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New contract, new era

The fall 2007 signing of labor contracts between the Detroit Three automakers — General Motors Corp., Ford Motor Co., and Chrysler LLC (which is now a unit of Cerberus Capital Management L.P., a large private investment firm based in New York) — and the UAW union, which represents autoworkers, starts a new era in the US auto industry. In our view, these US automakers (formerly known as the “Big Three”) were in a dire predicament due to market share losses, excess capacity, and an uncompetitive cost structure resulting from their higher legacy (pension and healthcare) and labor costs. Because of these factors, the union made unprecedented concessions in exchange for manufacturer commitments guaranteeing certain employment levels and plant investment in the US, subject to certain market conditions.

We have believed that there is a need to make the US automotive companies more competitive, end the string of losses and feeble profits, and stop the hemorrhaging of cash. We think the creation of healthcare VEBA trusts to be managed by the union will reduce the uncertainty and financial drain that the spiraling healthcare costs are having on the automakers. (VEBA stands for voluntary employees’ beneficiary association.) In addition, the companies should benefit from the establishment of a second, lower wage tier for new hourly workers, and from the closure of certain plants. These hourly worker concessions are not free. Automakers have committed to maintain certain levels of US production and to make aggregate lump contributions in the tens of billions of dollars to help fund the VEBA trusts and to pay for other services for active workers.

This arrangement is similar to an agreement between Goodyear Tire & Rubber Co. and its largest union, the United Steelworkers. In exchange for funds contributed to a healthcare program administered by the union, the tire maker was freed of its obliga-

tions for union members’ retiree healthcare costs.

Will it be enough?

The contracts reached with the unions will help automakers’ competitiveness on the cost side, but more work needs to be done on the product side, in our view. Although GM has benefited from the introduction of high-volume new vehicles, such as pickup trucks, in 2006 and 2007, we believe that both GM and Ford need to improve their product line-ups if they are to sustain and grow volumes and market share.

Currently, US consumers are giving greater consideration and preference to foreign brands; sometimes, they don’t even consider certain US brands. Clearly, the Detroit Three need to increase the customer’s “share of mind.” Unfortunately, this will take some time; one, two, or even three new vehicles are not enough to turn around companies of their size. And, unlike cost cutting, manufacturers have less control over consumer preferences.

Daimler-Benz sells Chrysler

Along with the historic UAW contracts, Daimler-Benz AG’s August 2007 sale of 80.1% of Chrysler to Cerberus Capital Management L.P. for \$7.4 billion heralds a new era. Cerberus has the financial and management resources to invest in growing the enterprise. In addition, as a private company without the need for quarterly earnings disclosures, Cerberus can focus on a multiyear restructuring timetable.

In the first few weeks after its purchase of Chrysler, Cerberus made aggressive management changes at the automaker. It hired former Home Depot CEO Robert Nardelli to run the company, ahead of veteran Chrysler leader Thomas LaSorda. We expect Nardelli to take a strong stand on restructuring costs and the company’s product line. Cerberus also hired Jim Press, former president of Toyota Motor USA, as president and vice-

NORTH AMERICAN MOTOR VEHICLE PRODUCTION

(Calendar year)

