

²¹ In July and August 2009, while the cash for clunkers program was in effect, nearly 700,000 new vehicles were sold by U.S. dealers. It is not clear how many of these sales would have been made anyway; the federal rebate program is credited by many observers as having contributed to the surge. After the program ended, the President's Council of Economic Advisers (CEA) estimated that as many as 346,000 sales were induced by the rebates. Others say that this short-term assistance distorted the market and delayed the correction that may still be needed among automakers. (See CEA report, "Economic Analysis of the Car Allowance Rebate System," September 10, 2009.)

²² *Bloomberg.com*, "GM, Toyota, Ford Say U.S. Sales Fell After 'Clunkers' Aid Ended," October 1, 2009.

²³ *Autodata Corp.*, "October 2009 U.S. Sales."

pickings on many car lots resulted in the seasonally adjusted annual sales rate (SAAR) in September dropping to 9.3 million units, the lowest level since February 2009. With the return of improved sales later in the fall, the SAAR for U.S. sales in October topped 11 million vehicles, and for November it was 10.5 million.²⁴ In December 2009, year-over-year sales unexpectedly increased by 15%. (For a list of the top 10 vehicles by make sold during the cash for clunkers program, see **Appendix C**.)

Supply Chain Shakeout

U.S. automakers cannot make a car or truck without access to an extensive network of more than 1,700 suppliers. While many are very large suppliers (referred to as Tier 1 suppliers in the auto business), there are hundreds of smaller companies that make up the Tier 2 and 3 supplier base. Together, these suppliers provide the estimated 8,000-12,000 parts that make up to two-thirds of the value of today's motor vehicles. See **Appendix D** for a graphic example of the diversity of part manufacturers for a typical 2010 Ford Mustang.

The auto parts industry employs more than 686,000 direct workers, generates \$388 billion in economic activity, and produces more than two-thirds of the value of automobiles.²⁵ About one-quarter of the parts makers are in Michigan, over one-third are located in other Great Lakes states, and nearly one-third have production facilities in Southern states, mirroring the shift in auto production to the South as shown on the map in **Figure 1**.²⁶

Recent trends in the auto industry show that the relationships between assemblers and parts suppliers are undergoing significant change. Automakers are developing longer-term relationships with suppliers, rather than just awarding annual contracts to the lowest bidder, and they expect the suppliers to participate more fully in product research and development (R&D). Nearly half of all auto industry R&D is conducted by suppliers. The JIT inventory management system has pushed responsibility for inventory management down the supply chain to the suppliers, as automakers demand that parts be delivered only when they are needed for final assembly.

These manufacturing changes have affected the way the Detroit 3 and the foreign-owned OEMs²⁷ interact with suppliers. U.S. and foreign-owned automakers have taken different approaches to their relationships with suppliers. According to an annual survey of automakers' supplier working relations, tracked since 2002, such relationships are an important gauge of the success of the automakers. According to the survey sponsors, "favorable supplier ranking of the automakers has a very real impact on the OEMs' future fortunes. For many years, the study has consistently shown that automakers with the best rankings, specifically Toyota and Honda, receive the greatest benefit from their suppliers in a variety of areas including lower costs, higher quality, and innovation."²⁸

²⁴ *Automotive News*, "Industry Sales Improve Slightly as a 'New Normal' Takes Hold," December 1, 2009.

²⁵ For a full discussion of the auto supplier industry, its employment and contribution to U.S. auto making, see CRS Report R40746, *The U.S. Automotive Industry: National and State Trends in Manufacturing Employment*, by Michaela D. Platzer and Glennon J. Harrison.

²⁶ Supplier data are from Motor and Equipment Manufacturers Association (MEMA), "Supplier Industry Facts," viewed at <http://www.mema.org> on March 16, 2010.

²⁷ OEMs are original equipment manufacturers; domestic OEMs refer to the Detroit 3.

²⁸ *Ibid.* The survey rates GM, Ford, Chrysler, Honda, Toyota and Nissan. Tier 1 suppliers, representing over half of the purchases of OEMs, are asked to evaluate their relationships on OEM communications with suppliers, OEM help given (continued...)

The survey notes that “of the six automakers, the domestic OEMs have been on the bottom half of the scale since 2002 ... while the foreign domestic automakers have continually been on the top half with Toyota and Honda having the highest Working Relations Index.”²⁹ The 2009 index shows changes under way in the U.S. auto industry, however, with Toyota falling from the top ranking and Ford rising to nearly the same supplier relations level as Nissan. In addition to their ongoing relationship issues with automakers, auto suppliers confront other challenges, including

- *consolidation* within the auto industry at a time when some suppliers are operating at 50% capacity utilization;
- *bankruptcy* of GM and Chrysler and many larger parts suppliers, such as Lear, Visteon, Metaldyne and Delphi. It is estimated that as many as 200 other suppliers liquidated their operations in 2009;³⁰ and
- *ongoing competition with imports*, which rose from 20% of all parts in 1997 to about 30% more recently (a 50% increase in foreign-sourced parts).³¹

One of the most pressing issues facing the supplier industry in 2009 is the availability of credit. The financial meltdown in the fall of 2008 affected auto suppliers, who base much of their business operations on their ability to borrow to pay for raw materials and labor long before they are paid by an auto manufacturer, such as Ford or Toyota.

At an October 2009 hearing of the Senate Committee on Banking, Housing & Urban Affairs, a representative of the auto suppliers’ association described the ongoing credit crunch affecting suppliers:

According to the OESA Automotive Supplier Barometer September survey, the majority of all respondents have not seen any significant change in lending practices as judged by metrics from the cost of credit lines to commercial loan interest rates, covenants or collateral requirements. In fact, 23% to 46% of the respondents actually saw tightening across these various terms over the past three months. When OESA examined the responses by size of company (above or below \$500 million in revenue), it is clear that smaller suppliers face the possibility of even tighter terms.³²

The credit problem affecting suppliers was addressed by the Obama Administration in March 2009 when it announced the Automotive Supplier Support Program, which provided \$3.5 billion in TARP funds³³ to GM and Chrysler to provide financial support to their largest Tier 1 suppliers. According to the suppliers’ association, this financing helped

(...continued)

to suppliers to reduce costs, and the suppliers profit opportunity at the OEM.

²⁹ Press release by Planning Perspectives, Inc., “Auto Supplier Study Shows Honda #1, Toyota Slipping to #2, Ford Gaining on Nissan and Chrysler Still Last in ‘Working Relations,’” May 25, 2009, <http://www.planningperspectivesinc.com/?cat=7>.

³⁰ At least 47 major suppliers filed for bankruptcy, well beyond the normal filings in this industry. Source: MEMA, October 9, 2009. Delphi finally emerged from bankruptcy in fall 2009, after four years in restructuring; Lear also left bankruptcy in fall 2009, after four months under legal protection.

³¹ Ibid, p. 303.

³² Statement of David Andrea, Vice President, Industry Analysis and Economics, Motor and Equipment Manufacturers Association (MEMA), before the Economic Policy Subcommittee of the Committee on Banking, Housing & Urban Affairs, October 9, 2009. OESA, the Original Equipment Suppliers Association, is an allied supplier organization.

³³ TARP is the Troubled Asset Relief Program. See CRS Report R41073, *Government Interventions in Response to* (continued...)

prevent widespread loan covenant violations and demands for changes in customer payment terms. However, OESA surveys indicated that while half of the direct suppliers to GM and/or Chrysler were eligible to participate, only half of those eligible suppliers were actually able to take part in the program.... There was a significant gap between those eligible and those able to participate because of issues in loading the thousands of purchase orders into the Citibank system and the general limitations on the types of eligible receivables and supplier bank restrictions. Even though in both the Chrysler and GM bankruptcies, most direct suppliers were treated as critical vendors and received pre-petition payments on various terms, the process failed to address the serious need of hundreds of suppliers to other vehicle manufacturers.³⁴

During the summer of 2009, MEMA requested that the Auto Task Force expand the auto supplier program, but task force head Ron Bloom told the suppliers that it would not be expanded or extended.

In light of the Administration's determination not to provide further TARP assistance, suppliers have asked Congress and the Administration to "lower the risk of potential production disruptions and unintended employment loss as well as to establish longer term programs to enhance product and manufacturing technology advancement."³⁵ In its October testimony, the suppliers' association listed a number of recommendations, including expanding SBA loan programs to loosen lending limits from \$2 million to levels in a range of \$3.5 million to \$10 million. MEMA argued that this would have greater utility for the supplier industry, in addition to passage of new legislation to spur new auto parts technologies, such as advanced batteries, clean diesel, and fuel cells.

Automobile Unions Continue to Shrink

U.S. auto parts and auto assembly plants employ roughly 880,000 workers, a decline of 435,000 jobs during the past decade.³⁶ As part of their restructuring plans, GM and Chrysler are expected to make additional employment reductions in 2010 and beyond.³⁷ For an extended discussion of auto industry employment, including a focus on a number of states where auto manufacturing is a

(...continued)

Financial Turmoil, by Baird Webel and Marc Labonte.

³⁴ Statement of David Andrea, Vice President, Industry Analysis and Economics, Motor and Equipment Manufacturers Association, before the Senate Committee on Banking, Housing & Urban Affairs, October 9, 2009. OESA, the Original Equipment Suppliers Association, is an allied supplier organization.

³⁵ Ibid.

³⁶ Auto parts manufacturing, including vehicle body and trailer manufacturing, makes up the largest share of U.S. auto industry employment, accounting for about 680,000 of the 880,000 jobs. Source: CRS Report R40746, *The U.S. Automotive Industry: National and State Trends in Manufacturing Employment*, by Michaela D. Platzer and Glennon J. Harrison.

³⁷ For example, in 2010, GM's joint venture with Toyota in Fremont, California (NUMMI) will close, leading to the loss of jobs at that facility. New GM did not acquire NUMMI, and the asset remained in bankruptcy. Toyota declined to operate the plant by itself, citing long supply lines and cost. On March 17, 2010, the 3,700 workers represented by the UAW overwhelmingly (by 90%) approved a shutdown agreement that provides a severance package to union members. The average package, based on 15 years of service, is approximately \$53,500. Workers with 25 years of service will receive \$68,500, and the minimum severance package is \$21,175. The 300 workers on disability will receive the minimum package. Some union members, including Sergio Santos, the UAW local president, said workers had little choice but to accept the package. *Mercury News.com*. "NUMMI workers in Fremont overwhelmingly approve shutdown agreement," March 18, 2010.

top industry, see CRS Report R40746, *The U.S. Automotive Industry: National and State Trends in Manufacturing Employment*, by Michaela D. Platzer and Glennon J. Harrison.

The U.S. unionized workforce has been shrinking for decades as many of the blue collar manufacturing jobs that were its industrial base fell to technology and productivity enhancements, shifted overseas, or faced competition from non-union shops operated by foreign OEMs. The high point of unionization was reached in the 1950s, when unions represented as much as one-third of U.S. workers.³⁸ Union membership has fallen steadily since then. Among all U.S. industries, the percentage of employees belonging to a union fell from 13.4% of the total workforce in 2000 to 12.1% in 2007.³⁹

The historic decline in unionization has not been reversed in the auto industry, either, as the number of Detroit 3 plants and unionized auto parts plants continued to decline. While a number of unions represent employees at auto assembly and parts manufacturing plants, the United Auto Workers (UAW) is the most prominent. Other major unions in the auto sector are the United Steelworkers of America (USW) and the International Union of Electronic, Electrical, Salaried, Machine and Furniture Workers-Communications Workers of America (IUE-CWA).⁴⁰ The UAW's membership numbers show a 7.3% decline of 33,000 from 2007 to 2008, to a total membership of just over 430,000. The UAW's membership is now about one-quarter of what it was in 1979, when it stood at 1.5 million.⁴¹

The plant closures and layoffs by GM and Chrysler will further erode union membership. GM alone announced closings of 13 plants for 2009 and 2010. In spring 2009, the Center for Automotive Research (CAR) said that there were 132,600 active union members at GM, Ford and Chrysler, with another 550,000 retirees and surviving spouses.⁴²

During the past decade, much of the growth of the U.S. motor vehicle sector has occurred at the foreign-owned plants, such as Toyota, Honda, Mercedes-Benz, and BMW. These plants, strategically located mainly in southern states with right-to-work laws, or the southern parts of Ohio and Indiana, are non-union⁴³ and directly employed over 107,000 workers in 2009. As with the Detroit 3, the foreign-owned plants also generate hundreds of thousands of additional jobs in parts supplier and distribution networks throughout the country.⁴⁴

³⁸ *Washington Post*, "American Union Ranks Grow After 'Bottoming Out,'" January 29, 2009.

³⁹ U.S. Department of Labor, Bureau of Labor Statistics, "Union Affiliation Data from the Current Population Survey," extracted March 17, 2010, <http://data.bls.gov/cgi-bin/surveymost>. The Current Population Survey, CPS, is a monthly survey of households conducted by the Bureau of the Census for BLS. It provides current data on the workforce and employment/unemployment trends.

⁴⁰ Klier, Thomas and James Rubenstein, *Who Really Made Your Car?: Restructuring and Geographic Change in the Auto Industry*, W.E. Upjohn Institute for Employment Research, Kalamazoo, MI, 2008, p. 279.

⁴¹ *Bloomberg.com*, "Obama Weighs Buyout Rage Against Future of Iconic Auto Union," April 2, 2009.

⁴² *Ibid.*

⁴³ Three transplants are unionized. All were one-time joint ventures with a Detroit 3 automaker: AutoAlliance in Flat Rock, MI (Ford-Mazda); Mitsubishi, Normal, IL (one-time joint venture with Chrysler); NUMMI, Fremont, CA (GM-Toyota). Source: Klier and Rubenstein, *Who Really Made Your Car?* p.279. NUMMI, alone among the one-time JVs, is set to close.

⁴⁴ The Association of International Automobile Manufacturers (AIAM) estimates that their members support over 558,000 indirect jobs in manufacturing and service positions that support U.S. manufacturing operations. Source: AIAM *Quick Facts*, extracted on October 20, 2009, <http://www.aiam.org>. See also various analyses by the Center for Automotive Research (CAR), which has reached similar conclusions. <http://www.cargroup.org/publications.html>

It has been observed that “the flip side of declining market share for the Detroit 3 and their suppliers has been an increasing market share for foreign-owned companies and their suppliers. As a result, unions lose in two ways: the Detroit 3 and their suppliers have cut union jobs, while foreign-owned companies and their suppliers have added non-union jobs.”⁴⁵ According to Thomas Klier and James Rubenstein, economists at the Federal Reserve Bank of Chicago and Miami University, respectively:

Unions and companies agree that foreign-owned plants do not provide an environment conducive for collective bargaining, but they would describe the environment differently. The companies see an environment in which collective bargaining is unnecessary, whereas unions see an environment in which collective bargaining is suppressed.... Foreign-owned companies argue that a union is not needed in plants run according to Japanese-style flexible work rules and that most of their employees recognize and accept that fact. They view key elements of flexible production, especially reliance on teamwork and local-scale problem-solving, as inimical with union-imposed work rules.⁴⁶

While a new era in auto manufacturing may well be under way, two workforce obstacles may remain to the future performance and well-being of the Detroit 3:

Competitive workforce differences. A 2007 contract and 2009 amendments to that contract negotiated between the Detroit companies and the UAW represented a major break from past labor agreements and may, in time, achieve greater parity between the domestic and foreign-owned manufacturers. These labor agreements reduced wages and other benefits for new hires; eliminated the much derided “jobs bank”;⁴⁷ suspended performance bonuses and annual cost of living increases; and shifted responsibility for retiree health care to the UAW; among other provisions. Workers at GM and Chrysler also agreed not to strike until 2015.⁴⁸

The contract between the Detroit 3 and the UAW created a two-tier employment system for hourly workers. Workers hired after the contracts entered into force are not eligible for the same hourly wages or benefits paid to employees hired before the 2007 contract. New workers, most of whom cannot be hired until the companies stop shrinking and start expanding again, will not qualify for the same generous health insurance, retiree health insurance, or pensions that most current employees or retirees receive. Instead of defined benefit pension plans, new employees will make defined contributions that will largely determine their benefits (based in part on investment returns on those contributions). In the 2009 amendments to the 2007 contract, the UAW agreed that new employees at GM and Chrysler would have their wages frozen until 2015.

⁴⁵ Klier and Rubenstein, *Who Really Made Your Car?* p. 280.

⁴⁶ Ibid.

⁴⁷ The “jobs bank,” a source of considerable controversy, was a part of the contract negotiated between the UAW and GM, Ford, and Chrysler. The contract provided that laid-off auto workers would receive approximately 72% of compensation (including state unemployment benefits and supplemental pay from the company) during the first 48 weeks of unemployment. After that, laid-off workers would qualify to join the “jobs bank” and receive 100% of their salaries. They were required to report to their work location each workday even if there was no work for them. GM, Chrysler, and Ford separately reached agreements to end the jobs bank in January 2009. *Bloomberg.com*, “UAW to End GM Jobs Bank on Feb. 2, Following Chrysler,” January 28, 2009; *wxyy.com*, ABC Channel 7 Detroit, “Ford Eliminates Jobs Bank Program,” January 29, 2009.

⁴⁸ Under the new contract terms, arbitration will resolve differences instead of a strike. *Automotive News*, “New UAW-Chrysler Pact Has No Strike Clause,” May 13, 2009; *New York Times*, “UAW Members Ratify GM Contract Concessions,” May 29, 2009; *Automotive News*, “Ford-UAW Deal Features No-Strike Clause, Bonuses,” October 14, 2009.

Despite the concessions, some observers say that manufacturing is still too expensive at the Detroit firms and did not achieve labor cost parity with the transplants. According to the Center for Automotive Research (CAR), a first-tier production worker at the Detroit 3 will now earn \$58 or \$59 an hour, including benefits, compared to about \$48 an hour at transplants. For UAW workers, that's down from about \$61 an hour. A UAW official said in a memo to members: "for our active duty members these tentative changes mean no loss in your base pay, no reduction in your health care, and no reduction in your pensions."⁴⁹ According to CAR, the Detroit 3 will only begin to match transplant labor costs when at least one-quarter of their unionized workforce is second tier (i.e., new hires). In light of the companies' 2009 shrinkage and plant closings, it could be a while before the GM and Chrysler workforces are expanded with new entrants at \$33 an hour.⁵⁰ The contracts give both GM and Chrysler a better opportunity to compete with foreign-owned assembly companies, but competition will remain intense.

Ford negotiated a 2009 contract amendment with the UAW similar to those negotiated between the UAW and GM and Chrysler. Although the UAW leadership supported the agreement, the Ford rank-and-file overwhelmingly rejected what UAW President Ron Gettelfinger said were modest concessions that would have locked in future commitments by Ford to manufacture certain products at U.S. facilities that would have been beneficial to Ford UAW members.⁵¹ Gettelfinger also said that the contract rejection would cause neither Ford nor the UAW long-term damage.⁵²

Although foreign-owned vehicle manufacturers do not negotiate collective bargaining agreements with the UAW or other unions, they are acutely aware that the UAW made concessions in 2007 and 2009 that will, over time, potentially reduce the gap between union and non-union operations. In addition, the 2007 agreement that transferred retiree health care costs from the Detroit 3 to the UAW as of January 1, 2010, will result in significant per-car savings for the Detroit 3. (For a more detailed discussion of this issue, see the next section.)

Detroit 3 legacy costs and corporate governance. Under the 2007 labor agreements between the Detroit 3 and the UAW, the automakers shifted tens of billions of dollars of retiree health care liabilities off their books by agreeing to fund the establishment of an independent, trustee-run Voluntary Employee Beneficiary Association (VEBA), which will provide health care benefits to UAW retirees.⁵³ The union agreed to assume the automakers' responsibilities for providing retiree health coverage from January 1, 2010, in exchange for a series of payments deemed to be sufficient for the VEBA to meet its future obligations. According to old GM's 2008 Annual Report, "we will be required to contribute more than \$25 billion in assets to the New VEBA in a relatively short time period, plus \$5.6 billion immediately or in payments through 2020 and up to 19 annual payments of \$165 million as necessary to support the New VEBA's future solvency."⁵⁴

⁴⁹ *Wall Street Journal*, "Why GM Can't Be Saved," May 28, 2009.

⁵⁰ Center for Automotive Research, "Picking Up the Pieces: The Year Ahead," December 15, 2009.

⁵¹ *Automotive News*. "Gettelfinger Wanted to Lock in Ford Commitments," November 2, 2009. With the rejection of the 2009 contract proposal, the terms of the 2007 contract remain in place.

⁵² *Ibid.*

⁵³ The Detroit 3 agreed in 2007 to contribute, collectively, \$54 billion to fund the UAW's VEBA and, in so doing, won the right to trim retiree health care costs and future obligations. Source: *BusinessWeek*, "UAW Ready to Take Over Retiree Health Care, Gettelfinger Says," December 31, 2009.

⁵⁴ U.S. Securities and Exchange Commission. *General Motors Corporation Annual Report for the Year Ending December 31, 2007*. 10k filing, February 28, 2008, p. 22.

