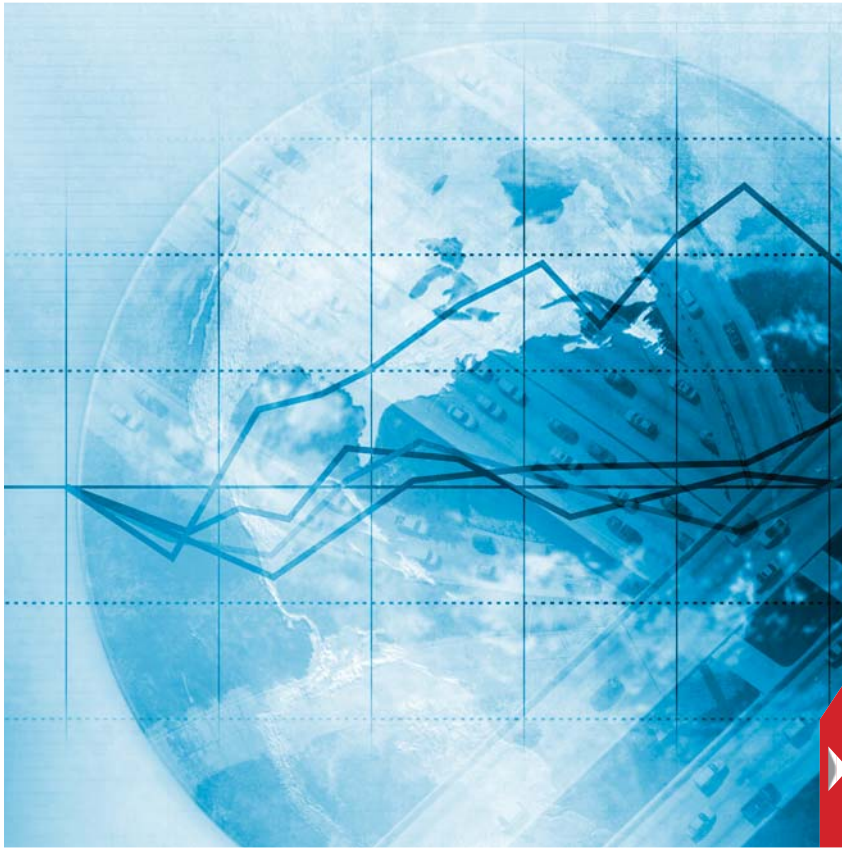


MARKET STUDY



The Changing Automotive Industry – Forecasting Global Vehicle Demand



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About the Authors

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Global Vehicle Market Not Expected to Improve in Short Term

The global automotive industry is facing challenging times and the situation is not expected to improve in the near term. Due to the worldwide recession, R. L. Polk & Co. forecasts that global light vehicle sales (passenger cars and light trucks) will decline to 55.2 million units in 2009, down 14.7 percent from 2008, despite tax and scrappage incentives introduced in many countries. As the impact of these initiatives subsides in 2010, global light vehicle volumes will decline slightly to 55.0 million.