	CARS						LIGHT TRUCKS					
	THOUSANDS OF UNITS			% OF TOTAL			THOUSANDS OF UNITS			% OF TOTAL		
	2004	2005	2006	2004	2005	2006	2004	2005	2006	2004	2005	2006
General Motors	1,927.3	1,772.2	1,762.7	30.0	26.8	25.1	3,064.7	2,803.8	2,630.9	31.3	28.9	29.7
Ford Motor	936.1	816.9	963.1	14.6	12.3	13.7	2,544.2	2,299.7	1,860.4	25.9	23.7	21.0
Daimler/Chrysler	532.2	608.1	620.2	8.3	9.2	8.8	2,055.7	2,071.9	1,838.8	21.0	21.4	20.8
Total Big Three	3,395.5	3,197.2	3,346.0	52.9	48.3	47.6	7,664.6	7,175.5	6,330.1	78.2	74.0	71.5
AM General	...	...	...	...	...	...	32.8	28.3	15.6	0.3	0.3	0.2
Auto Alliance	133.3	272.6	249.9	2.1	4.1	3.6	...	...	...	...	...	...
BMW	35.1	19.8	38.8	0.5	0.3	0.6	108.8	105.0	65.9	1.1	1.1	0.7
CAMI	...	...	...	...	...	...	131.2	190.0	196.3	1.3	2.0	2.2
Honda Motor	783.3	796.2	830.7	12.2	12.0	11.8	434.5	552.7	555.0	4.4	5.7	6.3
Hyundai	...	91.2	174.4	...	...	2.5	...	...	63.0	...	...	0.7
Mercedes	73.5	95.6	173.6	...	1.4	2.5	142.0	170.6	179.1	1.4	1.8	2.0
Mitsubishi	91.5	64.9	74.8	1.4	1.0	1.1	21.7	22.7	17.7	...	...	...
Nissan	654.2	703.5	705.3	10.2	10.6	10.0	425.1	495.2	446.6	4.3	5.1	5.0
NUMMI	237.4	248.4	257.9	3.7	3.8	3.7	143.3	168.9	170.8	1.5	1.7	1.9
Subaru/Isuzu	98.3	87.2	84.3	1.5	1.3	1.2	20.4	31.8	26.1	0.2	0.3	0.3
Toyota	692.9	742.0	744.4	10.8	11.2	10.6	440.3	466.7	446.5	4.5	4.8	5.0
Volkswagen	225.3	300.4	347.0	3.5	4.5	4.9	0.1	1.0	1.3	...	0.0	0.0
Others	...	...	...	...	...	...	239.7	291.3	340.8	2.4	3.0	3.8
Total transplants	3,024.9	3,421.9	3,681.0	47.1	51.7	52.4	2,139.8	2,524.1	2,524.7	21.8	26.0	28.5
Grand Total	6,420.5	6,619.1	7,027.0	100.0	100.0	100.0	9,804.4	9,699.6	8,854.8	100.0	100.0	100.0

Note: Totals may not add due to rounding.

Source: Ward's Automotive Reports.

chairman of Chrysler LLC. In addition, Deborah Wahl Meyer, who was vice president of marketing at Toyota's Lexus brand, and Philip Murtaugh, formerly the head of GM China, were brought onboard. These changes indicate to us that Cerberus is serious not only about making Chrysler a success, but also about doing so quickly.

Impact on GM and Ford

For the domestic automakers, several potential benefits and challenges could emerge from the Cerberus-DaimlerChrysler deal. Cerberus's aggressive action in restructuring and hiring leaders appears already to be having an impact on its competitors. Taking a cue from Chrysler, Ford hired Jim Farley, a veteran Toyota marketing leader, to head up its global marketing team. Chrysler's announced plans to eliminate weak-selling vehicles from its lineup in order to focus resources on developing and retaining stronger ones may force GM and Ford to follow suit. (Ford's planned sale of Jaguar and Land Rover is discussed later in this section.)

Over the long term, if Cerberus is successful in improving Chrysler's performance and product lineup, it could mean increased com-

petition for GM and Ford in the US and abroad. If Cerberus does not succeed, however, competitors should increase their market share and volume.

Private equity playing with cars

Cerberus is not the only private equity firm or investment group to set its sights on the US auto industry. With American automakers and parts suppliers struggling and restructuring in recent years, they have become targets of private equity players and other acquirers. Private equity investors generally make acquisitions because they believe they can find and create value in depressed market segments. With their combination of financial and management resources, they are able (and can afford) to invest a few years to improve profitability of the targeted companies or operations; they then exit via a private sale or a public offering.

For example, billionaire investor Wilbur Ross, who in April 2002 successfully invested in the then-struggling steel industry, has recently been investing in the US auto parts business. In 2006 and 2007, Ross and partners purchased the interiors business of

Collins & Aikman Corp., as well as Lear Corp.'s European interiors operations and North American interior assets — all of which are now part of Ross's International Automotive Components Group. Ross is betting that he can restructure and consolidate the segment and improve profitability in areas that the former parent companies did not have the resources or ability to turn around.