In other words, GM agreed to provide approximately \$30 billion in cash and other financial instruments to fund a VEBA with post-2010 obligations estimated at approximately \$50 billion. Ford and Chrysler also made similar agreements with the UAW: Ford agreed to pay \$13.2 billion to fund the independent VEBA to eliminate an estimated \$23 billion in retiree health care liabilities,⁵⁵ while Chrysler Group agreed to contribute \$8.8 billion on an estimated \$11 billion liability. To fund the VEBA, GM, Ford, and Chrysler hourly employees agreed to forego cost of living adjustments (COLAs) from December 1, 2007, through September 1, 2011, and also agreed to forego a 3% wage increase in 2009. For GM hourly employees, the present value of wage and COLA deferrals amounted to \$3.8 billion, which will help fund the VEBA.⁵⁶ According to Ellen O'Brien, of the AARP Public Policy Institute, "active workers will give up more than \$1 an hour (more than \$2,000 annually per worker) to help fund the trust."⁵⁷

With the 2008-2009 crisis of the Detroit 3, the question of VEBAs returned to the fore as GM and Chrysler in particular, but also Ford, ran into financial difficulties. In a U.S. Securities and Exchange Commission (SEC) filing, Ford noted that it had renegotiated its VEBA obligations because of government requirements that GM and Chrysler reduce cash expenses related to their VEBA agreements with the UAW:

Our domestic competitors have been required, pursuant to the terms of government-funded restructurings, to seek to reduce their public unsecured debt by two-thirds, reduce the cash expense associated with their retiree health care VEBA by half, and achieve parity in their labor costs with the U.S. operations of non-domestic automobile manufacturers. Although we are not engaged in a government-funded restructuring, we are committed to remaining competitive and to improving our capital structure. Toward this end, during the first quarter of 2009 we entered into modifications to our collective bargaining agreement with the UAW that will lower our overall labor costs in the United States by about \$500 million annually ... [W]e also reached an agreement in principle with the UAW which ... would allow us to settle up to half of our future cash VEBA obligations with Ford Common Stock.⁵⁸

Both GM and Chrysler also reached an agreement with the UAW that resulted in the VEBA taking equity stakes in new GM and new Chrysler. That is primarily the reason 67.7% of the new Chrysler is owned by the UAW's VEBA. Similarly, the union's VEBA owns 17.5% of new GM, with a warrant to own up to 20%. A central focus of labor unions going forward is the management of retiree legacies, perhaps more so than issues pertaining to current workers. The UAW has about 130,000 workers at the Detroit 3, but more than four times as many—over 550,000—retirees. The initial General Motors, Ford and Chrysler payments to the VEBA are shown in **Table 3**.

⁵⁵ *Kaiser Daily Health Care Report*, "Local UAW Leaders Approve Tentative Ford Contract," November 6, 2007.

⁵⁶ General Motors Corporation, 8-K, October 15, 2007, exhibit 10.3. 2007 GM-UAW Labor Agreement (Presentation), pp. 10-11.

⁵⁷ O'Brien, Ellen, "What Do the New Auto Industry VEBAs Mean for Current and Future Retirees?," AARP Public Policy Institute, March 2998, p. 7.

⁵⁸ SEC Form 8-K for Ford Motor Co., March 13, 2009.

Table 3. Initial VEBA Payments by the Detroit 3

General Motors	\$585 million made on 12/31/09
Ford	\$1.9 billion made on 12/31/09
Chrysler	\$315 million to be made on 7/15/10

Sources: Center for Automotive Research, “Picking Up the Pieces: The Year Ahead,” December 15, 2009, and *BusinessWeek*, “UAW Ready to Take Over Retiree Health Care, Gettelfinger Says,” December 31, 2009.

Notes: These payments were made at the same time as the VEBA assets were transferred to the UAW after December 31, 2009. Additional payments will be made to the VEBA through 2017 (for GM); 2022 (for Ford); and 2023 (for Chrysler).

New Tier II workers (those hired after the 2007 contract took effect) will not be covered by the VEBA. Those workers hired under the old system will continue to receive health care insurance provided by the VEBA—assuming that the VEBAs’ investments outpace medical inflation. The VEBA trustees may also reduce the medical benefits, should that prove to be necessary.

GM and Chrysler: Rescue and Rebirth

Executives from all three Detroit automakers testified several times before congressional committees in the fall of 2008. Initially, Ford, General Motors, and Chrysler presented a unified front, calling for federal financial assistance to help them weather the financial storm. Within a month of that initial testimony, however, Ford re-evaluated its position in light of its adequate capital resources and split from the other Detroit manufacturers, who apparently believed they had no choice but to seek federal assistance in December 2008 and January 2009, respectively.

In the run-up to receiving federal assistance, there were diverging thoughts on the appropriateness of granting GM and Chrysler the \$25 billion in loans they were seeking from the federal government. During hearings in the fall of 2008, GM’s then-Chairman and CEO Rick Wagoner summarized the reasons for federal aid and what the automakers would do with it:

What exposes us to failure now is not our product lineup, is not our business plan, is not our employees and their willingness to work hard, is not our long-term strategy. What exposes us to failure now is the global financial crisis, which has severely restricted credit availability and reduced industry sales to the lowest per-capita level since World War II..... Our industry, which represents America’s real economy, Main Street, needs a bridge to span the financial chasm that is open before us. We’ll use this bridge, and we’ll use it effectively, to pay for essential operations, new vehicles and power trains, parts from our suppliers, wages and benefits for our workers and suppliers, and taxes for state and local governments that help deliver essential services to millions of Americans. And in the process, we’ll continue to reinvent the automobile and to improve the nation’s energy security through development of advanced technologies like those in the Chevy Volt.⁵⁹

⁵⁹ Statement of Richard Wagoner before the Senate Banking, Housing and Urban Affairs Committee, November 18, 2008.

Others suggested that it would be better to let the automakers go through a normal bankruptcy, arguing that the companies that would emerge would be more competitive. At the same 2008 hearing, Peter Morici, an economist at the University of Maryland, counseled that

If Chapter 11 is put off, the industry will continue to shrink. And inevitably, when it happens, and we go through the process, fewer jobs will be saved, because fewer jobs will be there to be saved. Sooner or later, this industry has to go through the ultimate reorganization that brings its cost structure absolutely in line with its competition. It may not be fair, it may not be what we would want to see, but it is inevitable.... There are things that we can do to provide incentives for Americans to drive fuel efficient cars that we have not done, and there are things that we could do to improve the environment in the United States. But I don't think giving these guys \$25 billion right now is a smart idea.⁶⁰

In the end, the two automakers took a hybrid path: while they received over \$80 billion in federal assistance to keep them in business, they also extensively restructured operations prior to and during a Chapter 11 bankruptcy. For a full description of the legislative and Bush and Obama Administrations' steps that led to the filing of GM and Chrysler bankruptcies, see CRS Report R40003, *U.S. Motor Vehicle Industry: Federal Financial Assistance and Restructuring*, coordinated by Bill Canis.

The Shape of New GM and New Chrysler⁶¹

Old Chrysler (now known as Old Carco LLC) and old GM (now known as Motors Liquidation Company) remain in bankruptcy, but new Chrysler and new GM were incorporated as new companies. New Chrysler was launched in 42 days and new GM in 40 days. This is in marked contrast to other large bankruptcies, such as the bankruptcy of the largest U.S. auto supplier, Delphi. With revenues at one time of nearly \$30 billion, this auto-parts manufacturer was mired in bankruptcy proceedings for four years.⁶² The two auto companies' assets and liabilities changed significantly during the bankruptcy process, with the companies shedding plants, employees, creditors, and a wide range of liabilities, including some Superfund clean-up sites and product liability claims. **Table 4** summarizes the difference in assets, employment, sales, and debt loads between old GM and new GM and between old Chrysler and new Chrysler.

⁶⁰ Statement of Peter Morici, an economist and professor at the University of Maryland, before the Senate Banking, Housing and Urban Affairs Committee, November 18, 2008.

⁶¹ Prior to bankruptcy, these companies were legally General Motors Corporation and Chrysler LLC. Many of the assets of these companies remain in bankruptcy to be disposed of. The new companies are General Motors Company and Chrysler Group LLC. For the purposes of this report, "GM" and "Chrysler" usually refer to the new entities, unless otherwise noted.

⁶² Delphi emerged from bankruptcy in fall 2009. For a contrast of the GM and Delphi cases see *Detroit News*, "Delphi's Bankruptcy Nothing Like GM's," July 31, 2009.

Table 4. Auto Companies Before and After Bankruptcy

2008 vs. 2009

U.S. operations only, unless otherwise noted

Benchmark	Old General Motors Corporation 2008	New General Motors Company 2009	Old Chrysler LLC 2008	New Chrysler Group LLC 2009
Employment:				
Worldwide	243,500	209,000	51,000	48,000
U.S. Only	91,000	75,000	36,000	33,000
Plants	47 in 2008	34 by end of 2010	21	20
Dealerships ^a	5,900	3,600	3,298	2,355
Debt ^b	\$46 billion	\$20 billion	\$13.7 billion	\$8 billion
Retirees	531,396	539,350	126,000	130,000
U.S. Vehicle Production ^c	2,285,733	1,185,661	1,121,498	482,588

Sources: General Motors and Chrysler unless otherwise noted. Data in **Table 4** does not include Delphi assets acquired by GM in fall 2009.

Notes: General Motors Company began business on July 10, 2009; Chrysler Group LLC on June 10, 2009. Retirees include union and salaried employees.

- a. Auto dealerships are not owned by the automakers, but they figured in the restructuring and both companies reduced their dealer networks significantly. In 2010, GM agreed to reinstate about 660 dealers that had been given termination notices in May 2009. For further discussion, see dealer section on p. 25.
- b. With the addition of federal assistance in early 2009, GM's debt rose to \$54 billion on March 31, 2009, and rose further to over \$94 billion by July 9, 2009, with additional drawdowns of federal assistance. Chrysler's 2008 debt level sourced from "Chrysler Restructuring Plan for Long-Term Viability," February 17, 2009.
- c. The data cover production of U.S.-made cars and trucks. Source: *Automotive News*, January 11, 2010.

Government and UAW VEBA Trustee Ownership of GM and Chrysler

GM and Chrysler had few financial and legal options early in 2009. Chrysler had sought to find a buyer for the company and had tested the waters with a range of U.S. and foreign auto manufacturers, but as the global recession deepened and credit dried up, it found no takers.⁶³ Neither GM's efforts to find strategic alliances, nor its efforts to obtain adequate capital to continue its operations were successful.⁶⁴ Had the two companies gone straight to bankruptcy court late in 2008, the federal government might have been the only large lender that could have provided them with Debtor-in-Possession (DIP) financing⁶⁵ during the court proceedings. Absent DIP financing, the two automakers' assets would have been liquidated.

⁶³ From Chrysler bankruptcy filing statement, April 30, 2009.

⁶⁴ From General Motors bankruptcy filing statement, June 1, 2009.

⁶⁵ DIP financing involves agreements to provide funds to a debtor-in-possession to allow it to meet expenses incurred during reorganization. If suppliers have refused to continue shipments without prepayment, DIP financing can provide the means of making the prepayment. In some cases, simply having the loan agreements is sufficient to restore suppliers' confidence and willingness to ship without prepayment.

GM's then-President and CEO Fritz Henderson summarized the choice in the company's Chapter 11 bankruptcy filing, explaining why a section 363 sale⁶⁶ was important:

There are no other sources with either the financial wherewithal or willingness to provide [DIP] financing. The U.S. Government has stated it will not provide DIP financing absent the 363 Transaction. Without such financing, these cases will quickly plunge into liquidation, with the concomitant loss of value, employment, and systemic failure necessarily attendant thereto.⁶⁷

The result was that the federal government became the partner of last resort in the GM and Chrysler restructurings, whether the companies went straight to bankruptcy or not. GM's and Chrysler's need for capital infusions to continue day-to-day operations was immediate, while a secondary, long-term financial challenge was the unfunded legacy cost of their unionized retiree health care funds.

Once committed financially, the U.S. government took a stake in the companies, both to assure repayment of the loans and to assure taxpayers that the federal government would exercise prudent oversight of its investment. The companies already had too much debt, so issuing more debt to the U.S. Treasury was not a realistic option. An equity stake was the most straightforward alternative open to the federal government. If the companies survived, the government would be in a position to sell its stake, thus recouping some or all of its investment. The pre-bankruptcy restructuring facilitated first by the Bush Administration and then by the Obama Administration's Auto Task Force laid the groundwork for this unconventional ownership structure.

Including the U.S. Treasury, there were five stakeholders affected by the two restructurings:

- *United Auto Workers (UAW) VEBA.* For its retiree benefit plan, the UAW had a \$20 billion fixed obligation with GM and was owed more than \$8 billion by Chrysler. In lieu of this cash infusion, GM substituted a \$2.5 billion note, \$6.5 billion in preferred stock, and 17.5% in common equity (see **Figure 2**). In Chrysler's case, the union received a \$4.6 billion unsecured note and 67.7% of the company's stock (see **Figure 3**). The UAW also renegotiated its contracts with GM and Chrysler and agreed to a reduced range of benefits for current workers. These contracts were assumed by the post-bankruptcy successor companies.⁶⁸
- *Creditors and bondholders.* Chrysler's secured creditors received \$2 billion in cash, or 29 cents on the dollar, for their \$6.9 billion holdings of secured debt. The bankruptcy judge who presided in the case stated that the creditors would have received less if the company had been liquidated. GM's unsecured creditors' investment was replaced with 10% equity in the new company. Of all of the parties to the bankruptcy, only Chrysler's secured creditors received a cash

⁶⁶ In recent years, there appears to be a trend toward a "sale model" of reorganization where substantially all of the reorganizing company's assets are sold as a going concern. This is allowed under § 363(b) of the Bankruptcy Code. These sales are often referred to as "363 Sales."

⁶⁷ From General Motors bankruptcy filing statement, June 1, 2009.

⁶⁸ Both companies had lost the capacity to make good on their VEBA contributions with the collapse of the credit markets and auto sales, so finding another payment option was built in to the restructuring and bankruptcy proceeding. The companies and the UAW, in agreeing to a new contract prior to bankruptcy filings, agreed that financial support for the VEBA would take the form of stock ownership in the new companies.

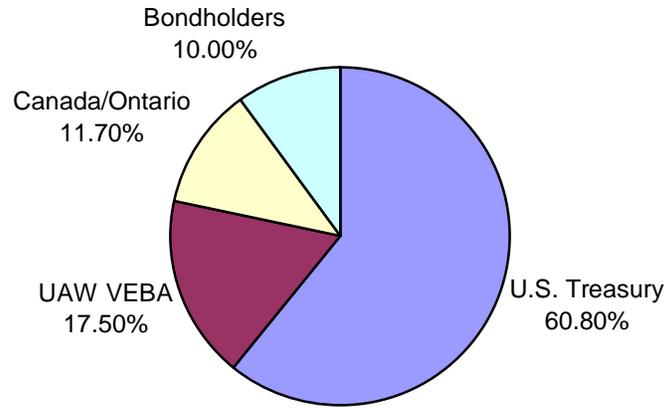
- settlement. All of the others, including the GM bondholders, received an equity position—the value of which depends on company performance.
- *U.S. taxpayers.* As discussed later in this report and portrayed in **Table 6**, the federal government contributed more than \$80 billion to the two companies, through the Troubled Asset Relief Program (TARP). The federal government owns nearly 61% of new GM and nearly 10% of new Chrysler. It is not known how much of this investment will be repaid. On one hand, it has been suggested that most of this federal assistance will be recouped, possibly with interest.⁶⁹ New GM began paying off a \$6.7 billion loan in December 2009, well ahead of the scheduled start of repayments in 2015. On the other hand, Treasury Secretary Timothy Geithner said in December 2009 that Treasury expected to lose \$30 billion of the TARP funds invested in the auto industry.⁷⁰ To lay the groundwork for recovery of the investments, the U.S. Treasury took large shares of each of the companies, as shown in **Figure 2** and **Figure 3**.
 - *Government of Canada and Province of Ontario.* With large auto-making facilities and 400,000 auto industry jobs at stake in Canada and particularly in the province of Ontario, financial support for GM and Chrysler became a Canadian priority. The governments of Canada and Ontario provided loans of \$3.02 billion to Chrysler and \$9.5 billion to GM.⁷¹ These loans were turned into equity stakes in the new companies.
 - *Stockholders.* Chrysler was owned by Cerberus Capital Management; GM by shareholders of all sizes, around the world. All stockholders in both transactions lost their entire investment.

⁶⁹ Former head of the Auto Task Force, Steve Rattner, said that the investments “should be recoverable, possibly with a profit.” Source: *Bloomberg.com*, “GM Management to be Leaner, Treasury’s Rattner Says,” July 6, 2006. It has been estimated that the federal government will be fully repaid by General Motors if its stock, when traded publicly in the future, rises above \$68 billion. By way of comparison, GM stock was worth \$56 billion at its peak in 2000. *Washington Post*, “Uncertainty Clouds Recovery of U.S. Investment in GM,” June 30, 2009.

⁷⁰ *Detroit News*, “Obama Administration Predicts \$30 billion Loss on Auto Bailout,” December 8, 2009. When President Obama submitted the Administration’s FY2011 budget request in January 2010, OMB estimated that the loss would be \$30.8 billion: \$24.5 billion from loan losses and \$6.3 billion from equity losses. The Congressional Budget Office has estimated a higher loss of \$47 billion. Source: Congressional Budget Office, *Budget and Economic Outlook*, January 2010, p. 31.

⁷¹ Of the \$3.02 billion loaned to Chrysler, \$1 billion was supplied by the provincial government of Ontario and the rest by the Canadian government. Of the \$9.5 billion for GM, \$3.2 billion was from Ontario and the balance from the Canadian government. Source: Provincial government of Ontario.

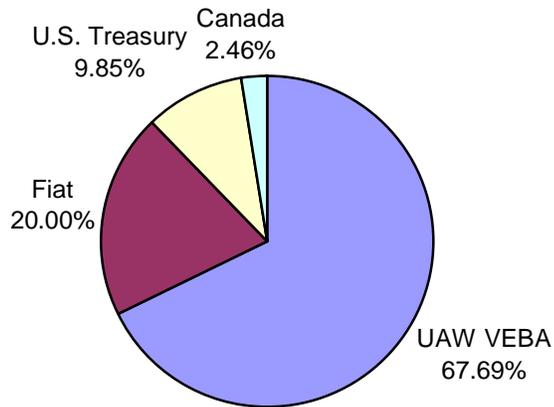
Figure 2. New General Motors' Ownership Structure Following Bankruptcy



Source: General Motors Bankruptcy Agreement, July 10, 2009.

Notes: Warrants were also issued to the VEBA and unsecured creditors, permitting the VEBA in the future to increase its stake by 2.5% and the creditors by 15%.

Figure 3. New Chrysler's Ownership Structure Following Bankruptcy



Source: Chrysler Bankruptcy Agreement, June 10, 2009.

Notes: Fiat was granted options to acquire up to 31% more of the company, in stages and if certain benchmarks are met.

Assets and Liabilities Left in Bankruptcy

In the language of the bankruptcy court, it is incorrect to say that GM and Chrysler “emerged from” bankruptcy. GM’s and Chrysler’s major assets were purchased by independent entities (new GM and new Chrysler) that took on the business of auto-making. Chrysler LLC and General Motors Corporation entered bankruptcy in April and June 2009, respectively. The new companies that began business 40-plus days later are new legal entities called General Motors Company and Chrysler Group LLC (now managed by Fiat).

The assets and liabilities that were retained by old GM and old Chrysler, therefore, remain in bankruptcy with the old entities. The remnants of General Motors Corporation are now officially known in the bankruptcy court as Motors Liquidation Company and those of Chrysler LLC as Old Carco LLC. Remaining behind in court are assets and liabilities, such as

- plants that have been closed and the accompanying property and machinery;
- environmental liabilities for polluted properties, including Superfund sites (in GM’s case it is estimated that these sites have liabilities of over \$530 million);⁷²
- dealerships that were terminated or rejected and not assumed by the new companies;⁷³
- certain tort liability claims, including those for product defects and asbestos; and
- contracts with suppliers that the new company will not continue.

The proceeds of asset sales will be applied to some of the liability claims. In addition, the federal government and old GM have set aside \$950 million to cover costs of bankruptcy administration, selling off plants, and paying priority claims from creditors. But the executive in charge of administering these sales, Albert Koch, says that costs would probably exceed \$1.25 billion;⁷⁴ environmental claims alone are estimated at \$530 million.⁷⁵

Environmental and Consumer Issues. Left in bankruptcy are 16 plants and about 100 other properties around the country.⁷⁶ Many communities are concerned that without GM or federal payments to clean up these sites they will not be sold and local economic development hopes may be thwarted. A Michigan official said, “It’s very, very difficult to get another company to come in and take over property where there is a legacy contamination problem that has remained unaddressed.”⁷⁷

⁷² *Detroit Free Press*, “GM is Allowed to Dump Old Sites,” August 8, 2009.

⁷³ Chrysler terminated 789 dealers and GM initially rejected over 1,200 (a figure later reduced by 661). Chrysler’s 789 dealers remain part of Old Carco LLC. In GM’s case, the 38 dealers who did not sign wind-down agreements with GM remain with Motors Liquidation Company; those who did sign wind-down agreements are part of new GM.

⁷⁴ *Edmunds.com AutoObserver*, “GM Bankruptcy: ‘Bad’ GM Wind-down to Cost \$1 Billion Plus,” July 1, 2009.

⁷⁵ *Detroit Free Press*, “GM Gets to Dump Its Polluted Sites,” August 7, 2009.

⁷⁶ *Ibid.*

⁷⁷ *Ibid.* Comment is by Robert McCann, a spokesman for the Michigan Department of Environmental Quality.