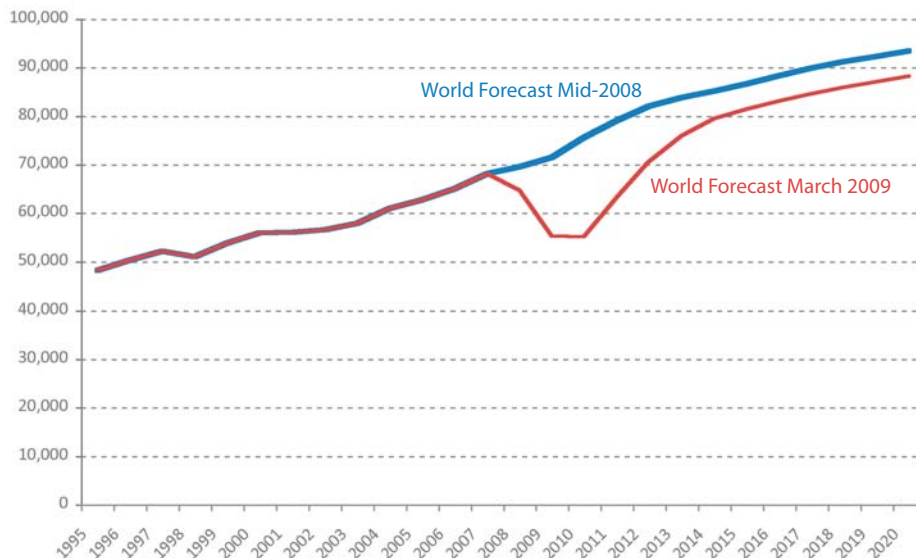
Polk expects the global economy to continue on a downward trend through the end of this year. Credit restrictions and low consumer confidence will linger into 2010, with a negative impact on vehicle sales. While moderate recovery in the industry is expected in 2011, 2012 will be the first year when global light vehicle sales will top 2007 levels. In 2012, global light vehicle registrations will be 71 million, up from 63 million in 2011.

One of the challenges for the automotive industry has been the way that worsening market conditions have impacted previous vehicle demand forecasts. For example, Polk’s current forecast for 2009 of 55.2 million units is 23 percent below the 71 million vehicles we predicted in mid-2008 (prior to the start of the economic crisis in fourth quarter 2008.) Through 2015, global light vehicle sales will be more than 80 million units lower than Polk predicted in mid-year 2008, as illustrated in **Figure 1**.

This market study provides an outlook based on regional and manufacturer forecasts for light passenger vehicles, including region-specific forecasts and trends.

Note: All forecast and data in this market study were current based on available information as of the end of April 2009.

Figure 1: Global Light Vehicle Forecasts





Market Assumptions

In addition to historical sales and registration volume trends and planned supply for global automakers, Polk took into account the following conditions when developing the forecasts utilized in this market study:

- The global economy will hit bottom in mid-2009 and will start to recover by the end of 2009. Due to the unique nature of this crisis, however, a recovery will take much longer than in earlier recessions.
- Negative global GDP growth is expected for 2009, with a slight recovery expected in 2010. The long-term growth target is about 3 percent.
- The price of oil will rise at a very moderate pace, from \$45 a barrel in 2009 to about \$115 a barrel in 2020. This should be seen as a normal trend, although cyclical fluctuations, e.g., as a result of speculation, cannot be ruled out.
- We do not expect the crisis to create a fundamental shift in private vehicle ownership. Vehicle ownership continues to have a high social value, especially in emerging markets.

Emerging Markets Have Far More Growth Potential than Saturated Markets

Within the global automotive industry, there are two primary types of markets, as shown in **Figure 2**: “saturated” and “emerging” vehicle markets. In the saturated markets, individual vehicle ownership is common and vehicle sales are largely driven by replacement demand. In the emerging vehicle markets, in contrast, many consumers are acquiring their first vehicle due to increased economic buying power and growing penetration by auto manufacturers in these markets.

Figure 2: Saturated and Emerging Vehicle Markets

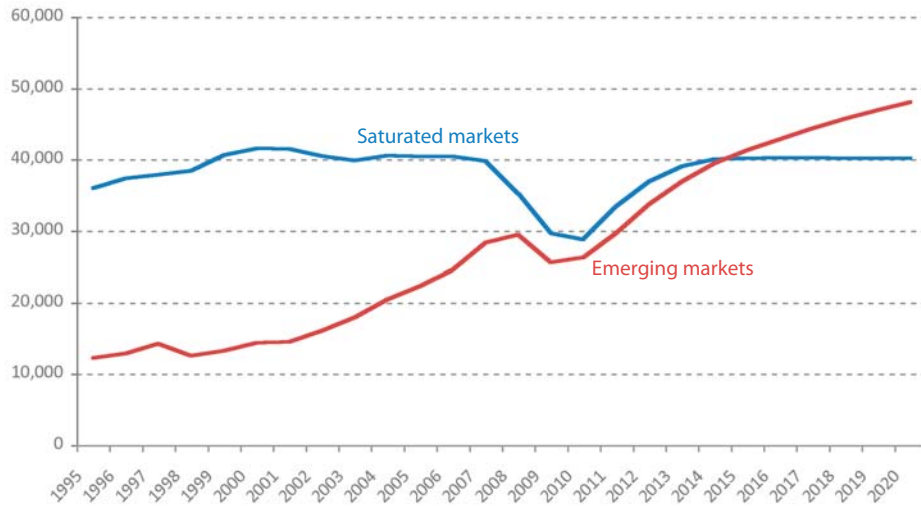
Saturated Vehicle Markets	Emerging Vehicle Markets
• United States and Canada	• Latin America (including Mexico)
• Western Europe	• Central and Eastern Europe (CEE)
• Japan	• Asia-Pacific/Middle East (excluding Japan)
	• Africa