Credit turmoil changes M&A

The credit market turmoil that occurred this past summer has changed the merger and acquisition (M&A) environment. Credit is more expensive and less available than it had been. As a result, we expect a slowing of M&A activity in the industry (particularly from financial buyers); valuations may also decline. Strategic buyers, however, should continue to make deals.

Jaguar, Land Rover on the block

Ford has been more direct recently, saying that the company will sell Jaguar and Land Rover, most likely together. In fact, formal bids have been received, and we expect a transaction to occur by early 2008 or sooner. The buyer could be a strategic purchaser that is looking to build its global business (such as Tata Motors Ltd. of India) or a financial acquirer that is looking to quickly restructure or fix the business and then divest it for a profit through a sale or public offering.

The sale of Jaguar and Land Rover would benefit Ford, in our view, as it would provide some cash and limit the drain on management time and resources. A sale of the two brands would allow the company to focus on its core Ford and Lincoln brands.

One part of Ford that we think is unlikely to be divested completely is its Volvo unit. For one, product development plans between Volvo and core Ford brands are too intertwined to separate in the near future. In addition, we believe that Volvo, which appeals to safety-oriented consumers, is generally profitable. One possible alternative would be the sale of a partial stake in Volvo, which would generate some cash for Ford and keep the existing synergistic benefits between the brands.

GM, Ford focus on profits

The 2.5% decline in US vehicle sales volume, year-to-date through October 2007, can be attributed to several factors, including elevated gas prices, a decrease in consumer confidence due to a weak housing environment, and the reduced availability and/or the higher cost of credit to certain consumers. Given our outlook for ongoing high gasoline prices and a soft housing market, we expect that vehicle sales will continue to be depressed.

In order to improve profitability, GM and Ford have sacrificed sales volume and market share, a process that can be painful at times. Although the number of vehicles GM and

US MOTOR VEHICLE SALES & PRODUCTION

(In thousands)

YEAR	SALES*				PRODUCTION†			
	PASSENGER CARS	LIGHT TRUCKS	MED. & HEAVY TRUCKS	TOTAL MOTOR VEHICLES	PASSENGER CARS	LIGHT TRUCKS	MED. & HEAVY TRUCKS	TOTAL MOTOR VEHICLES
2006	7,781	8,724	545	17,049	4,366	6,412	462	11,240
2005	7,667	9,281	497	17,444	4,321	7,203	422	11,947
2004	7,506	9,361	432	17,299	4,230	7,373	386	11,988
2003	7,610	9,029	328	16,967	4,510	7,319	268	12,097
2002	8,103	8,713	322	17,139	5,019	7,001	258	12,277
2001	8,423	8,700	350	17,472	4,879	6,293	217	11,389
2000	8,847	8,503	462	17,812	5,542	6,840	209	12,591
1999	8,698	8,195	521	17,415	5,638	6,955	430	13,023
1998	8,142	7,401	424	15,967	5,554	6,074	391	12,019
1997	8,272	6,850	376	15,498	5,934	5,858	289	12,081
1996	8,526	6,570	359	15,455	6,082	5,463	268	11,813
1995	8,635	6,093	388	15,116	6,340	5,306	283	11,930

Note: Totals may not add due to rounding. *Total US sales, including foreign models produced both inside and outside the United States, as well as domestic models produced in Canada and Mexico. †Foreign and domestic models produced inside the United States.
Source: *Ward's Automotive Reports*.

Ford sell to rental companies is still relatively high, both automakers reduced sales volumes in 2007. These fleet sales are problematic for several reasons. For one, they're not very profitable for the automakers. Second, rental vehicles end up in the used car market after just a few months of use, creating competition for new vehicles and depressing new vehicle sales and prices. Finally, these sales reduce the secondary market prices and residual values of original vehicles. These issues have spurred GM and Ford to cede rental company sales to competitors in order to enhance the value of their retail new vehicle operations.

CAFE regulations changing

Despite automakers' resistance to increases in the corporate average fuel economy (CAFE) standards, in June 2007 the US Senate approved a measure that seeks to raise fuel economy standards in the US by 40% (from 25 miles per gallon currently to 35 mpg) by 2020, and by an additional 4% annually between 2020 and 2030. The proposed legislation would also set mileage standards for heavy trucks for the first time. Before this becomes law, however, it would have to be passed by the House of Representatives.