Chrysler's case is similar. In June 2009, it was reported that the liquidation value of its assets left in bankruptcy would be worth no more than \$200 million, including seven assembly plants and a fleet of over 8,000 cars used by company employees. After administrative fees were paid, this estimate suggested there might be only \$2 million left for all other claimants, including creditors and product liability plaintiffs.⁷⁸

The new automakers initially refused to accept any product liability claims (or potential claims), leaving all claims and potential claims for existing motor vehicles with Old Carco LLC and Motors Liquidation Company. Individuals who owned a GM or Chrysler motor vehicle manufactured before bankruptcy would not be able to bring a product liability suit against the *new* companies. Those who had already brought suit would not be able to adjudicate their claims with hope of a settlement or receive payment on a settlement that was reached just prior to bankruptcy filing, because there were virtually no assets of the old companies to pay for such claims and other unsecured claims.

A number of existing plaintiffs emerged in the final weeks of the Chrysler bankruptcy to protest this decision, and consumer groups were party to a challenge that was lodged with the U.S. Supreme Court on June 6, 2009.⁷⁹ The Supreme Court did not delay the sale of Chrysler's assets, but new attention had been brought to the otherwise little-publicized fate of product liability plaintiffs.

When General Motors began its path through bankruptcy on June 1, 2009, there had been a number of press reports about individuals who had been injured in vehicles and who alleged a product defect. These reports influenced the path of the GM bankruptcy, leading new GM to agree to consider cases brought on defective vehicles made by old GM, but only if filed after July 10, 2009.

GM's announcement was seen as a positive step by consumer groups, but Chrysler continued to receive criticism for its stance. The issue was given greater prominence in the eyes of the public and Members of Congress when Jeremy Warriner, an injured plaintiff, testified before an auto industry hearing held by the House Judiciary Committee on July 21, 2009. Subsequently, Chrysler announced in August 2009 that it, too, would consider product liability claims brought by Chrysler owners, for those claims filed after June 10, 2009, and for accidents occurring on or after that date.⁸⁰

⁷⁸ *Wall Street Journal*, "'Old' Chrysler Worth Just \$2 Million, Says Secret Liquidation Analysis," June 12, 2009.

⁷⁹ The stay request filed with the Supreme Court was brought by the Indiana pension funds, Chrysler creditors, claiming the sale of Chrysler assets to a new company was illegal. Joining the pension funds in the request for a stay were other parties that disagreed with the final shape of the Chrysler bankruptcy. Justice Ruth Bader Ginsberg received the request to stay the emergence of Chrysler Group LLC. After a temporary stay so she could consult with other Justices, the Supreme Court announced on June 9, 2009, that challengers had not met the burden of showing that a stay was justified. Source: *SCOTUSblog.com*, "Court Clears Chrysler Sale Without Dissent," June 9, 2009.

⁸⁰ Chrysler Group LLC press release, "Chrysler Group to Expand Product Liability Claims," August 27, 2009.

Joanne Doroshov, executive director of the consumer group Center for Justice and Democracy, welcomed the change, saying, “while this decision is a victory for consumers, there are still hundreds of people who were injured before the bankruptcies by defective Chrysler and GM vehicles that still have no recourse because the companies continue to take no responsibility for pre-bankruptcy deaths and injuries.”⁸¹

Creditor Fallout

The creditor issues that played out in the bankruptcy proceedings may have an impact on some investors in the future. The creditors in the case of Chrysler were large banks, hedge funds, and mutual funds that loaned the company \$6.8 billion, including J.P. Morgan Chase, Goldman Sachs, Citigroup, Morgan Stanley, and Oppenheimer Funds. In a traditional bankruptcy, these holders of secured debt “have the right to take control of Chrysler plants, brands and other assets which were pledged as collateral for the loans.”⁸² At the time, many of the creditors felt they could get back more of their investment if Chrysler were to be liquidated rather than just restructured. Oppenheimer Funds, a mutual fund company, said, “our holdings in secured Chrysler debt are entitled to priority in long-established U.S. bankruptcy law and we are obligated to our fund shareholders to support agreements that respect these laws.”⁸³

There was an unusual feature in the dispute over how much the creditors could obtain from Chrysler (and, later, GM): the U.S. government had provided TARP loans to some of the largest institutions—such as Citigroup—that were now balking at a financial deal with Chrysler. On the eve of Chrysler’s bankruptcy filing, the largest institutions, which held 70% of Chrysler’s debt, changed their minds and agreed that the \$6.8 billion debt should be swapped for \$2 billion in cash, or 29 cents on the dollar. Smaller mutual funds and hedge funds opposed this settlement, which they felt was as much as a billion dollars short of what they were owed. It was noted that “many dissidents paid from 50 cents to 70 cents on the dollar for their Chrysler loans, so they’re sitting on losses.... Ronald Kolka, Chrysler’s chief financial officer, said in a court filing that the first-lien debt is trading at about 15 cents on the dollar in the secondary market.”⁸⁴ To avoid bankruptcy, the Administration needed all of the creditors on board. By not agreeing to settle, the so-called dissident creditors prompted Chrysler to file for bankruptcy on April 30, 2009. The dissident creditors eventually agreed to the same terms that the larger banks had, after attempting an unsuccessful challenge in the bankruptcy court.⁸⁵ President Obama on April 30, 2009, referred to these investors as a “small group of speculators” who “decided to hold out for the prospect of an unjustified taxpayer-funded bailout.”⁸⁶

⁸¹ *Associated Press*, “Chrysler to Accept More Product Liability Claims,” August 28, 2009.

⁸² *Wall Street Journal*, “Big Banks Resist Call to Aid Chrysler,” April 4, 2009.

⁸³ *Bloomberg.com*, “Chrysler Lenders Tried Obama’s Patience, Lost Game of Chicken,” May 1, 2009.

⁸⁴ *Ibid.*

⁸⁵ *Telegraph.co.uk*, “‘New Chrysler’ Emerges as Court Dismisses Legal Claim,” June 10, 2009.

⁸⁶ *Bloomberg.com*, “Obama Says Chrysler Holdout Lenders Speculated on U.S. Bailout,” April 30, 2009.

General Motors followed a similar path into bankruptcy, having failed to obtain support from all of its much larger group of bondholders. But at the end of May 2009, GM was successful in lining up support from bondholders for about half of its \$27.2 billion debt. Having a core group of bondholders⁸⁷ in support paved the way for a smoother bankruptcy proceeding. Still, as with Chrysler, a large dissident group of bondholders remained and believed they were being shortchanged. Despite their final support, they had misgivings about the deal they had struck and in a statement said that they remain “troubled by preferential treatment” they alleged had been given to the UAW’s VEBA. Nevertheless, the statement continued, “rejecting this offer in the expectation that the bondholders will do better in a litigated outcome was a risk the committee is unwilling to take.”⁸⁸ In the case of both Chrysler and GM, finance industry experts⁸⁹ say that there may be long-term effects including

- Subversion of long-standing legal precedents in bankruptcy proceedings that determine the order in which claimants get paid. Under traditional bankruptcy proceedings, secured lenders are at the top of the list to be paid. In the GM and Chrysler 363 proceedings, secured lenders were not given the same priority standing; and
- More expensive borrowing for some corporations, especially those that have a government connection, as some investors will be unwilling to lend with the GM and Chrysler examples fresh in their mind.

One creditor involved with Chrysler, commenting on what some see as a change in the standing of first lien holders, said the perceived change “will increase the cost of credit in the capital markets for lots of companies by tinkering with the well-settled priority system. Our firm and many other lenders will think twice about lending to companies who have junior creditors that might get an unfair sweetheart deal.”⁹⁰

Others disagreed and saw few after-effects. According to a private equity fund manager:

Interestingly, only the debt holders are being given the opportunity to take significant cash out of Chrysler. For all the other stakeholders, any return depends on the difficult work and investment necessary for long-term success.... The creditors are also reasonable and sophisticated capitalists who clearly recognized the risks they were taking when they purchased these Chrysler loans. Many probably bought these loans at prices below the 29 cents on the dollar that the government is offering ... while a few [GM bondholders] complain that the government is providing more equity than this to the unions, the relevant point is that bondholders are receiving far more from the government than they would likely get in a bankruptcy.⁹¹

⁸⁷ The committee of large creditors supported a swap of their \$27.2 billion investment for a 10% stake in the new GM, with a warrant for another 15%. Source: *Bloomberg.com*, “GM Bondholders Agree to Plan Clearing Bankruptcy Path,” May 28, 2009.

⁸⁸ *Ibid.*

⁸⁹ Deutsche Bank and Oppenheimer executive quoted in *Wall Street Journal*, “The Chrysler Bankruptcy Plan: U.S. Tactics Spark Worries Over Lenders’ Rights,” May 1, 2009.

⁹⁰ Comments of investor and hedge fund manager George Schultze quoted in *Financial Times*, “Painful Lessons for Lenders in Chrysler Debacle,” May 7, 2009.

⁹¹ *Wall Street Journal*, Opinion Piece, “Obama’s Auto Plan is Capitalism at Work,” by Scott Sperling, co-president of THL Partners, a private equity firm, May 20, 2009.

Controversy over the Size of Dealer Networks

The size and effectiveness of the GM and Chrysler auto dealership networks—and the role of the Administration’s Auto Task Force—were ongoing issues during and after the two automakers’ bankruptcy proceedings. In February 2009, as required by the terms of their earlier federal loans, GM and Chrysler submitted viability plans to the Obama Administration, laying out their plans for restructuring. In March, the President announced that the Administration had rejected GM’s and Chrysler’s viability plans and, as part of that rejection, the Auto Task Force identified each company’s dealer network as too large for the proposed size of the automakers.

In May, GM and Chrysler announced cutbacks in their dealer networks. Chrysler dropped 25% of its network, or 789 dealers, effective within a month. GM cancelled about 1,200 dealers, effective when their existing contracts expired in October 2010. Both companies argued that reducing their dealer networks was one of the ingredients in becoming more profitable and more competitive with Toyota and Honda, where average-dealer sales are much higher than at dealers affiliated with the Detroit automakers. At a June 2009 hearing of the Senate Commerce, Science and Transportation Committee, Chrysler’s then-vice chairman and president, Jim Press, cited the difference between Chrysler, with total retail sales per dealership of 405 vehicles, and Toyota, with 1,292.⁹² (See **Table 4** earlier in this report for more information on the number of dealer reductions.)

Slimming the dealer network was part of the more sweeping change that the Administration requested to improve the competitiveness and profitability of the new companies. At a 2009 hearing, Ron Bloom, head of the Auto Task Force, explained the necessity for some of the plant closings and dealer cutbacks:

New Chrysler determined that meaningful actions were required to reduce the overcapacity in both the Company’s plant footprint and dealer network. Therefore new Chrysler’s business plan included reductions in plants and dealers across the United States. These decisions, while difficult, are absolutely critical to making new Chrysler competitive and ensuring the success of the Company in the future. Importantly, new Chrysler retained the *overwhelming majority* of dealers from the old company—87 percent of dealers by volume.... [emphasis in the original remarks]⁹³

⁹² U.S. Senate Committee on Commerce, Science and Transportation, *GM and Chrysler Dealership Closures: Protecting Dealers and Consumers* Hearing, “Testimony of James Press, Vice Chairman and President, Chrysler LLC,” June 3, 2009.

⁹³ U.S. Senate. Congressional Oversight Panel. *Field Hearing on the Auto Industry Financing Program (AIFP) under the Troubled Asset Relief Program (TARP)*, “Statement of Ron Bloom,” Detroit, July 27, 2009. <http://cop.senate.gov/hearings/library/hearing-072709-detroithearing.cfm>

The dealer reductions became controversial as the process for eliminating them was approved by the bankruptcy court, which some saw as an end-run around procedures established in state franchise laws. The National Automobile Dealers Association (NADA), representing over 17,000 dealers, testified before Congress on three occasions in 2009 about their concerns over the way that more than 2,000 dealers had been terminated, arguing that there had not been a transparent process and that fewer dealerships would mean fewer, not more, sales for GM and Chrysler. At these hearings, NADA Chairman John McEleney said of the less-than-30-day period allowed for Chrysler dealer wind-downs, “the franchise agreement requires the manufacturer to buy back vehicles, parts and tools. No manufacturer has ever imposed such onerous conditions on terminated dealers.” At the same hearing, he also said that manufacturers “incur very little cost related to the dealer network. Therefore, few savings are likely to be generated from dealer reductions.”⁹⁴

The congressional response to the dealer terminations produced not only numerous hearings, but also a House-passed provision in the FY2010 Financial Services and General Government Appropriations bill (H.R. 3170) that was intended to reverse the dealer reductions and return to pre-bankruptcy dealership levels.⁹⁵ GM, Chrysler, and the Obama Administration expressed their opposition to this amendment. During summer and fall 2009, the Auto Task Force and several Members of Congress sponsored closed-door negotiations between NADA, Chrysler, and GM to see if a non-legislative accommodation could be reached on the dealer terminations.

Final legislation affecting the terminated dealers was passed in December 2009 in the FY2010 Consolidated Appropriations Act (H.R. 3288). The original House-passed wording was replaced with an entirely new provision establishing a binding arbitration process for aggrieved dealers and a timetable for completion. President Obama signed the appropriations Act on December 16, 2009 (P.L. 111-117). After the dealer arbitration process began in January 2010, GM announced that it was reinstating 661 of the 1,160 rejected dealerships that had filed for arbitration.⁹⁶

For a full description of the dealer issue and the congressional actions related to it, see CRS Report R40712, *U.S. Motor Vehicle Industry Restructuring and Dealership Terminations*, by Bill Canis and Michaela D. Platzer. For a discussion of constitutional issues pertaining to the dealership terminations and congressional actions, see CRS Report R40736, *Mandating Dealership Agreements for Automakers Receiving Federal Funds: Constitutional Analysis*, by Carol A. Pettit, Kenneth R. Thomas, and Robert Meltz.

⁹⁴ U.S. Senate, Committee on Commerce, Science and Transportation, *GM And Chrysler Dealership Closures: Protecting Dealers And Consumers*. “Testimony of John P. McEleney, Chairman, National Association of Automobile Dealers” Hearing, June 3, 2009. NADA also testified on this issue before the House Committee on the Judiciary, Subcommittee on Commercial and Administrative Law and the House Committee on Energy and Commerce, Subcommittee on Oversight and Investigations.

⁹⁵ An amendment by Rep. LaTourette in committee was included in the House-passed bill, H.R. 3170. That amendment required auto companies receiving federal assistance—that, GM and Chrysler—to reinstate agreements with franchise dealers to the extent a valid dealer agreement existed prior to Chapter 11 bankruptcy proceedings.

⁹⁶ *Automotive News*. “GM reinstatement offers deemed ‘more than fair,’” March 12, 2010; *Automotive News*, “Spurned dealers get good response from GM,” March 15, 2009.

New Management and New Directions

As shown earlier in this report in **Figure 2** and **Figure 3**, GM's and Chrysler's new and unconventional ownership structures include significant government and UAW stakes. Both companies now have new boards of directors and new corporate management for strategic and day-to-day operations. Each board also has a representative of the UAW's VEBA.

The most high-level changes occurred when the Obama Administration requested the resignation of GM's then-chairman and CEO, Rick Wagoner, on March 29, 2009,⁹⁷ replacing him with Fritz Henderson as president and CEO, and Ed Whitacre Jr. as chairman.⁹⁸ The roster of the new boards—12 members for GM and nine for Chrysler—is in **Table 5**.

Both companies have a mandate to develop and market new products successfully so they can quickly regain their status as publicly traded companies. The head of the Auto Task Force, Ron Bloom, has said that the Obama Administration is “very eager to dispose of [GM and Chrysler] as soon as possible”⁹⁹ and that the Treasury Department is “not going to be running the companies. We have put in place A-plus boards of directors at both of these companies.... These are hard-nosed, sophisticated men and women with proven track records in industry.”¹⁰⁰

GM's Whitacre says that “our intention is to get to profitability as quickly as we can. We are working very diligently to do that. Hopefully, we'll surprise some people.”¹⁰¹ Chrysler and GM are basing their potential success and rising profitability on the dual pillars of changing their internal corporate cultures and introducing a very different product line up.

⁹⁷ *Toronto Star*, “Wagoner Damaged by Refusal to Radically Shrink GM,” March 31, 2009.

⁹⁸ Fritz Henderson resigned as President and CEO on December 1, 2009, leaving the GM board at the same time. Whitacre later assumed the CEO position, in addition to serving a chairman of the board.

⁹⁹ *Detroit News*, “U.S. ‘Eager’ to Divest Itself of GM, Chrysler,” July 27, 2009.

¹⁰⁰ Statement of Ron Bloom, head of the U.S. Treasury's Auto Task Force, at the Center for Automotive Research's Management Briefing Seminars, Traverse City, MI, August 5, 2009, as reported in the *Detroit News*, “Adviser: Feds Won't Run GM, Chrysler,” August 6, 2009.

¹⁰¹ *Detroit News*, “GM Gets Early Start with New Models to Preserve Market Share,” August 6, 2009.

Table 5. GM and Chrysler Boards of Directors

As of February 20, 2010

General Motors Company	Chrysler Group LLC
Daniel Akerson Managing Director and Head of Global Buyout The Carlyle Group	Alfredo Altavilla CEO Fiat Powertrain Technologies
David Bonderman Co-Founding Partner and Managing General Partner TPG	James Blanchard Former Congressman and Former Governor of Michigan (Representing the UAW VEBA)
Erroll Davis, Jr. Chancellor University System of Georgia	George Gosbee Chairman, CEO and President Tristone Capital Inc.
Stephen Girsky Vice Chairman, Corporate Strategy and Business Development, General Motors Company Former President, S. J. Girsky & Company (Representing the UAW VEBA)	Robert Kidder ^a Chairman of the Board Chrysler Group LLC
Neville Isdell Retired Chairman and CEO The Coca-Cola Company	Sergio Marchionne CEO, Chrysler Group LLC and CEO, Fiat S.p.A.
Robert Krebs Retired Chairman and CEO Burlington Northern Santa Fe Corporation	Douglas Steenland Former CEO Northwest Airlines
Kent Kresa Chairman Emeritus Northrop Grumman Corporation	Scott Stuart Founding Partner Sageview Capital
Philip Laskawy Retired Chairman and CEO Ernst & Young	Ronald Thompson Chairman of the Board of Trustees Teachers Insurance and Annuity Association
Kathryn Marinello Former Chairman and CEO Ceridian Corporation	Stephen Wolf Chairman of the Board of Directors R.R. Donnelley & Sons. Co.
Patricia Russo Lead Independent Director Former CEO Alcatel-Lucent	
Carol Stephenson Dean, Richard Ivey School of Business The University of Western Ontario	
Edward Whitacre, Jr. ^a Chairman and Chief Executive Officer General Motors Company	

Source: GM Board members from GM website, viewed February 20, 2010; Chrysler Board members from *PR Newswire*, "Formation of Chrysler Group LLC Board is Completed," July 5, 2009.

- a. Edward Whitacre Jr. is the retired Chairman and CEO of AT&T, and Robert Kidder is the retired Chairman and CEO of both Duracell International and Borden Chemical; Kidder is also the Chairman and CEO of 3Stone Advisors, an investment firm.

Changing corporate culture. Changing GM and Chrysler corporate cultures has been a high priority for the success of both organizations, according to the Auto Task Force and many independent observers.¹⁰² While corporate culture is an intangible, it includes risk-taking, teamwork, attitude toward customers, and accountability within the organization, especially management's accountability to the board of directors.

Making this change is one reason that former Chairman and CEO Rick Wagoner was asked to step aside by the Obama Administration in March 2009; why CFO Ray Young was asked by the new GM board to leave that post in September 2009 and given the newly created position of vice-president of international operations in February 2010; and why Fritz Henderson resigned as president and CEO in December 2009. The drive to change GM's culture can also be seen in the board of directors' decision in January 2010 to designate Edward Whitacre's position as both chairman and permanent chief executive officer.

Steve Rattner, former head of the Auto Task Force, said in June 2009 that "addressing cultural issues is just as fundamental to our assignment as addressing the balance sheet or financing."¹⁰³ The day after the new GM bought old GM's assets, the *Financial Times* described then-CEO Fritz Henderson's view: "GM, which has long been criticized for arrogance and complacency, also promised a 'new way of doing business' ... CEO Fritz Henderson said, 'From this point on, our efforts are dedicated to customers, cars, culture and repaying the taxpayer.'"¹⁰⁴

Referring to the new GM board, another report noted that the new board would monitor management much more closely than in the past, when it had been said that former GM management ran the company with little oversight from the board:

Having such an activist board and chairman would be unusual at many large corporations. At GM it is a sea change. In the past, the company's directors almost always went along with the strategy of its former chief executive and chairman, Rick Wagoner. Rarely did the old board question management's assumptions or forecasts, people familiar with the matter said.¹⁰⁵

Similar challenges face Chrysler. There are high expectations that the new Fiat leadership will reorient Chrysler management. The new CEO, Fiat's Sergio Marchionne, has stated that he accomplished a major transformation when he took over Fiat, where he asserts that he tapped new kinds of leaders, challenged old assumptions, set very ambitious business goals, reached beyond the company for external innovations, and demonstrated respect for employees.¹⁰⁶

¹⁰² Ford Motor Co., which did not seek Federal aid or go through bankruptcy, initiated changes in corporate culture when Alan Mulally, an auto industry outsider and former Boeing executive took the helm as President and CEO in 2006. He also serves as a member of Ford's board of directors. See *Edmunds.com*, "Ford's Alan Mulally: the Man to Watch in 2007," Jan. 9, 2007.

¹⁰³ *New York Times*, "U.S. Takes on the Insular GM Culture," June 11, 2009.

¹⁰⁴ *Financial Times*, "GM Announces Rebirth with Vow to Start Listening to its Customers," July 11, 2009.

¹⁰⁵ *Wall Street Journal*, "GM Chief Talks Tough as Board is Set to Meet on Opel, New Marketing Push," September 8, 2009.