In our opinion, the emerging markets will come out of the current automotive industry crisis faster than the saturated ones. While it will take until 2014 for light vehicle sales in saturated markets to top 2007 levels, this will happen in 2011 in emerging markets as shown in **Figure 3** on the next page.

At the same time, emerging markets represent much more long-term potential for the automotive industry than saturated areas. In 2014, Polk predicts that light vehicle sales will be fairly evenly split between emerging and saturated markets, with more vehicles being sold in emerging markets beginning in 2015.



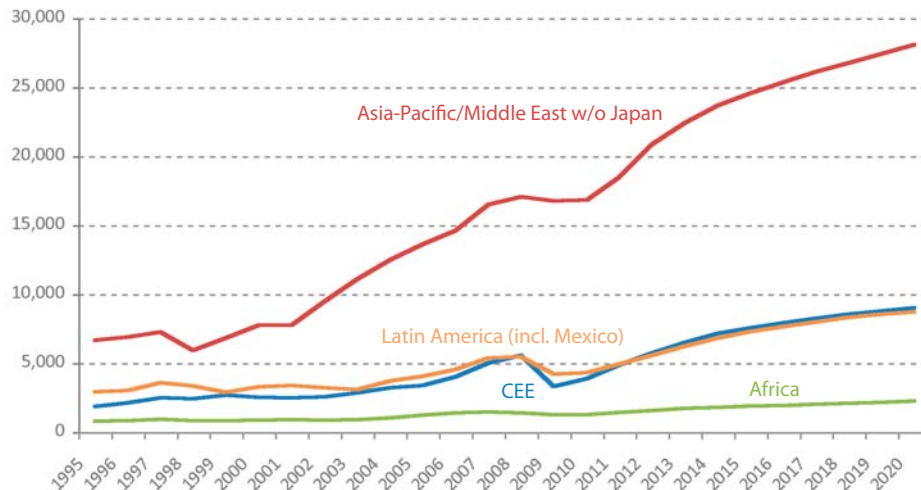
Figure 3: Light Vehicle Forecasts for Saturated and Emerging Markets



Breakdown of Emerging Markets

As shown in Figure 4, Asia has the most significant growth potential of all vehicle markets, driven by the development of China and India. In 2008, Asia-Pacific/Middle East (excluding Japan) became the largest automotive market in the world, as vehicles become attainable for a growing percentage of this region’s huge consumer population. The recent launch of the low-cost \$2,000 Nano by Tata Motors¹ is an example of the type of initiatives that attempt to revolutionize the automotive industry and significantly boost light vehicle sales in emerging markets.