While the Senate's recent action is only an initial step in the process to making the changes into law, the rules (if passed) would mean additional costs for automakers. We expect US auto companies to lobby against the full passage of such strict regulations, which they say would burden them with additional costs at a time when they're already struggling to invest and to compete with foreign auto manufacturers. We do think, however, that some increase in CAFE standards is likely to occur soon.

Raw materials costs remain high

Prices for raw materials (such as steel, copper, resins, and other oil-based commodities) used in manufacturing vehicles are rising again. Automakers and their suppliers, both US and foreign, have frequently cited higher raw materials costs as a drag on financial performance in the first three quarters of 2007, after penalizing results in 2006. Rising demand from emerging markets, such as China, has been putting pressure on commodity

prices, as producers compete for scarcer raw materials. We expect continued pressure on these costs in 2008, but at a lesser pace.

Gasoline prices rise

As this *Survey* was being prepared in late November 2007, oil prices had reached a record of more than \$99 per barrel. This represents a more than doubling of the price of \$43 per barrel at year-end 2004. Since 2004, US gasoline prices have been high (compared with prior years) and generally rising. On May 21, 2007, gasoline reached an average price of \$3.22 per gallon, a record and up nearly \$0.33 (about 11%) from a year earlier, according to the US Energy Information Administration, a statistical agency of the US Department of Energy. Although the price eased to as low as \$2.75 at one point, it subsequently resumed a rapid ascent, reaching \$3.10 on November 26. We expect this elevated level to propel demand for more fuel-efficient smaller vehicles, at the expense of less fuel-efficient vehicles such as large sport utility vehicles (SUVs) and pickup trucks.

Tires

New tires are sold under highly competitive conditions throughout the world. Manufacturers produce significant numbers of tires in low-cost markets. Companies operating in North America are challenged by industry overcapacity, which limits pricing power, and by increased competition from low-cost manufacturers. In addition, raw materials costs have risen significantly over the past few years, driven by increases in the cost of oil and natural rubber.

Tire manufacturers continued to experience increases in the costs of certain principal raw materials during the first 10 months of 2007, compared with the levels experienced during the comparable period in 2006. (Principal raw materials include synthetic rubber, carbon black, natural rubber, chemicals, and reinforcement components.) Increases in the cost of natural rubber and petroleum-based materials were the most significant drivers of higher raw material costs in 2006 and 2007. The pricing volatility in commodities, such as natural rubber and crude oil, contributed to the difficulty in managing the costs of related raw materials. The higher price of crude oil and the growing global demand for its derivative products

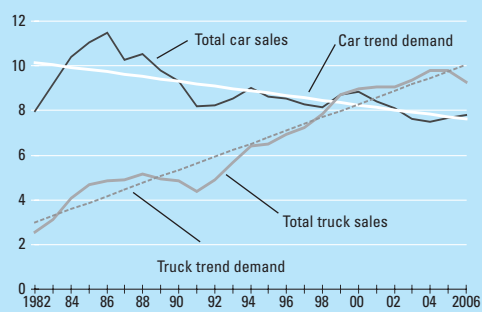
MARKET SHARES OF US DEALER NEW LIGHT VEHICLE SALES

(Calendar year)