¹⁰⁶ *Harvard Business Review*, article by Sergio Marchionne, "Fiat's Extreme Makeover," December 1, 2008.

Speeding up new product introductions with a stronger customer focus. GM's chairman and CEO, Ed Whitacre, said that gaining market share is "right there at the top" of his agenda and that "we just want to be No. 1.... We know we have great products. We've got to create awareness out there."¹⁰⁷ Even holding market share will be a challenge for GM, because it has eliminated the Pontiac, Hummer, Saturn, and Saab brands as part of its restructuring. Even with these four brands still in-house through most of 2009, GM's market share declined from 22.2% in 2008 to 19.8% in 2009.

Nevertheless, GM has had recent successful launches, such as the popular Cadillac CTS and Chevrolet Malibu. It expects to debut 25 vehicles in the next two years.¹⁰⁸ A Kelley Blue Book executive says, "GM got into this mess because it was not building competitive vehicles. During the '80s and '90s, the Japanese passed GM like it was a telephone pole on the highway. In some segments, GM builds world-class entrants, but in other segments they are not competitive."¹⁰⁹

Small cars have not been profitable for the Detroit 3 in the past, and it appears likely that they will maintain a lead in larger vehicles, which have a big following in the United States. However, because truck and SUV sales are very sensitive to higher gasoline prices, GM, Chrysler, and Ford can probably no longer afford to lose money on small cars. They will, therefore, also need to find ways to make a profit on small passenger cars.

The automakers' new models will likely respond to new fuel economy and tailpipe emissions standards emanating from Washington—as described in a separate section later in this report—as well as the perceived interest among consumers for such vehicles. Many of these changes will take place under the hood by reducing engine size and applying new technologies such as direct fuel-injection, turbo-charging, and "stop-start" technologies that will shut an engine off when it stops moving. Aerodynamic designs will reduce drag, and a new generation of transmissions is also on the drawing board.¹¹⁰

GM's vice chairman and head of product development said, "In my opinion, GM has three priorities: product, product and more product."¹¹¹ Among the new GM vehicles being introduced during the next two model years are

- Chevrolet Cruze, replacing the Cobalt in 2010, and a redesigned Aveo—both competing with the Corolla and Civic;
- Spark minicar, which began selling in Korea in 2009, will begin selling in Europe in 2010, and in the United States by 2011;
- Plug-in hybrid Volt, to be marketed in fall 2010; and
- Buick crossover with a direct-injection engine in 2010 and a plug-in hybrid model the next year.

¹⁰⁷ *Wall Street Journal*, "Board Chief Says GM Must Be No. 1 in U.S. Sales," August 6, 2009, reporting on an interview with Ed Whitacre.

¹⁰⁸ *Detroit News*, "GM Gives Sneak Peek of Its Future Lineup," August 12, 2009.

¹⁰⁹ *Ibid.* Comments are those of Jack Nerad, Kelley Blue Book's director of news.

¹¹⁰ *Detroit News*, "Fuel Rules Push Big 3 Design Changes," July 14, 2009.

¹¹¹ *Detroit News*, "GM Gives Sneak Peek of Its Future Lineup," August 12, 2009, quoting Tom Stephens.

Chrysler, on the other hand, has only one new product in the pipeline for model year 2010, the redesigned heavy-duty Dodge Ram truck. Vehicles such as the Chrysler Sebring, Dodge Caliber, and several Jeep models will have minor improvements. In November 2009, Chrysler CEO Sergio Marchionne released the new company's business plan for the first time. He forecast that Chrysler will double worldwide sales over the next five years, break even in 2010, and that it will repay all its government loans by 2014.¹¹² Among Chrysler's ambitious new line-up are the following vehicles, many of which will increasingly be based on Fiat platforms:

- Its Dodge brand will introduce 11 new models by 2014 and new mid-size and compact sedans in 2012. Chrysler says the compact sedan will have the best fuel economy of any car Chrysler has ever made;¹¹³
- Ram will introduce new vans in 2012 and at least one of them will carry the Fiat marque;
- Jeep will introduce a new compact SUV and compact crossover vehicle in 2013.

A Morgan Stanley analyst said, "we were surprised by the flood of aggressive investment in product, R&D and marketing. Chrysler is really going for it."¹¹⁴ Missing initially from the new Chrysler lineup were electric-drive vehicles. A year ago, Chrysler said it would sell a hybrid electric vehicle at the end of 2010, but that initiative was abandoned in 2009. In Europe, Fiat has emphasized diesels over electrics and hybrids.¹¹⁵ At the January 2010 Detroit Auto Show, Chrysler unveiled a Model Year 2011 Fiat 500 Battery Electric Vehicle (BEV).¹¹⁶

¹¹² *Wall Street Journal*, "Chrysler's Chief Says Recovery Under Way," November 5, 2009.

¹¹³ *Bloomberg.com*, "Chrysler to Break Even Next Year, Have 2011 Profit," November 5, 2009.

¹¹⁴ *Automotive News*, "Chrysler's Grand Brand Plan," November 9, 2009.

¹¹⁵ *Detroit Free Press*, "Chrysler Absent from Buzz on Electric Cars," August 27, 2009.

¹¹⁶ *Edmunds Inside Line*, "Fiat 500 BEV: 2010 Detroit Auto Show," January 12, 2010.

Ford Motor Company: A Different Path

Ford Strengthens Capital Base and Market Share

As previously discussed, Ford was able to take an independent path because of seemingly fortuitous planning in 2006 when credit markets were still strong. At that point, Ford was engaged in a relatively urgent move to recapitalize the company. Ford raised or borrowed \$23.5 billion, which was secured by all of its domestic assets, including its intellectual property and even the company's iconic blue oval trademark. In addition, it sold Jaguar and Land Rover to the Tata Group of India.¹¹⁷ Divesting these and other assets raised \$3.7 billion in additional capital. As part of this restructuring, Ford reduced North American operating costs by more than \$5 billion, closed 17 plants, and cut 12,000 salaried and 44,000 hourly employees.¹¹⁸ In December 2008, Ford announced that it would consider selling Volvo.¹¹⁹ Ford announced in December 2009 that a definitive sales agreement for Volvo to the Chinese firm Zhejiang Geely Holding Group Company Limited would be agreed to in the first quarter 2010, with a closing expected in the second quarter 2010.¹²⁰

These steps to raise cash and cut costs paid off for Ford. As the recession deepened and its two Detroit rivals moved further toward acceptance of large federal loans to stay afloat, Ford began to see value in differentiating itself to increase its U.S. market share. A 2009 study by Merrill Lynch forecast that Ford's market share could rise by three percentage points over the next four years to about 18%, while GM's could fall to 15% or 16%.¹²¹ There are indications that such a shift may be under way, as shown earlier in this report in **Table 2**: Ford's market share grew from 14.4% in 2008 to 15.5% in 2009, while the shares held by GM and Chrysler fell.

¹¹⁷ In 2007, the Tata Group acquired the Anglo-Dutch steel company, Corus, which was formed in 1999 by a merger of British Steel and Koninklijke Hoogovens N.V. The deal was valued at \$11 billion and made Tata one of the world's largest steelmakers. As with the acquisition of Jaguar and Land Rover, Tata's "rationale was to supplement the customer-facing front-end in the developed markets, with a lower-cost back-end in an emerging market." Khanna, Tarun, "Tata-Corus: India's New Steel Giant." Harvard Business School, *Working Knowledge*. February 14, 2007.

¹¹⁸ U.S. Senate, Committee on Banking, Housing, and Urban Affairs. *The State of the Domestic Automobile Industry: Part II*. Hearing. "Testimony of Alan R. Mulally, President and CEO, Ford Motor Company," December 4, 2008.

¹¹⁹ *Automotive News*. "Ford says it might sell Volvo," December 1, 2008.

¹²⁰ Ford Motor Company, "Ford Posts Full Year Profit For 2009; Fourth Quarter 2009 Net Income Of \$868 Million; Plans To Be Profitable In 2010," 8-K filing, January 28, 2010.

¹²¹ Reuters, "Ford Seen Gaining Market Share-Merrill Study," July 15, 2009.

The financial benefits of Ford's multi-year strategy started to show in 2009. In July 2009 Ford recorded a 2.4% increase in sales (year-over-year) for the first time since 2007.¹²² Its net income rose during the year; for the full year 2009 it earned \$2.9 billion, a \$17.5 billion improvement from 2008. It announced a pre-tax operating profit of \$454 million, compared with a nearly \$7 billion loss in 2008.¹²³ Its stock more than tripled in value between March and November 2009.¹²⁴

New Designs Yield Top Performers

In February 2010, Ford's sales exceeded General Motors' for the first time since 1998. According to one analyst, "Ford's advantage over GM could be the new normal. GM is still in turnaround mode and Ford is six steps ahead. Ford has the products, a new reputation for solid quality and management focus."¹²⁵ Ford's strategic plans include:

- *Introducing new fuel-efficient engines* such as the EcoBoost, which uses turbocharging and direct injection technologies. Ford developed this more fuel-efficient engine to replace larger engines like V-8s and started production at its Cleveland, OH, engine plant in May 2009. During 2010, it will offer this engine option in its F-150 pickups, and by 2013 it will be available in 90% of its models. A Ford executive said, "EcoBoost really represents the foundation for our sustainable strategy."¹²⁶
- *Increasing quality and reliability.* A decade ago, Ford's advertising hyped the phrase "Quality is Job One," but it didn't always show up in its vehicles.¹²⁷ Now Ford's commitment to quality is reflected in a number of surveys that measure "initial quality" and "vehicle dependability" based on three years of ownership. Ford's three domestic brands (Lincoln, Mercury, and Ford) ranked among the top eight brands in J.D. Power's 2010 Vehicle Dependability Study.¹²⁸ According to *Consumer Reports*, "Ford consolidated its position as the only Detroit automaker with world-class reliability. The Fusion and Milan led the charge; four-cylinder, front-wheel-drive V6, and hybrid versions got top marks."¹²⁹

¹²² Ford's sales of small cars and fuel-efficient trucks saw the largest increases, with its Fusion up 66% and its small pickup, the Ranger, up 65%, according to *Automotive News*, "July U.S. Auto Sales," August 3, 2009. Ford attributed this rise in sales partially to increased demand from the cash-for-clunkers Federal rebate program.

¹²³ Ford data are from Ford's quarterly and annual financial statements and press releases, "Ford Posts Full-Year Profit for 2009," January 28, 2010.

¹²⁴ *Wall Street Journal*, "S&P Lifts Ford's Ratings on Better-Than-Expected 3Q Results," November 3, 2009.

¹²⁵ The debt analyst quoted is Shelly Lombard with Gimme Credit LLC. Source: *Bloomberg.com*, "Ford Beating GM May Be the 'New Normal' on Vehicle Lineup," March 3, 2010.

¹²⁶ Statement by Barb Samardzich, Ford Vice President of Powertrain Engineering, cited in *Detroit Free Press*, "EcoBoost Production Begins in Ohio Plant," May 10, 2009.

¹²⁷ *Los Angeles Times*, "Hit By Recalls, Ford Remembers Quality is Job 1," January 13, 2001.

¹²⁸ J.D. Power and Associates, "Despite Overall Industry Improvement in Long-Term Dependability, Some Vehicle Brands Don't Receive the Credit They're Due," March 18, 2010.

¹²⁹ *ConsumerReports.org*. "Most reliable cars: a high price doesn't mean its reliable," April 2010.

- *Applying overseas technologies and styling to future vehicles.* Ford's new lineup of midsize cars and smaller SUVs, including the Ford Escape, Mercury Mariner, Ford Edge, and Lincoln MKX, use an architecture developed originally by Mazda for one of its midsize vehicles. Ford's European engineering centers are developing the underpinnings of vehicles that will be sold in the United States, such as the Fiesta subcompact, a car that will be assembled in Cuautitlan, Mexico.¹³⁰ Ford is increasingly using common platforms and components worldwide, a concept that Ford CEO Alan Mulally has dubbed "One Ford."¹³¹
- *Building on successful brands.* When Mulally arrived at Ford from Boeing, he reportedly expressed surprise to learn that one of Ford's most famous brands, the Taurus, had been terminated in 2006. He believed the former top-selling Taurus had been erroneously sidelined and asked the Ford staff, "how many billions of dollars does it cost to build brand loyalty around a name?" He directed that the Ford 500 be redesigned and rebranded as a Taurus for the 2010 model year.¹³² The new Taurus went on sale in August 2009.

While the Ford strategy includes a new direction toward fuel-efficient automobiles, it continues to rely on strong sales of its traditional light trucks. In 2009, Ford sold over 595,000 cars and just over 1 million SUVs, trucks and vans, similar to its car/truck sales ratio in 2008.¹³³

Forms of Federal Support

The federal government has provided various forms of support for the U.S. auto manufacturing sector.

Shape of Federal Support

TARP funds used for GM and Chrysler. More than \$80 billion in TARP funds were used to provide financial support to GM, Chrysler, GMAC, Chrysler Financial, and a group of Tier I parts suppliers of GM and Chrysler.¹³⁴ **Table 6** lists total federal aid to auto companies and the repayments through February 3, 2010.

¹³⁰ *Detroit Free Press*, "Look for Features on Ford Vehicles," June 4, 2009.

¹³¹ *Detroit News*, "Mulally Plans to Stay in Driver's Seat at Ford," July 30, 2009.

¹³² *CNN Money.com*, "Fixing Up Ford," May 11, 2009, citing a story Alan Mulally told the author, Alex Taylor III.

¹³³ Ford's F-150 pickup trucks are among the most popular truck models sold in the United States; they are highly profitable. Ford sales for 2008 and 2009 are sourced from a Ford Motor Co. press release, "Ford Caps 2009 with 33% Sales Increase, First Full-Year Market Share Gain Since 1995," January 5, 2010.

¹³⁴ Many of the Tier I and lower tier suppliers who make parts for GM and Chrysler cars frequently manufacture parts for Ford and other OEMs. Large-scale disruptions in the OE parts supply business would have had negative repercussions for the entire industry.

Table 6. Federal Auto Industry Financing Program

Chronology of Federal Aid Through February 3, 2010

Date Announced	Recipient	Amount (in billions of dollars)
December 2008	GMAC (owned by Cerberus Capital and GM)	\$5.9
	General Motors	13.4
January 2009	Chrysler Holding (owned by Cerberus Capital)	4.0
	Chrysler Financial Services (owned by Cerberus Capital)	1.5
April 2009	General Motors	2.0
	Chrysler Holding Warranty Program	0.3
	GM Supplier Receivables ^a	2.5
	Chrysler Receivables ^a	1.0
May 2009	Chrysler	1.9
	General Motors	4.0
	General Motors Warranty Program	0.4
	GMAC	7.5
	New Chrysler ^b	4.6
June 2009	General Motors	30.0
December 2009	GMAC	3.8
TOTAL COMMITTED		\$82.8
Repayments		
Various Dates 2009	Chrysler Financial Services	-\$1.5
	Repayments of January 2009 Loan	
July 2009	Chrysler Holding	-0.3
	Repayment for April 2009 Warranty Commitment Program	
July 2009	General Motors	-0.4
	Repayment for Warranty Commitment Program	
December 2009/January 2010	General Motors debt repayment	-1.03
CURRENT TOTAL		\$79.6

Sources: U.S. Department of the Treasury, *Troubled Asset Relief Program (TARP), Transactions Report*, February 3, 2010, FinancialStability.gov. This table was compiled with the assistance of Baird Webel, CRS Specialist in Financial Economics, and Marc Labonte, CRS Specialist in Macroeconomic Policy. For a comprehensive look at the entire TARP program, see their report, CRS Report R41073, *Government Interventions in Response to Financial Turmoil*.

Notes: In December 2008, the U.S. Treasury provided \$884 million to assist GM in GMAC's rights offerings, separate from the \$13.4 billion loaned for GM's operations. While this was provided to GM, it assisted GMAC and is tallied as GMAC assistance.

- a. The original Automotive Supplier Support Program commitment provided GM with \$3.5 billion and Chrysler with \$1.5 billion, for use with their suppliers. Of this \$5 billion program, GM and Chrysler utilized \$2.5 billion and \$1.0 billion, respectively. The remainder has not been used, as of February 3, 2010.
- b. Chrysler has drawn down \$4.6 billion of a \$6.6 billion commitment, as of February 3, 2010.

The financial assistance to GM and Chrysler was not the only federal aid given to the auto industry in 2009, although it was the most prominent and the largest. Other forms of direct and indirect federal assistance to these companies and/or the auto industry in general include

- *Direction from the Auto Task Force.* The Presidential Task Force on the Auto Industry is a cabinet-level group that includes the Secretaries of Transportation, Commerce, Labor, and Energy, the chair of the President's Council of Economic Advisers, the director of the Office of Management and Budget, the EPA administrator, and the director of the White House Office of Energy and Climate Change. The Task Force is led by Treasury Secretary Geithner and NEC Director Summers. Cabinet secretaries and other members are represented by official designees. Steven Rattner, a former journalist turned investment banker, was the first head of the Task Force, reporting to Treasury Secretary Geithner and NEC Director Summers. Rattner stepped down from the task force in July 2009, after Chrysler and GM were reorganized. Ron Bloom is the current head of the Auto Task Force, as well as senior counselor to the President for manufacturing policy. Bloom was also an investment banker and an advisor to the president of the United Steel Workers union.

The Auto Task Force staff was intimately involved in shaping the automakers' restructuring plans. As Rattner noted, the task force had "about five weeks to learn the auto industry, study the two companies' restructuring plans, develop a plan of action, and sell it to our superiors, including the President.... Moving simultaneously down multiple paths, we began meeting with all the interested parties: labor, lenders, legislators and suppliers.... Both companies needed gigantic reductions in their costs and liabilities. They had way too many plants and workers for expected car volumes. And their labor costs were out of line with those of their most direct competitors, the Japanese 'transplants' manufacturing in the South. The administration was united: No more money except in the context of a shared sacrifice and a truly viable restructuring."¹³⁵

Agreements with stakeholders negotiated by the automakers, with the assistance of the Auto Task Force, prior to the bankruptcy filings paved the way for this swift action. Without federal support, it is likely that the automakers might have been mired in bankruptcy for many years.¹³⁶

- *"Cash for Clunkers."* With Administration support, Congress passed a \$3 billion Cars Allowance Rebate System (CARS)¹³⁷ or "cash for clunkers" program in 2009.¹³⁸
- *Dealer financing and warranty protection.* The fall 2008 credit crisis in the U.S. banking system dried up all sources of private sector financing needed by dealers

¹³⁵ Article by Steven Rattner in *Fortune*, "The Auto Bailout: How We Did It," October 21, 2009.

¹³⁶ The closest parallel was that of auto parts maker Delphi (former the parts division of GM spun off as an independent company in 1999), which entered bankruptcy in 2005. At the time of the GM and Chrysler bankruptcy filings, Delphi had yet to complete its bankruptcy reorganization. It finally completed its restructuring in fall 2009.

¹³⁷ The official website is <http://www.cars.gov>.

¹³⁸ For an analysis of the program, see CRS Report R40654, *Accelerated Vehicle Retirement for Fuel Economy: "Cash for Clunkers,"* by Brent D. Yacobucci and Bill Canis.

to buy cars from manufacturers and, in turn, for consumers to buy cars from the dealers. To address the auto financing problems, the Auto Task Force provided TARP loans to GMAC and Chrysler Financial. As shown in **Table 6**, the companies received \$5.9 billion and \$1.5 billion, respectively, in the final months of the Bush Administration. These funds did not directly support GM and Chrysler, as neither financing arm was owned or under the control of the manufacturers. Both of the finance firms were owned by Cerberus Capital, which also owned 100% of Chrysler. Nonetheless, it was hoped that by priming these pumps, more capital would flow into the auto market. The effort appears to have been of minor assistance insofar as auto financing remains tight and remains an issue in the recovery of the auto markets in 2010. At the end of December 2009, the U.S. Treasury provided an additional \$3.8 billion in aid to GMAC in exchange for a majority stake (56%) in that financial company.¹³⁹

Even as financing was being addressed in the winter of 2009, the Auto Task Force also realized that the mere possibility of a GM and/or Chrysler bankruptcy could put a further chill on consumer purchases. News articles were reflecting consumer concern that auto warranties might not be honored if either company entered bankruptcy. To stanch this concern and maintain consumer confidence, the Auto Task Force announced a warranty commitment program in March that guaranteed warranties on GM and Chrysler vehicles. Backstopping the program were funds from the manufacturers and TARP funds, in case the two automakers could not meet warranty claims.¹⁴⁰ The program was terminated after the new companies were established, as summarized by Treasury Secretary Geithner in testimony: “The termination of the Auto Warranty Commitment Program demonstrates the government’s prudent use of taxpayer funds and commitment to exit. The government invested \$641 million in the Warranty Program to give confidence to GM’s and Chrysler’s customers during a period of substantial uncertainty. Following the companies’ emergence from bankruptcy, the money invested in the program has been returned, along with interest payments from new Chrysler.”¹⁴¹

- *Supplier assistance.* Not only were GM and Chrysler in dire financial straits, hundreds of suppliers that sold products and services to these and other auto companies found themselves in a similar position. That is because the automakers were unable to pay their bills as the overall motor vehicle market stagnated. More than 40 auto supplier companies entered bankruptcy in 2009 and hundreds of smaller firms faced closure and liquidation. To ensure the continued operation of this key part of the automotive supply chain, the Auto Task Force established an Automotive Supplier Support Program in March 2009, providing up to \$5 billion in TARP funds to GM and Chrysler to quickly pay their large Tier 1 suppliers. GM and Chrysler used \$3.5 billion from these loans. Supplier health still remained an issue afterward, notwithstanding the spring 2009 intervention. According to GM’s head of purchasing, “My gut tells me we will

¹³⁹ *Washington Post*. “U.S. takes majority stake in GMAC, giving lender \$3.8 billion more in aid,” December 31, 2009.