Figure 4: Vehicle Forecasts by Emerging Market Region



¹ "Hello Nano," Economist.com, March 23, 2009



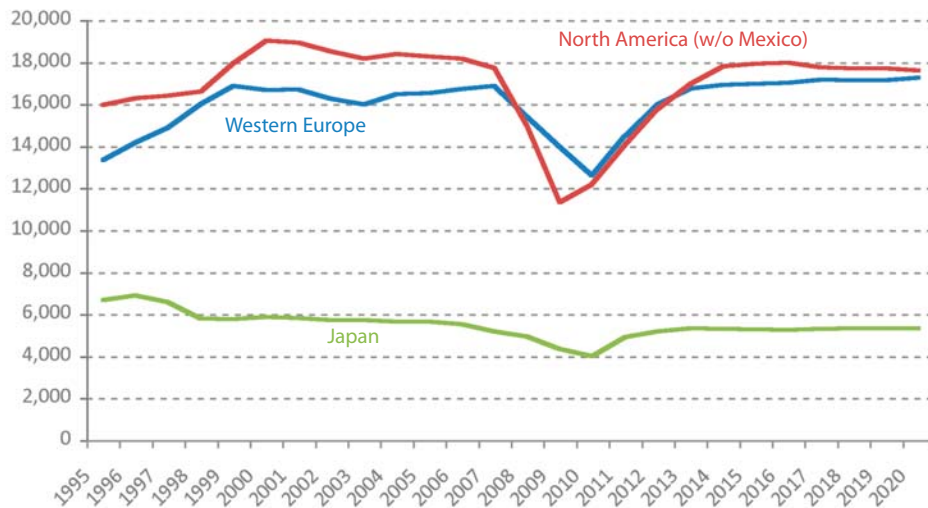
Breakdown of Saturated Markets

Unlike emerging markets, saturated ones lack further growth potential. However, vehicle sales in these regions will eventually return to levels seen before the economic crisis hit in the latter part of 2008.

In the near term, Western Europe will fare better than North America due in large part to scrappage incentives, which allow a driver to scrap an older vehicle and receive a credit toward purchase of a new one. From 2008 to 2009, light vehicle sales in Western Europe are expected to decline 9 percent compared to 24 percent in the U.S. and Canada. Italy and Germany, the two biggest vehicle markets in Europe, have seen increases in new car sales since their governments introduced scrappage incentives².

At the time this paper was written, a “cash for clunkers” proposal is still being debated in the United States³. However, the U.S. government is taking a number of steps to help stimulate vehicle demand in this recessionary period, including the purchase of federal fleet vehicles from domestic automakers and the introduction of tax benefits for consumers who purchase new cars and trucks.

Figure 5: Light Vehicle Forecasts in Saturated Markets



Toyota Leads List of Global Manufacturers

In 2008, five auto manufacturers (General Motors Group, Ford Group, Renault Nissan Alliance, Toyota Group and Volkswagen Group) accounted for just over 54 percent of all global light vehicle sales. The market share of the top five dropped from nearly 60 percent in 2000 and is expected to continue to decline.

From 2000 to 2008, both Ford and General Motors lost nearly five percentage points of global market share, which they are not expected to recover. Although both manufacturers are strong in the stable, saturated markets, they don’t perform as well in the emerging markets, where most of the global growth potential lies.

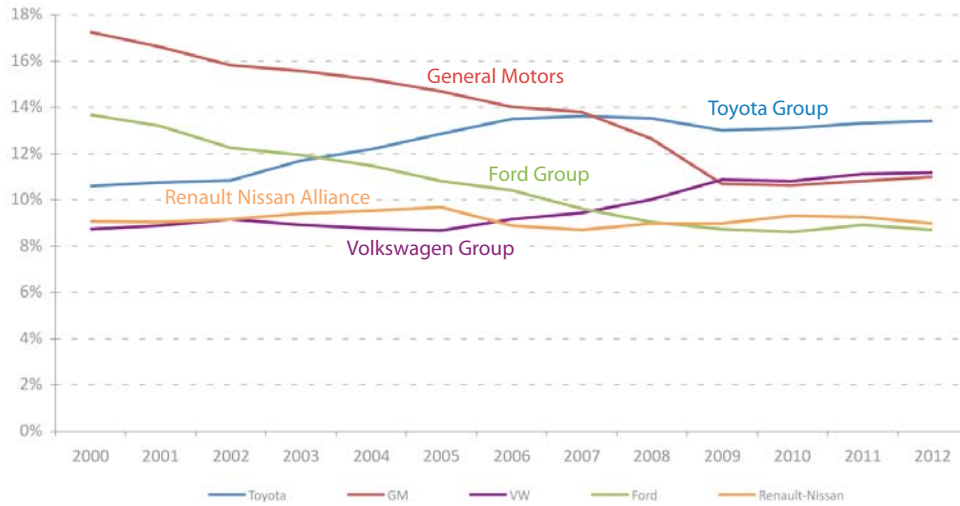
Volkswagen is expected to surpass General Motors in 2009 as the number two global automaker. From 2008 to 2012, the German automaker will gain approximately one percentage point of market share, while General Motors will lose 1.6 points and Ford will lose more than 0.3 points. Part of Volkswagen’s market share gain can be attributed to its success in the rapidly-growing Chinese market, where Volkswagen is one of the biggest manufacturers.