¹⁴⁰ For the Administration’s description of the program, go to http://www.whitehouse.gov/assets/documents/Warrantee_Commitment_Program.pdf.

¹⁴¹ Testimony of Secretary Geithner before the TARP Congressional Oversight Panel on September 10, 2009.

face more troubled suppliers as volumes come back. We have no indication it is behind us.... We have troubled waters in front of us for the next year. We are monitoring the supply base.”¹⁴²

The supplier industry, through its trade association, MEMA, and allied organizations, petitioned the Treasury to extend and expand the supplier program. Ron Bloom, the head of Treasury’s Auto Task Force, indicated on several occasions that the task force has no intention of providing further assistance and that the normal competitive pressures of the market will shape the supplier base going forward.

- *Financial support for alternative fuels and advanced technology vehicles.* Before the GM and Chrysler bailouts, the federal government supported funding for advanced vehicle manufacturing and alternative fuel programs. The 2002 FreedomCAR Initiative promotes cooperative R&D between the federal government and the Detroit 3, mainly in fuel cell and hydrogen technologies.¹⁴³ Over time, Congress appropriated \$1.4 billion for these research initiatives. In 2005, Congress passed legislation (Energy Policy Act of 2005, P.L. 109-58) establishing a hybrid vehicle tax credit of \$3,400 to encourage sales of such vehicles. In 2008, President Bush signed legislation extending and expanding biofuels tax credits¹⁴⁴ and establishing a \$7,500 plug-in tax credit (Emergency Economic Stabilization Act of 2008, P.L. 110-343). More recent legislation¹⁴⁵ appropriated \$7.5 billion to fund \$25 billion in loans to establish facilities to produce advanced technology vehicles; \$2 billion for grants for advanced battery manufacturing; and additional appropriations for grants to state, local, and federal governments to purchase alternative fuel and advanced technology vehicles.

Auto Task Force’s Exit Strategy

The Obama Administration has said that it does not want to be in the auto business, that it will not micromanage GM and Chrysler, and that it wants to exit the auto business as soon as it can stabilize the companies and receive at least partial repayment of U.S. funds.¹⁴⁶ The U.S. Treasury, which owns significant shares of both automakers, did not appoint a government representative to serve on the boards of the two companies. Rather, the Treasury was instrumental in the selection of a majority of new, private sector board members and executives, such as GM Chairman and CEO Ed Whitacre, who are managing GM and Chrysler in the same manner as other privately held companies. Each company will issue financial statements periodically, even though they are

¹⁴² *Automotive News*, “GM Purchasing Chief Says Supplier Crisis Not Over,” October 22, 2009, Comments of GM’s Vice President for Global Purchasing and Supply Chain.

¹⁴³ The Energy Policy Act of 2005 authorized a total of \$3.3 billion through FY2010 for fuel cell and hydrogen R&D.

¹⁴⁴ There are four key tax incentives for alternative fuels: (1) a tax credit for conventional ethanol of \$0.45 per gallon; (2) a tax credit for biodiesel and renewable diesel of \$1.00 per gallon (expired at the end of 2009); (3) a credit of \$0.50 per gallon for the retail sale of alternative fuels other than ethanol and biodiesel (expired at the end of 2009); and (4) a credit of \$1.01 per gallon for biofuels produced from cellulose. For a discussion and analysis of the background on alternative fuels programs and legislation, see CRS Report R40168, *Alternative Fuels and Advanced Technology Vehicles: Issues in Congress*, by Brent D. Yacobucci, February 4, 2010.

¹⁴⁵ Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, P.L. 110-329, and the American Recovery and Reinvestment Act of 2009, P.L. 111-5.

¹⁴⁶ CBSNews.com, “Obama: ‘I don’t Want to Run Auto Companies,’” April 29, 2009.

not required to do so by the Securities and Exchange Commission (SEC) as they are not publicly traded. New GM issued its first financial report in November 2009. New Chrysler will publish capsule financial information for the first time at the end of April 2010 and will file a 10(k) statement with the SEC in 2011.¹⁴⁷ In addition, the Auto Task Force meets from time to time with GM and Chrysler executives.

The Obama Administration has said that it does not intend to use federal policy in unique ways to influence the management of GM and Chrysler. The Auto Task Force has indicated, for example, that it won't force either company to build small automobiles or make certain vehicles domestically. In an August interview, Auto Task Force head Ron Bloom said that "we do not view the ownership of GM as an instrument of social policy." In the same interview, he said that he expected that GM would offer shares in a public offering in 2010, but would not give a date. He forecast that Chrysler shares would eventually be offered as well.¹⁴⁸

After bankruptcy, the two new companies have substantially fewer liabilities, an infusion of federal cash, and amended labor contracts, which should assist in their success. The former head of the Auto Task Force, Steve Rattner, said of this process:

Like any patient that undergoes major surgery, a successful recovery is far from assured. For Chrysler, the biggest challenges are its need to regenerate its product line and manage a significantly leveraged balance sheet. In the case of GM, the overarching question is whether, without an infusion of new blood, its management team can implement the massive cultural change that is essential. But by dramatically lowering the break-even point for both companies, we believed we were creating a healthy margin for error.¹⁴⁹

A question remains about the ability of the federal government to recoup the financial assistance extended to GM and Chrysler. Its main avenue to that end is the eventual sale of GM and Chrysler equity holdings. There may be conflicting objectives as the Administration seeks to divest itself of the automakers at an early date, while still achieving the greatest possible payback. If the stock is sold too early, taxpayers will not benefit in the same way they would if the Treasury waited longer to sell, assuming the stock prices rise as the automakers and the auto sector as a whole recover.

In June 2009, the Auto Task Force's Ron Bloom said "we have certainly looked at scenarios where, over time, a very substantial portion and potentially all of the taxpayer investment in General Motors will be returned.... But I certainly by no means would say that I am highly confident that that will occur."¹⁵⁰ At a September 2009 hearing by the TARP Congressional Oversight Panel, Ron Bloom said that obtaining a return for taxpayers on the investments in GM and Chrysler was an important benchmark of success.¹⁵¹ Independent analysts have suggested that for the federal government to recover its investment in GM, the company's stock value would have to rise above \$68 billion as a publicly traded firm. In 2000, at its all-time peak, GM's market valuation (in terms of the aggregate value of all stock shares) reached \$56 billion. At that time,

¹⁴⁷ Source: Chrysler Group LLC.

¹⁴⁸ *Detroit Free Press*, "Bloom: GM, Chrysler Have More to Do," August 5, 2009.

¹⁴⁹ From an article by Steven Rattner in *Fortune*, "The Auto Bailout: How We Did It," October 21, 2009.

¹⁵⁰ *Los Angeles Times*, "Will Government Motors Do Better Than General Motors?" June 5, 2009.

¹⁵¹ U.S. Congress. Congressional Oversight Panel, "September Oversight Report," September 9, 2009. p. 38. <http://cop.senate.gov/documents/cop-090909-report.pdf>

the company was a much larger firm than today's GM, and its market share and total U.S. auto sales were significantly higher than they are today.¹⁵²

The outlook for recovery of federal aid was clarified in December 2009 when Secretary Geithner reported to Congress that Treasury expected to lose about \$30 billion of the more than \$80 billion invested.¹⁵³ Of the \$50 billion loaned to GM, all but \$6.7 billion was converted into a 60.8% equity stake in the company.¹⁵⁴ GM said it would pay off the remaining \$6.7 billion loan by July 2010; it made its first down payment of \$1 billion in December 2009. Old Chrysler filed a plan with the bankruptcy court in December 2009 stating that it would not repay the \$4 billion loan made to Chrysler in January 2009.¹⁵⁵

The TARP-related Congressional Oversight Panel (COP), the only congressionally related entity to hold extensive hearings on the breadth of TARP-auto industry relations, issued a report in September 2009 laying out four major recommendations¹⁵⁶ for managing GM and Chrysler while under federal control, including:

- *Better Transparency.* The U.S. Treasury Department should do a better job of explaining its objectives for the automakers and “provide a full, transparent picture of its actions”;
- *Financial Disclosure.* Treasury should ensure that GM and Chrysler disclose their financial status on a regular basis and align corporate executive compensation with clear, long-term objectives;
- *Potential Conflict of Interest.* To avoid conflicts of interest and to promote the transition of these companies back to the private sector, Treasury should consider placing its share of these companies in an “independent trust that would be insulated from political pressure and government interference”; and
- *Legal Justification.* Treasury should lay out its legal analysis that justifies using TARP funds to support automakers when the principal focus of the original TARP legislation was to support financial institutions.

¹⁵² *Washington Post*, “Uncertainty Clouds Recovery of U.S. Investment in GM,” June 30, 2009.

¹⁵³ *Detroit News*, “Obama Administration Predicts \$30 billion Loss on Auto Bailout,” December 8, 2009. When President Obama submitted the Administration’s FY2011 budget request in January 2010, OMB estimated that the loss would be \$24.5 billion from loan losses and \$6.3 billion from equity losses.

¹⁵⁴ In addition, the federal government holds \$2.1 billion in GM preferred stock.

¹⁵⁵ *Detroit News*, “Old Carco Will Not Repay \$4 billion Federal Loan,” December 16, 2009.

¹⁵⁶ Congressional Oversight Panel (COP), “September Oversight Report: The Use of TARP Funds in the Support Reorganization of the Domestic Automotive Industry,” September 9, 2009. This report was required by the Emergency Economic Stabilization Act of 2008, P.L. 110-343. For more information on COP, go to <http://cop.senate.gov/>

Foreign-Owned Automakers Adjust and Expand

In the 1970s, U.S. consumers bought cars that were either made domestically by the Detroit automakers or imported from Japan or Europe. Until 1978, there were no foreign-owned plants producing automobiles in the United States. The first such foreign facility was a Volkswagen plant in New Stanton, PA, that produced 1.15 million units during its 10 years of operation, including the Rabbit, Rabbit truck, Golf, and Jetta. The plant closed in 1988 because of a sluggish economy and lack of sales. In its final year the Volkswagen facility produced only about 60,000 vehicles, while the plant's capacity was 200,000 vehicles per year.¹⁵⁷

Despite the inauspicious start for foreign auto manufacturers, during the next decade Japanese, then other European and Korean automakers began producing vehicles at new U.S. plants, mainly located in the South. Honda, Toyota, and Subaru also operate non-union assembly plants in Indiana and Ohio. VW is returning to the United States to produce vehicles as well, with the construction of a new auto assembly plant near Chattanooga, TN, expected to begin production in 2011.

U.S. auto manufacturing has been dramatically transformed with the investment in new plants and equipment by European and Asian manufacturers. In 1988 the Detroit 3 domestically produced 74% of all motor vehicles sold in the United States. By 2008, Detroit's share had fallen to about 48%, with the U.S. operations of European and Asian automakers making steady progress in capturing ever larger shares of U.S. consumers' auto purchases. Asian automakers' sales of all cars and light trucks (domestically made plus imports) rose from 21% in 1988 to nearly 45% by 2008. **Table 7** shows the changing market shares of U.S. and foreign automakers, including imports and rising U.S. production by the foreign-owned companies.

It is notable that the Detroit 3's share of the passenger car market fell from 69% of all light vehicles in 1988 to 35% in 2008, as Detroit ceased to contest that part of the market. As **Table 7** shows, the Detroit 3 narrowly avoided bigger losses in the past by developing and marketing a series of light trucks that appealed to American tastes.¹⁵⁸ Consumers eagerly purchased minivans (introduced in the United States by Chrysler in 1984), SUVs (AMC introduced the first true sport utility vehicle, the Jeep Cherokee XJ, in 1984),¹⁵⁹ and pickup trucks, which comprised 36% of Detroit 3 sales in 1990 and 63% in 2008. The data also show two major challenges facing the Detroit 3 as they enter a new automobile era. To succeed, they need to win back American consumers with a passenger car segment that they largely ceded to Asian and European manufacturers. In 2008, Asian manufacturers sold 1.3 million more passenger cars in the United States than GM, Chrysler, and Ford combined.

¹⁵⁷ *New York Times*, "Volkswagen to Shut U.S. Plant," November 21, 1987

¹⁵⁸ Ingrassia, Paul. *Crash Course: The American Automobile Industry's Road from Glory to Disaster*. New York: Random House, 2010; Maynard, Micheline. *The End of Detroit: How the Big Three Lost Their Grip on the American Car Market*. New York: Doubleday, 2003.

¹⁵⁹ According to Keith Bradsher, SUVs trace their origin to the military Jeep and its consumer-oriented descendant, the Jeep Cherokee. Introduced in 1990, the Ford Explorer was the breakthrough vehicle that made the SUV one of the most popular vehicles in America. Bradsher, Keith. *High and Mighty, S.U.V.'s: The World's Most Dangerous Vehicles and How They Got That Way*. New York: Public Affairs, 2002.

The future reliance of the Detroit 3 on SUVs and pickups has been undercut by two factors: increased production of these vehicles by Asian automakers, on one hand, and the possibility that the public may once again reduce such purchases if gasoline prices hit \$4 per gallon, as they did in 2008. While the future price of gasoline is uncertain, global economic recovery would likely be accompanied by rising demand for oil and, consequently, higher prices at the pump. Foreign-owned automakers are also closing in on the light truck/SUV market segment. Although Asian automakers accounted for only 13% of light trucks in 1988, by 2008 they approached a 35% market share. To a lesser extent, German carmakers are also increasing their sales of U.S.-built passenger cars and light trucks, such as SUVs and crossovers.

Table 7. U.S. Motor Vehicle Sales by Manufacturer, 1988 vs. 2008

Sales Numbers in Thousands, Including Imports

Company	1988				2008			
	Cars	Light Trucks	Total	%	Cars	Light Trucks	Total	%
GM	3,823	1,690	5,513	35.6	1,257	1,699	2,956	22.4
Ford	2,274	1,462	3,736	24.2	716	1,225	1,941	14.7
Chrysler	1,192	1,017	2,209	14.3	406	1,042	1,448	11.0
Detroit 3	7,289	4,169	11,458	74.1	2,379	3,966	6,345	48.1
Toyota	656	279	935	6.0	1,357	861	2,218	16.8
Honda	768	—	768	5.0	878	551	1,429	10.8
Nissan	473	169	641	4.1	594	358	952	7.2
Hyundai/Kia	264	—	264	1.7	446	229	675	5.1
Mazda	219	99	318	2.1	177	87	264	2.0
Mitsubishi	64	50	114	0.7	75	22	97	0.7
Subaru	156	.01	156	1.0	116	72	188	1.4
Suzuki	1	57	58	0.4	50	35	85	0.7
Asian-owned mfrs.	2,601	654	3,254	21.0	3,693	2,215	5,908	44.7
VW	148	5	153	1.0	279	32	311	2.4
Daimler	a	a	a		183	67	250	1.9
BMW	a	a	a		249	54	303	2.3
German-owned mfrs.	148	5	153	1.0	711	153	864	6.6
Other	505	94	599	3.9	30	48	78	0.6
Total	10,543	4,922	15,465	100	6,813	6,382	13,195	100

Source: Ward's, *Motor Vehicle Facts & Figures*, 1990 and 2009.

Notes: Light trucks include pickup trucks, vans, crossover vehicles and sports utility vehicles (SUVs).

a. Included in "Other."

While foreign automakers' U.S. facilities build an increasingly large share of the vehicles they sell, a large number of vehicles are also imported. In 1988, 24% of all cars and light trucks sold in the United States were imports: over 3.7 million vehicles out of a total of 15.5 million sold. By 2008, with a smaller market, 26% of vehicles were imported—that is, 3.4 million out of 13.2 million sold.

Sales patterns are also affected by economic trends. For example, during periods of high gasoline prices demand may shift from larger to smaller vehicles leading to an increase in U.S. imports of a small car, such as the Toyota Yaris, which is built in Europe and Japan, but not in the United States. Much stronger demand in Japan and Europe for small cars makes it easier to make cars in those locations and to fulfill demand in the United States and elsewhere through exports.

At the same time, Toyota also follows a strategy of building most of its luxury Lexus brand vehicles in Japan and exporting them to foreign markets. Mercedes-Benz, which is located in Vance, AL, has pursued a variation of this strategy. Instead of building SUVs in its home market, it assembles luxury SUVs at its plant in Vance. In addition to supplying the U.S. market, it also builds and exports \$1 billion a year in high-value SUVs and crossovers to 135 countries.

In 2008, cars and light trucks were imported into the United States from the following countries:

- 190,197 from North America (i.e., Mexico and Canada);
- 2,529,681 from Japan and Korea. The Asian manufacturers produced nearly 900,000 more cars in their U.S. plants than they imported. This highlights the importance of the U.S. market and their strategy of locating production as close to their customers as possible. The Asian automakers also import small compacts and larger luxury vehicles from Japan and Korea.
- 654,862 from Europe. German, French and British manufacturers exported three times as many cars to the United States as they produced in the United States.¹⁶⁰

Global Auto Markets: Prospects for the Detroit Three

Since 2008, two milestones have demonstrated the changing nature of international auto markets. First, Toyota surpassed GM as the largest automaker in the world, knocking down a title that GM held for 77 years.¹⁶¹ Then, as the U.S. car market fell into a deep recession, car sales in China continued to rise rapidly. China supplanted the United States for the first time as the world's largest car market in 2009.

U.S. automakers that produce vehicles in China—especially GM—were beneficiaries of this surge of car sales in China, a development that helped them financially as the U.S. market tumbled. In 2009, GM sold 1.8 million cars and light trucks in China, a 67% increase over 2008, and 25% of GM's worldwide sales. According to a *Washington Post* analysis:

GM, already among the most important auto manufacturers in China, said the market share of its Chinese ventures rose to 13.4 percent, up 1.3 percentage points from 2008. Leading the company's sales in China were Buicks, as well as inexpensive small vans and pickups. The

¹⁶⁰ Import data is from Ward's, *Automotive Yearbook*, 1990 and 2009, pages 212 and 251, respectively.

¹⁶¹ *Automotive News*, "And the winner is ... Toyota, probably," November 13, 2009.

rapid growth of auto sales in China have made it a rich prize for manufacturers, and GM's recent success puts it in good position to benefit from any continued rise. Already, the number of cars sold in China rivals the number sold in the United States, and the Chinese market is expected to continue to grow rapidly.¹⁶²

GM's fall from being the undisputed largest car company in the world to No. 2 status, and the rise of China and India as car-consuming nations illustrate the restructuring that is taking place in the global motor vehicle industry.

The apparent loss of competitiveness of the Detroit 3 in the United States over a period of years was accompanied by a quality revolution that American manufacturers were slow to respond to. As various segments of the industry were ceded to Japanese and European carmakers, Detroit worked hard to protect its lead in light trucks and SUVs. Ford, GM, and Chrysler began 2010 facing intense pressure from foreign car makers in the U.S. market, but both Ford and GM were in the midst of launching new products that they hope would once again put them back into competition for the passenger car segment. However, the Detroit 3's foreign competitors will not stand still while Ford, GM, and Chrysler attempt to regain competitiveness.

Equally important, both GM and Ford are intent on competing in the Chinese market, and both are building products in Asia that respond to local demand. The mature U.S. and Western European markets will be more difficult to contest than countries that have low per capita automobile ownership. In the United States, quality, productivity, and price will be the terrain on which the battle for the automotive market will occur. In China and other growth markets, international car companies are competing for a share of a rapidly expanding market that demands a full range of vehicles, but above all, small, fuel-efficient cars that are affordable. In addition, a number of Chinese car companies may emerge as competitors to U.S. and other carmakers in China. Their successful development may well depend on producing cars that can be sold in more highly developed countries.

Scrappage and other car purchasing programs were popular in most auto-making countries, with those in Germany and China producing the most robust results.¹⁶³ The following is a brief summary of developments in major overseas automobile markets that are affecting, and will continue to affect, U.S. automakers:

China. Unlike the industrialized western countries that have seen a major decline in auto sales since fall 2008, China is setting records. Chinese vehicle sales in 2009 rose 45% over 2008.¹⁶⁴ According to *Forbes*, the surge in "the lucrative Chinese auto market was helped by a spate of supportive government policies, such as tax rate cut to 5% from 10% for smaller passenger vehicles, a rural auto stimulus package, and a vehicle replacement subsidy."¹⁶⁵

¹⁶² *Washington Post*, "GM Sales in China Surge 67% in 2009," January 5, 2010.

¹⁶³ For a discussion of the U.S. scrappage program and a summary of similar programs in other countries, see CRS Report R40654, *Accelerated Vehicle Retirement for Fuel Economy: "Cash for Clunkers,"* by Brent D. Yacobucci and Bill Canis, March 3, 2010.

¹⁶⁴ *Newsmax.com*, "China Surpasses U.S. in 2009 Auto Sales," January 8, 2010. The rise in sales over the summer months was particularly notable. For example, Chinese car sales rose by over 70% in July 2009, according to *Bloomberg.com*, "China's July Car Sales Rise 70.5%, Most Since 2006," August 7, 2009.

¹⁶⁵ *Forbes.com*, "China Car Sales Boom at Home," September 9, 2009.

GM, as well as Ford, Chrysler, Toyota, VW, Honda, and Hyundai are all beneficiaries of the rising demand for cars in China. GM's sales in China now account for 25% of its worldwide sales, and that will most likely grow, as long as the China market expands. China is so important to the company's future that GM announced in the fall of 2009 that it was relocating its international operations headquarters from Detroit to Shanghai. Going forward, GM's Asia-Pacific, Latin America, Africa, and Middle East operations will be managed from China. Additionally, GM and its main partner in China, SAIC (Shanghai Automotive Industries Corp.), agreed in 2009 to launch a joint venture to sell cars in India, "a deal that involved GM giving up majority ownership in its biggest China joint venture. The two companies plan to collaborate in future efforts to sell vehicles in other emerging markets such as Southeast Asia."¹⁶⁶

Rising incomes in China have resulted in a growing middle class that aspires to own larger cars, such as Chinese-made Buicks. In 2008, the number of cars sold in China was 20 times greater than a decade before. To accommodate the influx of automobiles, the government is rapidly building new highways and has 30,000 miles of new roads planned for this decade.¹⁶⁷

Interestingly, small, fuel-efficient cars popular in Europe and Japan are less popular among the middle class in China. According to a Shanghai auto analyst, "both Chinese and American people like to buy big, luxurious cars. It's a symbol they dream of achieving. In China, where cars are less widespread, they are even more of a decoration, to display wealth."¹⁶⁸ Nevertheless, Chinese automakers are building smaller, low-cost cars for less affluent Chinese consumers. A number of Chinese companies hope to leap-frog the internal combustion engine era and go straight to hybrids and electric vehicles. The Chinese government, like governments elsewhere, is supporting this innovative drive to help reduce its oil import bill and improve the environment. The only new Chinese auto company that has achieved some degree of critical mass in alternative fuel vehicles is BYD—short for Build Your Dreams—which has developed a hybrid plug-in that can be charged at a regular electric outlet. Warren Buffet has taken a 9.9% stake in the company, which plans to begin exporting its cars to the United States by 2011.¹⁶⁹

Japan. Japan is the world's largest producer of motor vehicles¹⁷⁰ and the third-largest market for auto sales after China and the United States. As recently as 2004, the Japanese auto market accounted for 40% of all auto sales in Asia,¹⁷¹ reflecting its standing as the world's second-largest economy (after the United States). More than 4.5 million new light vehicles were sold in Japan in

¹⁶⁶ GM News, "GM Announces Leadership Changes," December 4, 2009; *Associated Press*, "Tim Lee New Head of GM's International Operations," December 7, 2009.

¹⁶⁷ *USA Today*, "China's Car Sales Boom, Reshaping a Way of Life," June 14, 2009.

¹⁶⁸ *Ibid.*

¹⁶⁹ *Detroit News*, "Car Industry Shakeup Opens Door to China Upstarts," April 17, 2009. Buffet has already realized a \$1 billion profit from his investment in BYD. He was reportedly attracted to the company because of its battery technology, according to *Bloomberg.com*, "Buffet Posts \$1 Billion Profit on China Hybrid Carmaker BYD," July 31, 2009.

¹⁷⁰ In 2008, Japan produced 11.5 million cars and trucks; China 9.5 million and the United States, 8.6 million. Sources: Japan Auto Manufacturers Association; Ward's, *Automotive Yearbook*, 2001-2009 and Ward's, *Motor Vehicle Facts & Figures*, 2009.

¹⁷¹ It still accounts for 30% of all vehicles sold in Asia and is forecast to drop to 20% by 2012, as auto sales boom in China and other Asian countries. *Economist Intelligence Unit*, "Asia and Australasia Automotive Outlook," viewed September 24, 2009.

2009, a decline from the peak year of 2004 when nearly 4.8 million cars were sold.¹⁷² The best-selling brands, which are all Japanese, are shown in **Table 8**.

**Table 8. New Cars Registered in Japan:
Top Five Brands in 2009**

Cars, in thousands

Automaker	Number of New Cars Registered
Toyota	1,995
Honda	626
Nissan	599
Suzuki	617
Mazda	204

Source: *Automotive News*, “Japan Vehicle Sales, 4th quarter and YTD,” February 12, 2010.

Japan’s auto market has extremely low levels of import penetration. In the past, the yen, which many economists considered to be both managed and undervalued, benefited Japanese automakers because exports were more competitive and imports more expensive. Of the 4.5 million cars sold in 2009, only 178,500 were imports. **Table 9** shows the largest volume of registered foreign-made vehicles were European models. Sales of Detroit 3 cars in Japan totaled about 9000 vehicles in 2009.¹⁷³ Sales of vehicles from other nations were limited as well.

To boost sales, Japan enacted an “EcoCars” auto scrappage “cash-for-clunkers”-type program in 2009 that runs until September 2010.¹⁷⁴ Initially, U.S.-made and some European-made vehicles were not eligible under Japan’s scrappage program because of auto import regulations. When the government said it would extend the program by six months (from March to September 2010), U.S. automakers and the U.S. Trade Representative’s office protested the exclusion of U.S.-made vehicles. In response, the Japanese government agreed to make eight U.S. models and several European models eligible, including the Cadillac CTS, Dodge Grand Voyager, Hummer H3, and Ford Escape. Under the new rules, the Japanese government will accept the U.S. EPA’s city mileage fuel economy rating as a basis for U.S. vehicle participation.¹⁷⁵

Japanese automakers are aggressively pursuing alternatives to the traditional internal combustion engine. Toyota sold nearly 209,000 Prius hybrids in 2009, three times the number sold in 2008, making it the best-selling car in Japan.¹⁷⁶ Honda’s sales of its new Insight hybrid have exceeded

¹⁷² *Automotive News*, “Japan Vehicle Sales, 4th quarter and YTD,” February 12, 2010.

¹⁷³ Japan also imports U.S.-made light vehicles from BMW, Mercedes, and other automakers besides the Detroit 3, but that data has not been released for 2009. In 2008, about 14,000 U.S.-origin vehicles were sold in Japan, including Detroit 3 and others. Source for 2008 imports: *Reuters*, “Japan Alters Car Scrappage Scheme to Include U.S.,” January 19, 2010.

¹⁷⁴ The scrappage program, known officially as the EcoCars Program, was began in April 2009 and was originally set to run until March 2010. Year-over-year sales of all cars and light trucks in Japan were flat during the first 11 months of the EcoCars Program, but sales began to increase in January and February 2010. Of all sales during this time, 53% were cars eligible for the EcoCars Program. It is not known how many of these sales were spurred by EcoCars or would have been made anyway, according to the Next Generation Vehicle Promotion Center in Japan.

¹⁷⁵ *World Trade Online*, “Only Eight U.S. Autos Eligible for Japan’s Cash-for-Clunkers Program,” February 3, 2010.

¹⁷⁶ *The Detroit News*, “Toyota’s Prius Top-Selling Car in Japan Last Year,” January 9, 2010.

expectations, and it was the fifth-most popular car sold in Japan in 2009. Other popular cars were the small, fuel-efficient Honda Fit and Toyota Vitz (available in other markets as the Toyota Yaris).¹⁷⁷ Nissan has recently announced a zero-emissions electric vehicle, the Leaf, which it will begin marketing in Japan and the United States in 2010.

Table 9. Top Foreign Brands Sold In Japan, 2009

Cars, in thousands

Automaker	Number of New Cars Registered
Volkswagen	54
Daimler	29
BMW	40
Volvo ^a	6
PSA ^b	6
Detroit 3, U.S. Origin Sales	
Ford	3
Chrysler	3
General Motors ^c	3

Source: *Automotive News*, "Japan Vehicle Sales, 4th quarter and YTD," February 12, 2010.

- a. Ford is selling Volvo to Chinese carmaker Geely.
- b. PSA makes Peugeot and Citroen vehicles.
- c. GM also sold 7,400 cars built at Suzuki's Kosai, Japan plant and badged as Chevrolets.

For much of 2009, the new Japanese government seemed to take a different approach to the yen than previous governments, abandoning currency interventions that, in the past, prevented import competition and increased the competitiveness of Japanese exports. In early March 2010, the yen had strengthened against the dollar by 18% since August 15, 2008.¹⁷⁸ According to the *Wall Street Journal*, "the new leadership and the Bank of Japan have made comments suggesting a strong yen, which makes imports cheaper, would help spark a rebound in consumer spending missing in Japan since the 1980s."¹⁷⁹ However, by March 2010, the government of Prime Minister Yukio Hatoyama was reportedly attempting to halt further strengthening of the yen: "Japan's stubbornly strong currency is becoming a source of frustration for the country's new administration.... Prime Minister Yukio Hatoyama tried to weaken the yen Friday through the unusual step of talking down the Japanese economy in front of parliament. He called for international help to contain the yen's advance."¹⁸⁰ A strengthening yen has a direct impact on the Japanese auto export sector: "The strong yen is troubling for Japan's auto and electronics sectors, which rely heavily on

¹⁷⁷ *USA Today*, "Prius #1 in Japan Sales as Green Interest Grows," January 8, 2010.

¹⁷⁸ On August 15, 2008, the Japanese yen/U.S. dollar exchange rate was 110 yen to the dollar; on March 5, 2010, it was 90 yen to the dollar.

¹⁷⁹ *Wall Street Journal*, "Stronger Yen Policy Gets Put to the Test," September 28, 2009.

¹⁸⁰ *Wall Street Journal*, "Japan Frustrated by Firm Yen," March 15, 2010.

exports. Toyota Motor Corp., for example, sees annual operating profit cut by ¥35 billion, or \$390 million, for every one-yen appreciation against the dollar.”¹⁸¹

Korea. Korea has emerged as a significant global automaker in the past decade, with two large international players: the Hyundai-Kia Automotive Group and GM Daewoo Automotive and Technology Company (GM Daewoo or GM DAT), a subsidiary of General Motors Company. The Korean companies have generally specialized in small, less expensive vehicles that benefitted in 2008 and 2009 from consumers’ concerns about rising fuel prices. The nosedive in much of the global auto market and credit tightening negatively affected Korean manufacturers because much of their output is exported. Production dropped by 8.2% to 3.5 million units in 2009, as exports were adversely affected by the recession in other industrial markets.¹⁸² However, IHS Global Insight forecasts a 9.5% increase in 2010, with Korean vehicle exports rebounding.¹⁸³

In its efforts to produce world-class vehicles, Hyundai has a large number of new models in the pipeline. Over the next four model years, it will replace 27% of its fleet with seven new models; the auto industry average for replacements is 18%. Analysts say that ambitious fleet replacement often indicates that an automaker may pick up additional market share, and they forecast that Hyundai/Kia may benefit with this strategy.¹⁸⁴ It is complementing its traditional small cars, like the Elantra, with a fleet of mid-size cars and SUVs, as well as a new luxury car, the Genesis, which won the 2009 North American Car of the Year award at the North American International Automobile Show in Detroit.¹⁸⁵ Hyundai has also introduced a redesigned Tucson and Sonata. Hyundai is positioning itself to be competitive in Europe and the United States with Honda and Toyota. Hyundai is now the fourth-largest automaker, behind Toyota, Volkswagen, and GM. A U.S. analyst noted: “They [Hyundai] have a tremendous amount of momentum right now, and I don’t see that stopping,” said Erich Merkle, an analyst who founded the website Autoconomy.com (<http://www.autoconomy.com>) in Grand Rapids, MI. “Hyundai is a competitive threat not just to the Big Three but for the first time to the Japanese automakers as well.”¹⁸⁶

GM purchased a controlling interest in Daewoo in 2002 after Daewoo ran into financial difficulties. GM increased its ownership position to 50.9% in 2008 and, in October 2009, paid \$417 million from unrestricted cash to increase its ownership stake to 70.1%. GM has succeeded in building a subsidiary that markets cars internationally under the Chevy name, including the Aveo, which is sold in the United States. GM Daewoo auto sales account for about 7% of all cars sold in Korea.

India. The Indian subcontinent is entering a new, more robust investment stage for auto manufacturing. According to one recent news report

India’s exports of automobiles have surged as global automakers turn the country into a production hub for compact cars. A host of companies such as Suzuki, Ford, and Toyota plan to spend millions of dollars in the coming years to build auto plants in India.... When exports

¹⁸¹ *Wall Street Journal*, “Stronger Yen Policy Gets Put to the Test,” September 28, 2009.

¹⁸² IHS Global Insight. *Automotive Forecast Flash Report: Production*. March 15, 2010.

¹⁸³ *Ibid.*

¹⁸⁴ Bank of American/Merrill Lynch Research, *Car Wars 2010-2013*, July 15, 2009, p.34.

¹⁸⁵ In 2010, Ford won both the Car of the Year (Ford Fusion Hybrid) and Truck of the Year (Ford Transit Connect) awards.

¹⁸⁶ *New York Times*, “With Low Prices, Hyundai Builds Market Share,” September 21, 2009.

of automobiles crossed a quarter of a million in the first seven months of the year [2009], India's auto industry had two reasons to cheer. Although India exported fewer cars compared to other Asian countries such as Thailand and South Korea, it saw a rise in exports, whereas these countries witnessed a drop. Also, for the first time, India exported more cars than China. All the cars exported from India were compact cars produced by global automakers such as Suzuki and Hyundai. The surge in exports comes as India turns into a production hub for cheap, fuel efficient cars.¹⁸⁷

Ford Motor Company has announced that it will build a new model, the Figo, in India for the Indian, Asia-Pacific, and African market.¹⁸⁸ While Ford has been building cars there since 1995, this will be its first small car. The company announced in September 2009 that it would invest \$500 million to double its production capacity to 200,000 units a year. Indian automaker Tata is a highly diversified Indian conglomerate with global dimensions. Tata owns two UK-based luxury carmakers, Jaguar and Land Rover, which it purchased from Ford Motor Company. Tata Motors launched the Nano in India in 2009; at \$2,500 it is the world's cheapest car. The Nano has already passed European safety crash testing and is set to go on sale in Nigeria in 2010, in Europe for about \$8,000 in 2011, and in the United States in 2012.¹⁸⁹ Reva Electric Car Company is an entrepreneurial venture between Maini Group of India and AEV LLC of California, which are backed by U.S. investors, including General Motors. Reva is selling a small electric car in 22 countries worldwide for about \$6,000.¹⁹⁰

Europe. Europe is a major, mature auto manufacturing market, with 15 automakers operating more than 250 plants for such brands as BMW, Daimler, Fiat, VW, the Renault-Nissan Alliance, and Peugeot, as well as the European plants of Ford, GM, Toyota, and Hyundai-Kia. The sector is a major European manufacturer, with production of 15 million light vehicles in 2009, a 21% decline from the 19 million light vehicles produced in 2007 (one-third of then global passenger car production).¹⁹¹

According to some observers, European plants face significant overcapacity problems that could lead to a glut of autos now that scrappage programs have expired. Fiat (and Chrysler) CEO Sergio Marchionne said in fall 2009 at the Frankfurt Motor Show that Europe is not dealing with overcapacity: "In Europe, as a result of this crisis, there's not a single plant that has shut down. Fiat is doing what it needs to do to rationalize its infrastructure, but there's no concerted movement at the European level to do it right for once."¹⁹²

The United States absorbs more than 40% of European auto exports and is by far the largest export destination for European cars. Registrations of new vehicles within Europe stood at 15.9

¹⁸⁷ *VOANews.com*, "India Becoming Production Hub for Compact Cars," September 25, 2009.

¹⁸⁸ *Wall Street Journal*, "Ford Targets India Market with First Small Car," September 23, 2009.

¹⁸⁹ *BusinessWeek Insight*, "Tata Nano: Not Just a Car but Also a Platform: The low-cost 'People's Car,' an impressive engineering feat, creates a chance for India's Tata Motors to launch new products in new markets," January 29, 2010, http://www.businessweek.com/globalbiz/content/jan2010/gb20100129_489420.htm.

¹⁹⁰ *Financial Times*, "Fueled by a Dream of Free Energy," July 14, 2009. According to a September 24, 2009, press release from GM and Reva, "General Motors India and REVA Form Partnership to Transform Electric Vehicle Market," the collaborative agreement will assist Reva in building an electric car platform for the Indian market.

¹⁹¹ European auto data are from the Association des Constructeurs Européens d'Automobiles/European Automobile Manufacturers' Association (ACEA), *The Automobile Industry Pocket Guide 2008*. <http://www.acea.be>, viewed March 21, 2010.

¹⁹² *Bloomberg.com*, "Marchionne Says Europe Hasn't Solved Overcapacity," September 16, 2009.

million units in 2007, with nearly 60% being small- or small mid-sized cars. Over 30% of European vehicles are diesel-powered.

As elsewhere, the global recession has adversely affected European auto sales, as well as previously discussed production. While passenger car sales fell steeply in the last half of 2008 and first months of 2009, “cash-for-clunkers”-type scrappage programs halted the slide in most European countries and resulted in 14.5 million new car registrations, nearly the same as 2008, but 9.5% lower than 2007. As in the United States, strong sales in December 2009 boosted the numbers for the year.¹⁹³ Not all EU countries saw the same auto market pattern. While registrations were up in Germany, France, and a few other European countries, they fell by 22% and 32% in the UK and Spain, respectively, and by 50% in Hungary. In countries that did register a rise in sales, domestic scrappage programs are credited for the turnaround.¹⁹⁴

Looking forward, European automakers forecast a flat market in 2010, with foreign markets, such as China and India, offsetting much lower demand in Europe. German demand, in particular, may see a market decline of from 2.6 million to 2.9 million cars in 2010, down from 3.8 million vehicles sold in 2009.¹⁹⁵ The European share of the U.S. market is forecast to remain about the same over the next four years, with continued emphasis on luxury models, which make up over 40% of their new model mix.¹⁹⁶

The Toyota Standard

U.S. automakers have sought to improve their operations and strategies to match those of Toyota.¹⁹⁷ There are at least three dimensions of Toyota’s business plan that U.S.-based companies have said they seek to emulate: the Toyota Production System for manufacturing high-quality vehicles, manageable legacy costs, and its dealer network.

Toyota Production System (TPS). Although Toyota has recently encountered serious quality and safety issues that have tarnished its reputation across the entire range of its U.S.-marketed products, the vaunted TPS remains the standard that most other automakers strive to emulate. While the precise reasons for Toyota’s failure to meet its own standards in some instances are not yet fully known, Toyota’s extremely rapid growth and its determination to replace GM as the world’s largest car company may have played a role in its failure to respond in a timely manner to important safety problems. For most auto assemblers, Toyota’s stumble will almost certainly provide insights into how a company can stray from a production system that appeared to be self-correcting, with teamwork, learning, constant incremental improvement, and lean manufacturing at the heart of that system. Nevertheless, few auto manufacturers will assume that Toyota will not

¹⁹³ ACEA press release, “Passenger Cars: 2009 Registrations Down 1.6% Compared to 2008,” January 15, 2010.

¹⁹⁴ In Germany, half of the 800,000 cars sold there between January and July 2009 were attributed to the scrappage program. *Financial Times*, “VW Braced for ‘Zero Growth’ in Car Market,” July 31, 2009.

¹⁹⁵ Motor Trade Insider, “German New Car Registration Down 4.2% in January,” February 2, 2010.

¹⁹⁶ Bank of American/Merrill Lynch Research, *Car Wars 2010-2013*, July 15, 2009, p.32.

¹⁹⁷ For 77 years, General Motors was the world’s largest automaker; Toyota passed GM in 2008 when GM worldwide sales fell 11% to 8.35 million vehicles while Toyota’s fell by 4% to 8.97 million. Prior to 1931, Ford Motor Co. held the title. Source: *Bloomberg.com*, “Toyota Surpasses GM As Biggest Automaker Amid Slump,” January 21, 2009.

learn from its mistakes. It is likely that Toyota will double down on the TPS and incorporate the painful lessons that it is now learning.¹⁹⁸

TPS is frequently assumed to be an outgrowth of Toyota executives' observations of U.S. auto manufacturing, particularly Ford's Rouge plant in Dearborn, MI, after World War II. Some observers see it as a refinement of the manufacturing philosophy that Henry Ford used to guide his operations in the early 20th century:

It was the United States that saved Toyota in the 1950s and provided the stepping-stone to its future. Eiji Toyoda, who had joined his uncle's business after graduating from school in the 1930s, set off for Dearborn, Michigan, to visit Ford's sprawling operations. The company, which was producing just 40 trucks a day, decided to establish ties with an American company. There had always been symbiotic, if unofficial, relationships between Toyota and Ford. Kiichiro Toyoda was a deep admirer of Henry Ford's business practices and a great fan of Ford's book *My Life and Work*, which he made required reading for his staff.... Shortly after Eiji Toyoda returned to Japan, one of the greatest figures in Toyota's history, Taiichi Ohno, who would become as famous as its founder, came forward to implement ideas that he, too, had learned in Dearborn. His concepts proved to be far more of a breakthrough for Toyota, and far more influential to the company's future.¹⁹⁹

TPS harnesses lean manufacturing, continuous improvement, and just-in-time delivery with a high-level of employee participation, and "it's what makes Toyota cars and the company itself so sound. TPS isn't just the way Toyota cars are built; it's the foundation that the company is built upon. TPS is the reason that Toyota can bring out cars and trucks that fit together and run perfectly."²⁰⁰

While TPS may appear to be a straightforward set of operational and management practices, other automakers have had difficulty implementing it. In 1982, General Motors and Toyota agreed to jointly operate an assembly plant that GM had closed in Fremont, CA, largely because of a combative workforce and low productivity.²⁰¹ It was Toyota's first plant in the United States, where it hoped to learn more about the U.S. market. For its part, GM²⁰² hoped to learn something about making the smaller cars Toyota was good at producing and "learn some of the secrets that had made Toyota such a strong manufacturer."²⁰³ While GM did learn from the joint venture, a recent analysis concluded that it wasn't enough to transform GM's workplace or corporate culture:

¹⁹⁸ For an interesting discussion of Toyota's current problems, see Paul Ingrassia, "Toyota: Too Big, Too Fast," *Wall Street Journal*, January 28, 2010.