² “Most U.K. Buyers Favor Scrappage Incentives, Says SMMT,” *Automotive News Europe*, March 17, 2009

³ “Cash for Clunkers Could Drive New Sales,” *The Washington Post*, March 19, 2009



Figure 6: Global Market Share by Manufacturer



Regional Vehicle Forecasts: United States Hit Hard by Crisis

Long the world’s largest automotive market, the U.S. auto sector is being especially hard-hit by the economic crisis. From a high of almost 17.5 million in 2000, new light vehicle sales fell to 13.2 million in 2008. A further decline to about 10 million is expected for 2009. By 2012, light vehicle registrations in the U.S. are expected to hit about 14 million, well below pre-crisis volumes.

Figure 7: U.S. Light Vehicle Registrations



Within a weakening American light vehicle market, domestic automakers suffered the most as shown in Figure 8 on the next page. From 2000 to 2008, the market share of domestic U.S. automotive brands fell from 66 percent to 48 percent. Further market share erosion is expected, and Polk predicts that the domestic automakers will hold 41 percent of U.S. market share in 2012.



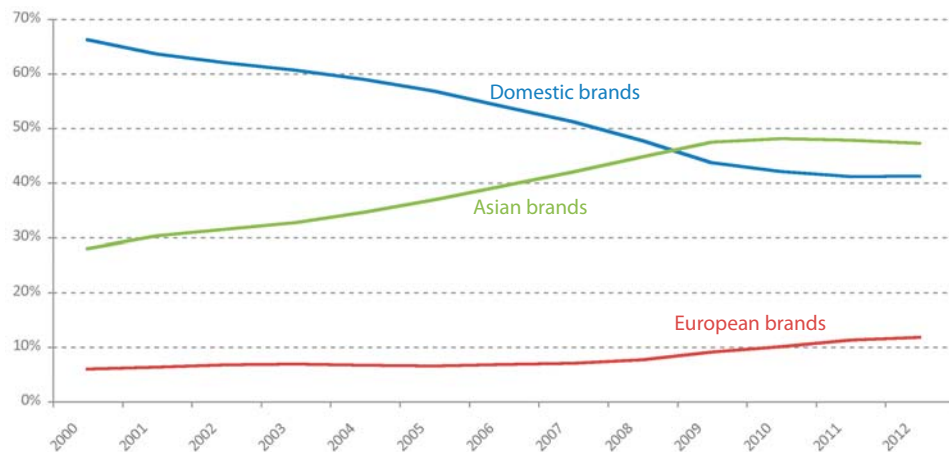
As has been widely reported in the media, the domestic automakers are seen as having put too much focus on large vehicles like pickup trucks and sport utility vehicles (which typically had higher profit margins), even as consumers' needs shifted to more fuel-efficient smaller vehicles. Especially now, with Chrysler LLC in bankruptcy and General Motors relying on government loans for survival, the domestic auto industry is in "catch up" mode compared to its Asian counterparts.

In many ways, the U.S. automakers have followed the lead of the Asian manufacturers. For example, the U.S. brands were latecomers to the race to develop affordable hybrid vehicles. And in late March, Ford and GM announced that they would provide payment protection on vehicle loans for consumers who lose their jobs, following a similar program announced in January by Hyundai⁴.