¹⁹⁹ Maynard, Micheline, *The End of Detroit: How the Big Three Lost Their Grip on the American Car Market*, New York: Doubleday, 2003. p. 64.

²⁰⁰ *Ibid*, p. 67.

²⁰¹ This joint venture, New United Motor Manufacturing, Inc., or NUMMI, opened in 1984 and made a number of successful small cars and trucks under both the Toyota and GM badges.

²⁰² WardsAuto.com, "Toyota's Decision to Abandon NUMMI Closes Book on 25-Year Experiment, August 28, 2009.

²⁰³ Maynard, Micheline, "The End of Detroit: How the Big Three Lost Their Grip on the American Car Market," New York: Doubleday, 2003. p. 82. The NUMMI joint venture grew to employ over 5,000 employees and ended only when GM entered bankruptcy. When new GM was formed, it left NUMMI assets in bankruptcy with other old GM assets. Toyota announced in summer 2009 that it would not continue operating the facility only to make Toyota-branded vehicles.

GM also faced an uphill battle in incorporating what it did learn from Toyota. Yes, GM saw that Toyota organized the factory floor and relations with suppliers differently. But transferring this to GM's legacy plants in Detroit proved difficult. The new Saturn line was launched to try to capture this learning, but even a new nameplate could not change old corporate habits.²⁰⁴

According to a 1997 article in the *Harvard Business Review* by Michael Maccoby, "A profound transformation in automobile production has resulted in better quality and lower costs. The new system that has delivered these results, *lean production*, has become the competitive standard for companies worldwide."²⁰⁵ Maccoby notes that two GM plants, NUMMI and Saturn (in Spring Hill, TN), were successful examples of lean production.

Saturn, though successful, did not achieve NUMMI's results, because lean production was not fully implemented. Moreover, "both corporate GM management and the union's national leadership distrust[ed] Saturn's autonomy."²⁰⁶ After Saturn was folded into GM in 2004, Saturn-only assembly continued in the plant until 2007, when the plant was idled to be retooled to produce the 2009 Chevrolet Traverse. The Spring Hill, TN, plant was idled in November 2009 when Traverse production was transferred to Lansing, MI. The plant continues to produce some engines and components, and GM could potentially reopen the plant should demand warrant. The Saturn brand, which could not be sold, remained with old GM and will be discontinued.

Legacy Costs. The Detroit 3 negotiated contracts with their unions over time that left them with hourly wages and benefit costs much higher than the Asian and European auto manufacturers' U.S. operations. In addition, GM, Ford and Chrysler have much larger retiree populations,²⁰⁷ with pension and health care programs more generous than those offered by Toyota and other foreign-owned carmakers. Collectively, these costs have put the U.S. automakers at a competitive disadvantage, and they have sought in recent years to rebalance these costs so they are more in line with Toyota's and Honda's. David Cole, chairman of the Center for Automotive Research (CAR), has said, "when the international car companies came to the U.S., the move stuck the domestics with a very large disadvantage related to legacy costs. And that's \$2,000 a car."²⁰⁸

It has been estimated by various economists that GM's hourly compensation—wages plus benefits, such as health care, retirement, and tuition reimbursement—totaled \$61 in 2009,²⁰⁹ compared with Toyota's \$48.²¹⁰ According to news reports in spring 2009, reaching closer parity with Toyota and the other Japanese carmakers was "a stipulation required for General Motors

²⁰⁴ HarvardBusiness.org, "NUMMI: What Toyota Learned and GM Didn't," article by Ben Gomes-Casseres, professor at Brandeis International Business School, September 1, 2009.

²⁰⁵ Maccoby, Michael, "Is There a Best Way to Build a Car?," *Harvard Business Review*, November-December 1997, pp. 161-170.

²⁰⁶ Ibid.

²⁰⁷ GM alone has nearly 493,000 retirees. By comparison, the restructured General Motors Company that emerged from bankruptcy had 48,000 hourly workers at the end of September 2009, a decrease of 23.3% from the December 31, 2008 total of 63,000 hourly workers. *BusinessWeek*. "GM Retirees Face an Uncertain Future: Nearly half a million retired autoworkers and surviving spouses worry about the future of their pensions and health benefits," June 4, 2009; General Motors Company, 8-K Filing, November 16, 2009. p. 91.

²⁰⁸ Quoted in *Popular Mechanics*, "GM in Crisis—5 Reasons Why America's Largest Car Company Teeters on the Edge," November 18, 2008.

²⁰⁹ Estimate by the Center for Automotive Research, December 15, 2009.

²¹⁰ Deutsche Bank report cited by Robert Samuelson in his column, "How to Bail Out General Motors," November 15, 2008.

Corp. and Chrysler LLC to receive further aid and a milestone of cost-reduction... [the companies] must demonstrate parity with the labor costs of at least one Japanese automaker's U.S. operations to keep \$17.4 billion in U.S. aid and convince the Treasury to release as much as \$21.6 billion more."²¹¹

The Detroit 3's 2007 contracts with the UAW and the contract amendments agreed to in 2009 with GM and Chrysler move toward that goal, according to news reports.²¹² These contracts will reportedly cut hourly labor costs to the levels of Toyota and other foreign rivals' U.S. plants when the Detroit 3 begin hiring new workers, who will receive about \$33 an hour.²¹³

Marketing and Dealer Structure. In 2009, auto executives testified on Capitol Hill about another area in which they seek to emulate Toyota and Honda: selling more cars through fewer dealers. See the earlier discussion in this report on the dealer network ("Controversy over the Size of Dealer Networks").

Worldwide Overcapacity: Will It Affect the U.S. Vehicle Market?

The U.S. auto manufacturing capacity utilization rate has been at low levels since fall 2008. In March and April 2009, U.S. auto industry capacity utilization was around 41.5%. By February 2010, the rate had risen to 52.8%. By contrast, during the previous recession in 2001-2002, auto industry capacity fell to 69%. During the more prosperous mid-1990s, it stood at 89%.²¹⁴ While the capacity utilization rate should continue to rise when economic recovery begins in earnest, there nevertheless appears to be a significant overhang in auto production domestically and internationally. Overcapacity is an important issue to the auto sector, because excess supply drives down prices and reduces profits, investment, R&D, and competitiveness.

As the global economy emerges from recession, capacity in auto making appears to be growing as new plants are built in Tennessee and Mississippi, older ones are upgraded to build new vehicles, and many others in China and India are built to serve those markets and to export. The United States affords an opportunity to both Japanese and European carmakers to build cars less expensively in the United States than in either Europe or Japan.

No auto plants have been shuttered in Europe during this downturn. While the recession has seen many changes in the U.S. industry, the same cannot be said for other industrial countries. In a recent *Economist* article, it was noted that

last December, the boss of Fiat, Sergio Marchionne, predicted that the economic crisis would finally force the world's car industry to confront profit-destroying overcapacity and change its broken business model... But his predictions look increasingly like wishful thinking... Across the world governments have lavished their ailing car firms with subsidies. Although General Motors ... has shed some brands and factories in America, so far not a single

²¹¹ *Bloomberg.com*, "U.S. Automakers on Path Toward Labor-Cost Parity with Toyota," March 18, 2009.

²¹² Ford negotiated a similar contract in the fall of 2009 but it was rejected at the end of October 2009 by 70% of the U.S. UAW membership (the Canadian UAW members approved it). *Reliable Plant Magazine*, RP News Wires, "UAW Members Voted Down Ford Contract Modifications," November 2, 2009.

²¹³ Estimate by the Center for Automotive Research, December 15, 2009.

²¹⁴ Federal Reserve System, Statistical Release G.17, "Industrial Production and Capacity Utilization," Table 7, August 14, 2009, and March 15, 2010.

carmaker of any size has disappeared.... The remarkable thing is that not a single car factory in Europe has closed in the past 12 months.²¹⁵

Figure 4. Capacity Utilization in the U.S. Motor Vehicle Sector, 1972-2009

Seasonally Adjusted



Source: Federal Reserve Bank of Chicago and Haver Analytics.

The *Economist* has projected that U.S. overcapacity will fall from 6 million to 3.4 million vehicles in 2010,²¹⁶ while Europe will still have an overcapacity of 7 million vehicles (compared to an overcapacity of 10.4 million in 2009). The clunkers scrappage programs were successful in Europe in 2009, but European automakers' capacity to build 20 million vehicles a year overwhelmed sales of only 14 million units in 2009. Projections are that European sales will not reach 15 million units again until 2012 at the earliest.²¹⁷ How the Europeans deal with this large mismatch between supply and demand will likely have serious implications for the U.S. auto market.

There is similar overcapacity in developing markets like China, where a senior development official recently warned that the rapid escalation in auto production there was a "symptom of overcapacity" that will lead to "production capacity that will be idle in coming years." In addition to Chinese investments in auto plants, VW will expand its production in China by 650,000 units; GM has formed a new joint venture to increase production of light trucks by 200,000, and Fiat has a similar joint venture that will have an initial run of 140,000 vehicles.

²¹⁵ *Economist.com*, "Trouble Down the Road," September 17, 2009.

²¹⁶ It has been estimated that by 2015, U.S. vehicle production capacity will have been reduced by 25%, or 2.9 million units. Center for Automotive Research, "Picking Up the Pieces: The Year Ahead," December 15, 2009.

²¹⁷ European capacity data is sourced from *Bloomberg.com*, "Marchionne Says Europe Hasn't Solved Overcapacity," September 16, 2009, and *Wall Street Journal*, "Europe's Auto Sector Chokes on Capacity," February 2, 2010.

As previously discussed, auto sales and production have been strong in China in 2009 and the first months of 2010. Capacity utilization in China in 2009 ran at 80%. According to projections of China's National Development and Reform Commission (NDRC), approximately 70% of domestic auto capacity will be in use by 2013 unless the government takes steps to further curb its growth.²¹⁸

Observers say that it is unlikely that demand for autos will rise fast enough to absorb the additional production coming on line, so there will be intense pressure on prices as automakers around the world are left with unused capacity.²¹⁹ For U.S. as well as foreign automakers, who make their highest profits on larger vehicles, the shift to smaller cars will be a parallel concern as they build more capacity for smaller cars. If smaller cars continue to yield lower profits, the global overcapacity of vehicles will place intense pressure on those carmakers in the weakest financial condition. Dealing with a worldwide overcapacity of as much as 20 million vehicles²²⁰ will be one of the challenges U.S. automakers face as they emerge from recession.

New Environmental Standards: Will They Remake the Auto Industry?²²¹

Fuel Economy and Greenhouse Gas Standards: Opportunities and Challenges

In the Energy Independence and Security Act of 2007 (EISA, P.L. 110-140), Congress mandated a significant increase in corporate average fuel economy ("CAFE") standards. EISA established a CAFE target of 35 miles per gallon (mpg) by model year (MY) 2020 for the combined passenger automobile and light truck fleet, as opposed to MY2008 standards of 27.5 mpg for cars and a lower standard, 22.5 mpg, for light trucks. The law further requires "maximum feasible" increases from 2021 through 2030.²²²

On September 28, 2009, the National Highway Traffic and Safety Administration (NHTSA) proposed a joint rulemaking with the Environmental Protection Agency (EPA) to establish combined standards for fuel economy and vehicle greenhouse gas (GHG) emissions.²²³ The proposal was the result of negotiations between the federal agencies, automakers, and the state of California, which has established state vehicle GHG standards. The proposal, if finalized, would effectively mandate California's standards nationwide, as well as begin implementation of EISA's

²¹⁸ Quotes and all data about China are taken from an article in *China Daily*, "Top Planner Warns of Overcapacity," September 23, 2009.

²¹⁹ *FinancierWorldwide.com*, "Expectations for the Automotive Industry to 2014," March 2010.

²²⁰ *WardsAuto.com*, "Europe, Japan Must Restructure, Too," September 22, 2009.

²²¹ This section is authored by Brent Yacobucci, CRS Specialist in Energy and Environmental Policy.

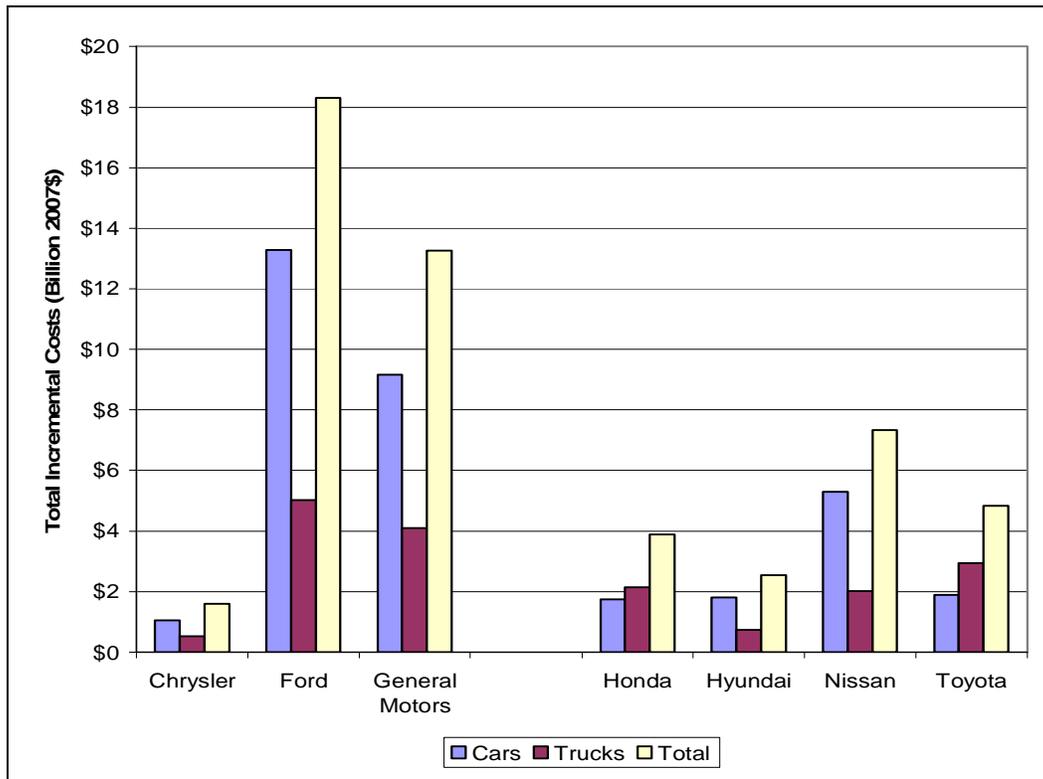
²²² P.L. 110-140 §102(b)(2)(A-B). CRS Report R40166, *Automobile and Light Truck Fuel Economy: The CAFE Standards*, by Brent D. Yacobucci and Robert Bamberger.

²²³ Environmental Protection Agency, National Highway Traffic Safety Administration, "Proposed Rulemaking To Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Proposed Rule," 74 *Federal Register* 49453-49789, September 28, 2009.

mandated CAFE increase. The proposed standards would require that CAFE increase to an estimated 34.1 mpg for MY2016.

New CAFE standards through MY2016 will shift the burden from a “straight-line” average—where all automakers must meet the same numerical average—to a size-based standard—where each automaker will have a different fuel economy target, and those automakers that produce smaller vehicles will face a higher target. In NHTSA’s Preliminary Regulatory Impact Analysis (PRIA) for the proposed rule, the agency found that *total costs* for cars and light trucks for Ford and General Motors were significantly higher than for the major Japanese and Korean automakers (Honda, Nissan, Toyota, and Hyundai). (See **Figure 5.**) That said, in some cases, NHTSA found that under the proposed rule, Detroit 3 automakers faced lower *per-vehicle costs*. For example, NHTSA estimated that General Motors would face lower per-vehicle costs for its passenger cars than Nissan (**Figure 6**). Likewise, Chrysler and Ford may face lower per-vehicle costs for their light trucks than Hyundai.²²⁴

Figure 5. Estimated Cumulative Incremental Cost Through MY2016 for Selected Manufacturers Under the Proposed Rule



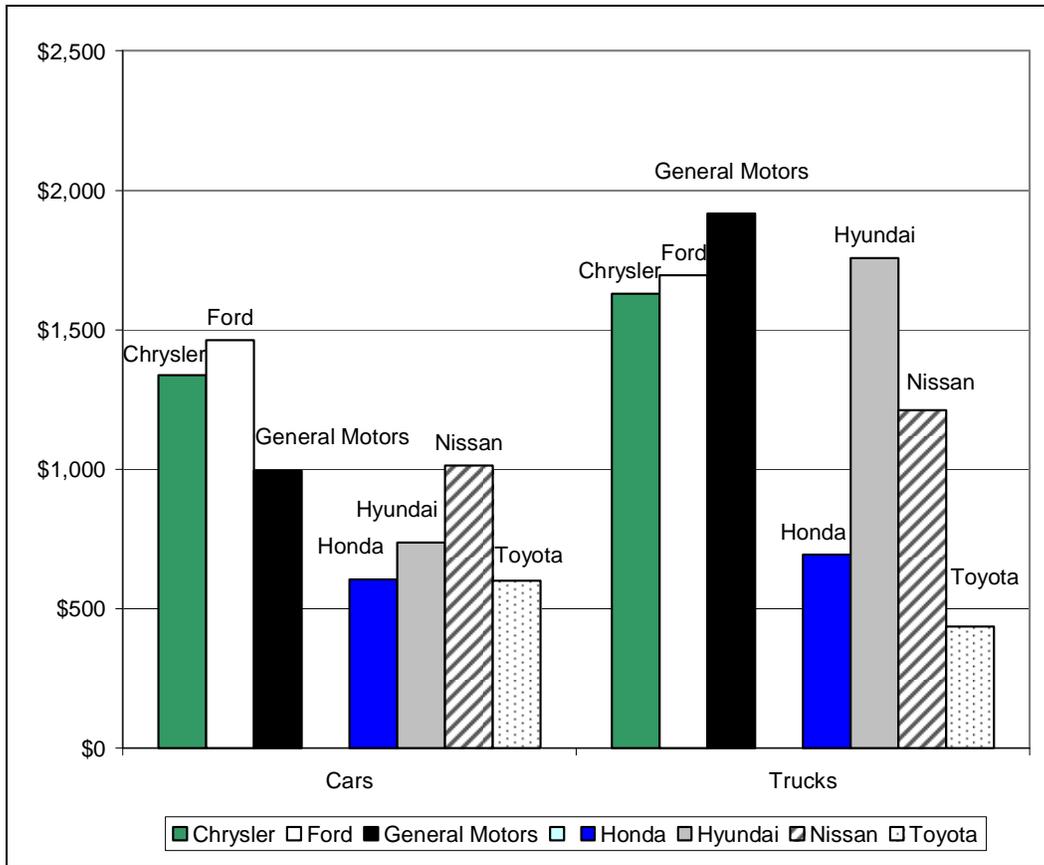
Source: CRS analysis of National Highway Traffic Safety Administration, Preliminary Regulatory Impact Analysis: Corporate Average Fuel Economy for MY2012-MY2016 Passenger Cars and Light Trucks, August, 2009. Tables VII-2b and VII-3b.

²²⁴ The footprint-based standards mean that an automaker’s *absolute* level of fuel economy is less relevant than its fuel economy relative to other vehicles of the *same size*. The difference in per-vehicle costs implies that some manufacturers have more fuel efficient vehicles than other manufacturers of the same size vehicle. Thus, the question becomes not whether a Honda Civic has higher or lower fuel economy than a Lincoln Town Car, but whether that Civic has higher or lower fuel economy than a Ford Focus.

The differences in total incremental cost are driven by both the differences in the relative fuel economy of similarly sized models among automakers, as well as the relative size of their market share. For example, even though General Motors could face lower per-vehicle costs in the passenger car market than Chrysler or Nissan, its significantly larger market share leads to considerably higher total costs.²²⁵ How each automaker can limit per-vehicle costs—and thus overall costs—will affect its competitiveness going forward.

Figure 6. Estimated Per-Vehicle Incremental Costs Through MY2016 for Selected Manufacturers Under the Proposed Rule

2007 Dollars per Vehicle



Source: CRS analysis of Environmental Protection Agency, National Highway Traffic Safety Administration, “Proposed Rulemaking To Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Proposed Rule,” 74 *Federal Register* 49453-49789, September 28, 2009. Table III.D.6-4.

Notes: These numbers include the combined incremental costs of meeting the MY2011 CAFE standards and the MY2016 CAFE/GHG standards.

²²⁵ It should be noted that while per-vehicle manufacturing costs are expected to increase, NHTSA is required by law to balance the overall societal costs and benefits of CAFE standards. Thus, for consumers, the average increase in vehicle costs should be outweighed by lifetime fuel savings from the increased standards.

Cap-and-Trade Legislation: Net Cost or Net Benefit to Automakers?

In addition to new fuel economy standards under NHTSA and federal vehicle greenhouse gas emission standards under EPA, Congress is also currently considering broad legislation to control greenhouse gas emissions from most sectors of the economy. The two bills that have seen the most congressional action, the American Clean Energy and Security Act of 2009 (H.R. 2454) and the Clean Energy Jobs and American Power Act (S. 1733), would establish cap-and-trade systems to reduce greenhouse emissions, requiring an 83% reduction in emissions from 2005 levels by 2050.²²⁶ Both bills would establish a system whereby covered entities would need to submit “allowances” (i.e., permits) to cover their annual emissions of carbon dioxide, methane, nitrous oxide, and other greenhouse gases. The “cap” would be the annual limit on the number of permits established under the system and distributed by the government. Those allowances would be allocated in three ways: 1) directly given to covered entities to help them transition to the new system; 2) directly given to non-covered entities (e.g., states, energy local distribution companies) who would sell them and use the revenue for various public policy purposes (e.g., energy efficiency, relief on expected increases in consumer’s utility bills); and 3) auctioned by the federal government with the proceeds used for various purposes (e.g., deficit reduction, consumer rebates, R&D).