The Asian and European brands will recover better from the current situation because of their more competitive market positions. From 2008 to 2009, while the domestic brands' U.S. market share is forecasted to fall from 47 to 43 percent, the European brands will see a U.S. market share increase of more than one percentage point. Asian brands will also see a two percentage point increase in U.S. market share, from 45 to 47 percent.

In the long term, due to restructuring, brand eliminations and capacity reduction, the U.S. market share of the American brands is expected to stabilize around 40 percent.

Figure 8: U.S. Market Share by Brand Category



Regional Market Share Forecasts: Winners and Losers by Brand

Over the next three years, sales volumes in different global regions will continue to evolve. While market share by brand will remain stable in many regional markets in the short term, some brands will gain market share in specific regions as described below.

Emerging Markets

In Asia (excluding Japan), India's Tata Motors is expected to gain one-half percentage point of market share due to the introduction of the Nano mini car, which will provide affordable access for many consumers to their first vehicles.

In Central and Eastern European (CEE) countries, Hyundai will gain almost one percentage point of market share from 2009 to 2012 as the manufacturer extends production in the region and launches an entry-level car specifically designed for emerging markets.

⁴ "GM, Ford Offer Hyundai-Style Job-Loss Protection Plans," *Automotive News*, March 31, 2009



In Latin America, Fiat is expected to gain 1.3 percentage points of market share from 2009 through 2012 as the Italian automaker invests more heavily in the region.

Saturated Markets

In Japan, Toyota will be the biggest market share winner, with an expected increase of 1.7 percentage points from 2009 to 2012. This can be attributed to the extension of hybrid technology to additional model lines and additional body styles of the Prius.

In Western Europe, Audi is expected to gain one-half percentage point of market share as the brand extends its model portfolio to include additional smaller cars with environmentally-friendly technology.

Volkswagen stands to gain the most market share in the United States and Canada. The manufacturer's growth strategy in the region includes opening a local production facility to launch a midsize car intended to compete with the Toyota Camry and the Honda Accord. Additional Jetta, Audi and SUV models will be produced in Mexico and the U.S.

Figure 9 shows the brands in each region that are expected to gain and lose the most market share from 2009 to 2012.

Figure 9: Market Share Winners & Losers by Brand

Region	Brand with Largest Forecasted Gain (2009 – 2012)		Brand with Largest Forecasted Decline (2009 – 2012)	
	Brand	Market Share Change (in percentage points)	Brand	Market Share Change (in percentage points)
Asia (excluding Japan)	Tata	+0.5	Hyundai Wuling	-0.8
Central & Eastern Europe (CEE)	Hyundai	+0.9	Lada	-1.9
Japan	Toyota	+1.7	Suzuki	-2.1
Latin America	Fiat	+1.3	Nissan	-1.1
U.S. & Canada	Volkswagen	+1.3	Chevrolet	-1.3
Oceania	Ford	+1.6	Mazda	-1.3
Western Europe	Opel Audi	+0.5	Peugeot	-1.5

About R. L. Polk & Co.

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Conclusion: Global Automotive Industry at a Crossroads

The global automotive industry is at a crossroads and it will be interesting to watch how different manufacturers and regions emerge from the current global economic crisis. Polk does not expect to see a positive trend in worldwide vehicle sales until 2012.

However, looking at the global market as a whole doesn't tell the whole story. In emerging markets, where many consumers are newly able to purchase their first vehicle, the automotive industry will recover faster...and will experience more sustained long-term growth. Saturated markets like the U.S. and Western Europe will take longer to emerge from the current situation. And, these regions are not expected to ever again experience the robust growth levels they did in the past.

Worldwide, Toyota will maintain its place as the top-selling manufacturer for the foreseeable future, while Volkswagen is expected to move up the global manufacturer rankings and eventually surpass General Motors. Ford and General Motors, on the other hand, are not expected to be able to regain the market share they've lost.