The auto industry would likely be affected in three ways by the bills as written. First, some domestic auto plants would have enough emissions to qualify as covered entities under the bills. Those plants would need to monitor and report their emissions annually, and would need to submit allowances to cover those emissions. Regardless of whether they are covered, all U.S. auto plants would likely face higher energy costs, and potentially higher materials costs, as suppliers upstream (e.g., power plants, steel mills) would need to pass the additional cost of the cap-and-trade program down to their consumers. This would likely increase the cost of doing business for U.S. auto plants. This could be an especially important factor in the future if cars are imported from countries that have not established their own greenhouse gas control programs.

Second, a cap-and-trade system would raise the cost of petroleum- and other fossil-based fuels. Those cost increases could motivate consumers to purchase more efficient vehicles than they otherwise would have in the absence of that fuel cost increase. If that change is large enough, it could ease automakers’ burden to increase their fuel economy in response to CAFE standards—bringing consumers’ preferences more in line with the fleet mandated by the standards.

Third, under both bills, a significant portion of allowances would be allocated to the auto industry in the early years of the program to develop advanced technology vehicles and retool plants to build those vehicles—vehicles that would help ease the transition to more stringent CAFE and greenhouse gas standards. Using a relatively low estimate for allowance prices, that pool of allowances would lead to roughly \$1.5 billion to \$2 billion annually through 2017 and somewhat less than \$1 billion annually through 2025.²²⁷ Through 2016, those allowances would be worth

²²⁶ For a comparison of the cap-and-trade provisions in these two bills, see CRS Report R40896, *Climate Change: Comparison of the Cap-and-Trade Provisions in H.R. 2454 and S. 1733*, by Brent D. Yacobucci, Jonathan L. Ramseur, and Larry Parker. Various other legislation to control carbon emissions has been introduced or proposed. Some of these proposals would take the form of an emissions fee or “carbon tax,” while others would focus on specific sectors of the economy.

²²⁷ For a detailed discussion of allowance value and allowance cost estimates in H.R. 2454, see CRS Report R40809, *Climate Change: Costs and Benefits of the Cap-and-Trade Provisions of H.R. 2454*, by Larry Parker and Brent D. Yacobucci, especially Figures 1 and 2 and Table 7.

roughly \$9 billion, compared to \$45 billion NHTSA estimates the proposed CAFE standards will cost through MY2016. Assuming a higher allowance price (i.e., a more expensive cap-and-trade program), the value of those allowances would be higher, tightening the gap between the allowance value and the expected outlays for CAFE.

How these three factors (the direct and indirect costs of the cap-and-trade program, the effects on fuel prices and thus vehicle choice, and the value of allowances allocations for advanced vehicles) interact would determine the effects of the proposed cap-and-trade system on the auto industry.

Advanced Technology: Competitive Game Changer?²²⁸

Electric Vehicles Promise Remake of the Industry

As noted above, there is growing pressure to improve efficiency and reduce greenhouse gas emissions from cars and light trucks. Regardless of whether federal legislation establishing an economy-wide greenhouse gas control system is passed, automakers will face tighter fuel economy standards and federal and state greenhouse gas standards. Furthermore, automakers are subject to a mandate in California and other states to sell electric vehicles and other low-emission vehicles. Therefore, vehicles with electric powertrains—be they hybrid vehicles, plug-in hybrids, battery-electric vehicles, or fuel cell vehicles—will likely play an increasing role in transportation.

However, there are many barriers to the development and widespread deployment of electric vehicles. These barriers include the cost of developing and producing battery packs to supply electric vehicles, real and perceived performance problems with electric vehicles relative to conventional vehicles, and a lack of infrastructure to fuel plug-in vehicles. Federal and state policies aim to reduce these barriers, including tax credits for the purchase of new vehicles and for the installation of recharging stations, grants to states and localities to deploy electric vehicles and infrastructure, and fuels taxes that favor alternative fuels over gasoline and diesel fuel.

Despite these incentives, very few electric vehicles are on the road today, but automakers are pushing for broader introduction of these vehicles in the next few years. Notable examples include the Chevy Volt (plug-in hybrid) and the Nissan Leaf (battery-electric), both expected in 2010. Further, in the past few years, dedicated electric vehicle producers Tesla (battery-electric) and Fisker (plug-in hybrid) have begun U.S. production or announced plans to establish U.S. production facilities.

Tesla currently assembles its convertible Roadster in Menlo Park, CA, with parts and intermediate assembly in various locations worldwide.²²⁹ The Roadster sells for roughly \$100,000, although Tesla is currently working on a sedan, the Model S, that will reportedly retail for roughly \$50,000. Tesla expects to start deliveries of the Model S in late 2011 or early 2012.

²²⁸ This section authored by Brent Yacobucci, CRS Specialist in Energy and Environmental Policy.

²²⁹ <http://www.teslamotors.com>.

Fisker Automotive currently produces its Karma model in Finland, but recently announced plans to purchase GM's Wilmington assembly plant in Delaware.²³⁰ Fisker plans to begin production at the Delaware plant in 2012.

The ability of automakers to produce affordable electric drive vehicles will directly affect their costs of compliance with existing and future efficiency and greenhouse gas standards.

Other Research and Development Directions

In addition to electric drive vehicles, automakers are also facing other developments in the automotive and fuels industries. For example, fuel suppliers face an ever-increasing renewable fuel standard (RFS) that mandates the use of biofuels in transportation.²³¹ By 2022, the RFS will require the use of 36 billion gallons of renewable fuel annually, up from roughly 7 billion gallons in 2007.²³² Depending on the type of biofuels produced to meet the mandate, current conventional vehicles may be unable to consume all of that fuel. Most passenger vehicles currently can operate on gasoline with up to 10% ethanol, meaning that the total amount of ethanol that could be blended into U.S. gasoline is limited—this 10% limit is commonly referred to as the “blend wall.”²³³

This “blend wall” has several components, including automaker warranties, Clean Air Act limitations, and safety certifications for fuel pumps. For example, current auto warranties limit the ethanol content in gasoline at 10%. Likewise, fuel pumps are certified to dispense gasoline with up to 10% ethanol. To increase the consumption of ethanol in the United States, this blend wall would need to be eliminated, or more flexible fuel vehicles (FFVs) would need to operate on E85 (85% ethanol and 15% gasoline) than currently do.²³⁴ Otherwise, to meet the mandates, fuel producers would need to develop non-ethanol renewable fuels that might be more compatible with existing fuel and vehicle systems.

There is also growing interest in the expansion of the use of natural gas vehicles in the United States. Proposals to require automakers to produce natural gas vehicles have been introduced, as have proposals to significantly increase incentives for the production of natural gas vehicles and the deployment of fueling infrastructure.²³⁵

There is also continuing interest in the development of fuel cell vehicles. Fuel cell vehicles are essentially electric vehicles, but instead of operating solely on batteries, a fuel cell converts fuel into electric power through a chemical reaction (as opposed to combustion). Fuel cell vehicles have the potential to be significantly more efficient than conventional vehicles, but various technical and market barriers remain, including reducing the cost of the fuel cells themselves,

²³⁰ Fisker Automotive, Inc., *Fisker Automotive Announces Plan to Buy U.S. Assembly Plant*, Irvine, CA, October 27, 2009, http://karma.fiskerautomotive.com/news_items.

²³¹ Established by the Energy Policy Act of 2005 (P.L. 109-58) and expanded by the Energy Independence and Security Act of 2007 (P.L. 110-140).

²³² See CRS Report RL33290, *Fuel Ethanol: Background and Public Policy Issues*, by Brent D. Yacobucci.

²³³ For more information, see CRS Report R40445, *Intermediate-Level Blends of Ethanol in Gasoline, and the Ethanol “Blend Wall,”* by Brent D. Yacobucci.

²³⁴ Several million E85/gasoline FFVs are currently on the road that could be operated on E85. However, the majority of these vehicles are currently fueled primarily or exclusively with gasoline.

²³⁵ For example, see New Alternative Transportation to Give Americans Solutions Act (H.R. 1835 and S. 1408).

improving on-board fuel storage—most fuel cells are fueled by hydrogen—and reducing the cost of producing and distributing hydrogen fuel. Since 2002, the Department of Energy has focused research on fuel cells and other electric-drive technologies, including batteries, hybrid vehicles, and plug-ins through its FreedomCAR program, a cooperative research program with the U.S. Council on Automotive Research (USCAR), a research group funded by the Detroit 3 automakers.²³⁶

If requirements increase for alternative fuel use and/or the production of alternative fuel vehicles, various automakers will have different competitive advantages. For example, the vast majority of FFVs in the United States are produced by the Detroit 3 automakers, while Honda produces the only natural gas passenger car currently available from an OEM.²³⁷ Likewise, some automakers are more focused on plug-in vehicles or hybrids, while others have focused research in recent years on fuel cell vehicles.

Congressional Actions

The 111th Congress has shown a high level of interest in the auto sector, reflected in numerous hearings on a wide range of issues and in legislation introduced during 2009 and 2010:

- *Environment.* A variety of proposals have been introduced, including amendments to the Clean Air Act to encourage use of alternative fuels in trucks and cars and in areas that currently do not meet federal standards for ambient air quality (known as nonattainment areas); tax incentives for the reduction of diesel-idling for on-highway trucks, and a program to encourage state and local governments to reduce greenhouse gas emissions from the transportation sector. In addition, major environmental legislation affecting all manufacturers was passed by the House in June 2009: the American Clean Energy and Security Act (H.R. 2454).
- *Alternative fuels.* Multiple proposals have been introduced to encourage the development and use of ethanol, methanol and biofuels in motor vehicles. In addition, in July 2009, the House passed H.R. 1622 authorizing a federal R&D program for natural gas vehicles.
- *Safety.* Bills have been introduced to include a bittering agent in car radiator antifreeze to prevent it from being consumed; address motor vehicle safety standards related to pedestrians; provide tax credits for motor coaches complying with federal safety requirements; provide tax incentives for the accelerated development of safety systems for commercial vehicles; and address product liability claims affected by the GM and Chrysler bankruptcies, among others.
- *Research and development.* Research proposals would encourage the development of electric cars and related technology through the Energy Department and encourage deployment of plug-in vehicles nationwide. The House passed H.R. 3246 in September 2009, authorizing \$2.9 billion for Energy

²³⁶ For more information on FreedomCAR, see CRS Report RS21442, *Hydrogen and Fuel Cell Vehicle R&D: FreedomCAR and the President's Hydrogen Fuel Initiative*, by Brent D. Yacobucci.

²³⁷ Some companies convert new vehicles to operate on natural gas—most of the vehicles they currently convert are Detroit 3 vehicles.

Department research into a range of motor vehicle technologies, including alternative fuel technologies, hybrid and fully electric engines, hydrogen fuel cells and battery technologies, and improvements to engine efficiency, waste heat recovery, and engine durability.

- *GM and Chrysler issues.* Various bills propose that any auto companies receiving TARP funding be required to report certain types of financial information; TARP-funded companies would be prohibited from opening or expanding foreign subsidiaries; and the Small Business Administration (SBA) 7(a) loan program would be authorized to expand aid to auto dealers. In addition, the House passed the Automobile Dealer Economic Rights Restoration Act, as part of H.R. 3170, the FY2010 Financial Services and General Government Appropriations Act. Final legislation to assist terminated dealers was passed in December 2009, in the FY2010 Consolidated Appropriations Act (H.R. 3288), which also included the FY2010 Financial Services and General Government Appropriations. The original House-passed Automobile Dealer Economic Rights Restoration Act amendment was replaced with an entirely new provision, Section 747, establishing a binding arbitration process for aggrieved dealers and a timetable for completion by June 2010. President Obama signed this appropriations bill on December 16, 2009 (P.L. 111-117).
- *Other.* There are a wide range of other auto issues of interest to Members of Congress, including the role of the National Highway Traffic Safety Administration (NHTSA) in motor vehicle recalls; motor vehicle repair; disclosure of information on damaged vehicles; advertising pertaining to fuel economy; tax provisions to allow for the charitable use of automobiles and to allow the alternative motor vehicle personal credit to offset the Alternative Minimum Tax (AMT), among others.

Appendix A. Locations of North American Auto Manufacturing

Table A-1. North American Vehicle Assembly Plants
Major Manufacturers, as of October 14, 2009

Manufacturer	Plant Location
	United States
General Motors	Arlington, TX
	Detroit-Hamtramck, MI
	Flint, MI
	Fort Wayne, IN
	Kansas City, KS
	Lansing, MI
	Lordstown, OH
	Orion, MI
	Shreveport, LA
	Spring Hill, TN ^a
	Wentzville, MO
Ford	Avon Lake, OH
	Chicago, IL
	Dearborn, MI
	Detroit, MI
	Flat Rock, MI (joint venture with Mazda)
	Kansas City, MO
	Louisville, KY
	St. Paul, MN
	Wayne, MI
Chrysler	Belvidere, IL
	Detroit, MI
	Ladson, SC
	Sterling Heights, MI
	Toledo, OH
	Warren, MI
BMW	Spartanburg, SC

Manufacturer	Plant Location
Honda	East Liberty, OH
	Greensburg, IN
	Lincoln, AL
	Marysville, OH
	Montgomery, AL
Hyundai/Kia	West Point, GA
	Vance, AL
Mercedes-Benz	Normal, IL
Mitsubishi	Canton, MS
Nissan	Smyrna, TN
	Lafayette, IN ^b
Subaru	Blue Springs, MS ^c
Toyota	Georgetown, KY
	Princeton, IN
	San Antonio, TX
	Fremont, CA (NUMMI-Toyota) (Closing March 31, 2010)
	Chattanooga, TN
VW	
Canada	
General Motors	Ingersoll and Oshawa, Ont.
Chrysler	Brampton and Windsor, Ont.
Ford	Oakville and St. Thomas, Ont.
Honda	Alliston, Ont.
Toyota	Cambridge and Woodstock, Ont.
Mexico	
General Motors	Ramos Arizpe, San Luis Potosi, Silao and Toluca
Ford	Cuautitlan and Hermosillo
Chrysler	Saltillo and Toluca
Honda	El Salto Jalisco
Nissan	Cuernavaca and Aguascalientes
Toyota	Tijuana
VW	Puebla

Source: Thomas Klier, Federal Reserve Board of Chicago and *Automotive News*, "2009 Market Data, North American Production," July 27, 2009.

Notes: At some locations, manufacturers operate more than one plant.

- a. Spring Hill, TN assembly lines shut down in November 2009. Engines and components continue to be manufactured, and there is a possibility that assembly could resume if vehicle demand increases.
- b. Toyota produces Camrys at Subaru's Lafayette, IN plant.
- c. Toyota's Blue Springs, MS plant is under construction.

Appendix B. The Global Automakers

Table B-1. Who Owns What

Major Global Automakers and Their Brands as of June 2009

Owner	Brands
BMW	BMW, Mini, and Rolls Royce
Chrysler	Chrysler, Dodge, Ram and Jeep; Fiat owns a 20% stake in Chrysler.
Fiat	Alfa Romeo, Ferrari, Fiat, Lancia, Abarth, Maserati
Ford Motor Company	Ford, Lincoln, Mercury, Volvo, ^a and 13.4% of Mazda
General Motors Company	Buick, Cadillac, Chevrolet, GMC, GM Daewoo, Adam Opel AG, Vauxhall Motors Ltd., and GM Holden in Australia.
Honda	Honda, Acura
Hyundai	Hyundai, Kia
Tata Motors (India)	Jaguar, Land Rover
Mazda ^b	Mazda
Mitsubishi	Mitsubishi
Daimler	Mercedes-Benz, Smart, Maybach
Nissan ^c	Nissan, Infiniti
PSA/Peugeot-Citroën	Peugeot, Citroën
Renault	Renault, Dacia, Renault Samsung Motors
Subaru ^d	Subaru
Suzuki	Suzuki
Toyota Motor Company	Toyota, Lexus, Scion, Daihatsu; Toyota, which holds around 17% of Fuji Heavy Industries (FHI) (Subaru's parent), is that company's largest shareholder; and a 5.6% stake in Isuzu
Volkswagen	Audi, Volkswagen, Bentley, Bugatti, Lamborghini, SEAT, Skoda and Porsche ^e

Source: *Automotive News*, Guide to Global Automaker Partnerships, Oct. 6, 2008; ConsumerReports.org, "Car Brands: Who Owns What?" June 22, 2009

- a. Ford is selling Volvo to Chinese carmaker Geely.
- b. Ford sold most of its controlling interest in Mazda in November 2009.
- c. Nissan is owned by Renault.
- d. Toyota has a controlling interest in Subaru's parent company, Fuji Heavy Industries.
- e. Porsche was merged with Volkswagen in 2009.

Appendix C. Top U.S. “Cash for Clunkers” Sales

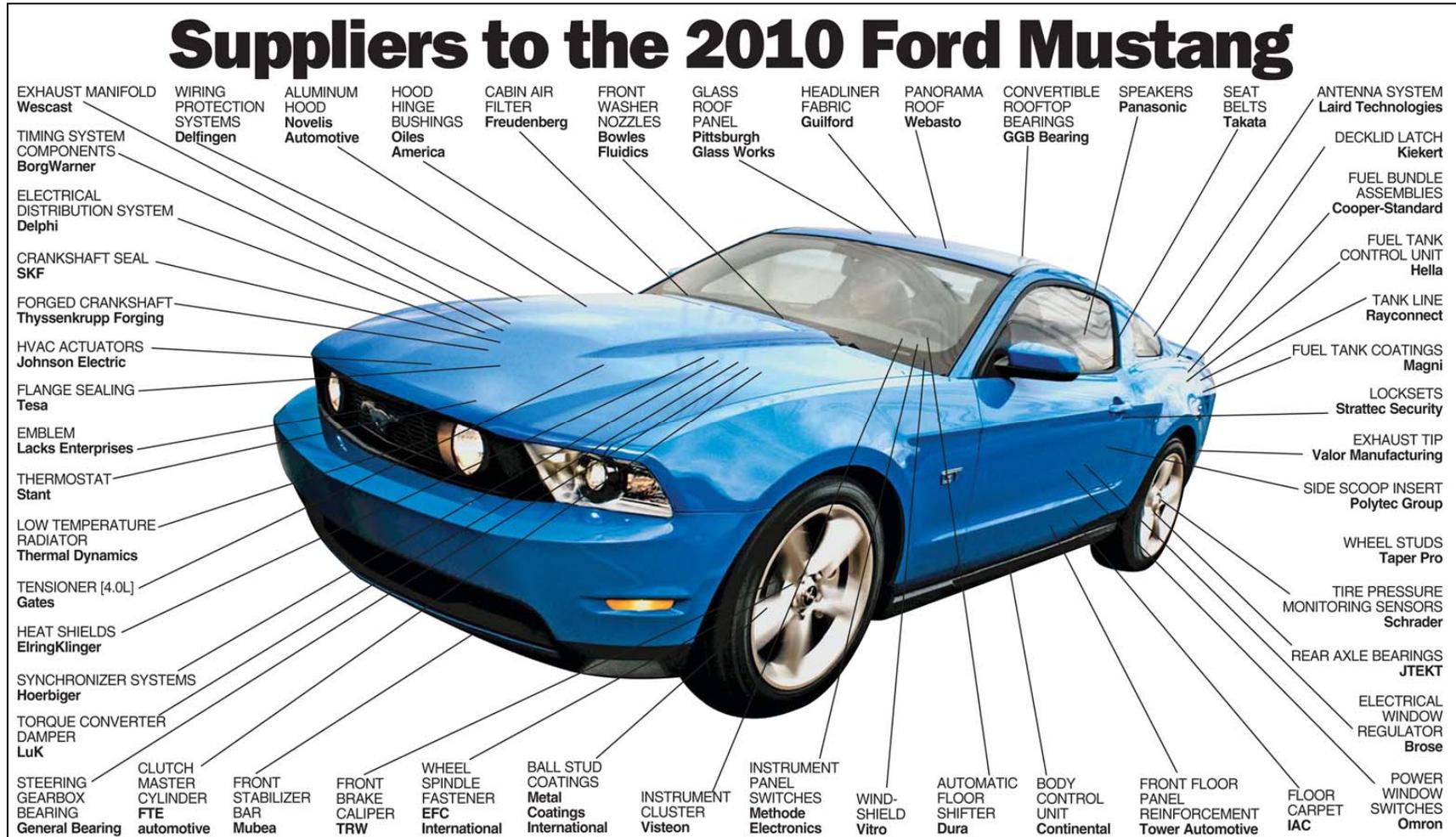
Table C-1. Top 10 Sales Under “Cash for Clunkers”
Cars and Light Trucks Sold During July and August 2009

Make of Vehicle	Share of New Vehicle Sales
Toyota	17.8%
Ford	13.3%
Honda	12.9%
Chevrolet	12.7%
Nissan	8.7%
Hyundai	7.2%
Kia	4.3%
Dodge	3.6%
Subaru	2.5%
Pontiac	2.5%

Source: Department of Transportation and National Highway Traffic Safety Administration, Report to Congress on the Consumer Assistance to Recycle and Save Act of 2009, December 2009.

Appendix D. Many Suppliers for Every Vehicle

Figure D-1. Many Suppliers for Every Vehicle



Source: Automotive News, September 28, 2009 (By permission of Automotive News Data Center and Supplier Business).

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