	THOUSANDS OF UNITS				% OF TOTAL			
	2003	2004	2005	2006	2003	2004	2005	2006
PASSENGER CARS								
US MANUFACTURERS								
General Motors	1,959.0	1,875.6	1,743.8	1,621.6	25.7	25.0	22.7	20.8
Chevrolet	799.5	908.2	858.1	794.4	10.5	12.1	11.2	10.2
Pontiac	408.7	420.0	395.3	353.2	5.4	5.6	5.2	4.5
Oldsmobile	103.1	20.4	1.4	0.1	1.4	0.3	0.0	0.0
Buick	259.3	223.3	186.1	170.1	3.4	3.0	2.4	2.2
Cadillac	151.3	141.9	160.9	142.8	2.0	1.9	2.1	1.8
Saturn	189.2	123.5	105.9	130.5	2.5	1.6	1.4	1.7
Saab	47.9	38.2	36.1	30.6	0.6	0.5	0.5	0.4
Ford Motor Co.	1,169.4	1,018.3	1,038.9	1,094.7	15.4	13.6	13.5	14.1
Ford Division	792.3	684.6	742.4	810.4	10.4	9.1	9.7	10.4
Lincoln-Mercury	240.8	204.0	192.4	194.1	3.2	2.7	2.5	2.5
Jaguar	54.7	45.9	30.4	20.7	0.7	0.6	0.4	0.3
Volvo	81.7	83.8	73.6	69.5	1.1	1.1	1.0	0.9
DaimlerChrysler Corp.*	456.7	474.1	526.8	510.2	6.0	6.3	6.9	6.6
Chrysler/Plymouth/Jeep/Eagle	158.1	252.2	267.1	233.7	2.1	3.4	3.5	3.0
Dodge	298.6	221.9	259.7	276.5	3.9	3.0	3.4	3.6
Total Big Three	3,585.1	3,368.0	3,309.5	3,226.5	47.1	44.9	43.2	41.5
JAPANESE MANUFACTURERS								
Honda Motor	820.1	843.3	837.8	844.0	10.8	11.2	10.9	10.8
Mazda	163.7	187.7	193.3	186.9	2.2	2.5	2.5	2.4
Mitsubishi	161.5	108.9	86.5	83.8	2.1	1.5	1.1	1.1
Nissan	505.4	536.8	572.5	553.6	6.6	7.2	7.5	7.1
Subaru	116.4	121.7	121.4	125.6	1.5	1.6	1.6	1.6
Suzuki	22.5	47.1	57.8	63.1	0.3	0.6	0.8	0.8
Toyota	996.0	1,101.2	1,289.4	1,458.2	13.1	14.7	16.8	18.7
OTHER FOREIGN MANUFACTURERS								
BMW	236.2	226.3	238.7	255.5	3.1	3.0	3.1	3.3
Hyundai	298.9	300.1	326.0	327.3	3.9	4.0	4.3	4.2
Kia	140.4	155.9	146.4	148.9	1.8	2.1	1.9	1.9
Mercedes	186.6	194.1	182.8	178.6	2.5	2.6	2.4	2.3
Volkswagen	362.1	301.5	286.8	305.1	4.8	4.0	3.7	3.9
Others	15.5	13.4	18.3	23.7	0.2	0.2	0.2	0.3
Total domestic-built	5,527.4	5,356.9	5,480.5	5,436.0	72.6	71.4	71.5	69.9
Total imported	2,083.1	2,149.1	2,186.5	2,344.8	27.4	28.6	28.5	30.1
Total car sales	7,610.5	7,505.9	7,667.1	7,780.8	100.0	100.0	100.0	100.0
LIGHT TRUCKS								
US MANUFACTURERS								
General Motors	2,757.0	2,781.8	2,713.0	2,446.0	30.5	29.7	29.2	28.0
Chevrolet	1,843.4	1,839.8	1,794.0	1,603.0	20.4	19.7	19.3	18.4
GMC/Pontiac	631.3	637.1	581.5	515.0	7.0	6.8	6.3	5.9
Saturn	81.9	88.5	107.7	95.9	0.9	0.9	1.2	1.1
Other divisions	200.3	216.4	229.8	232.2	2.2	2.3	2.5	2.7
Ford Motor Co.	2,267.8	2,252.8	2,067.9	1,753.5	25.1	24.1	22.3	20.1
DaimlerChrysler Corp.*	1,670.8	1,731.9	1,778.0	1,632.3	18.5	18.5	19.2	18.7
Chrysler/Plymouth/Jeep	746.1	763.9	858.7	831.2	8.3	8.2	9.3	9.5
Dodge	924.7	968.0	919.3	801.1	10.2	10.3	9.9	9.2
Total Big Three	6,695.6	6,766.5	6,558.9	5,831.8	74.2	72.3	70.7	66.9
FOREIGN MANUFACTURERS								
Honda	529.7	551.1	624.7	665.4	5.9	5.9	6.7	7.6
Hyundai	101.3	118.5	129.1	128.2	1.1	1.3	1.4	1.5
Isuzu	34.8	32.2	17.3	13.3	0.4	0.3	0.2	0.2
Kia	97.0	114.1	129.5	145.4	1.1	1.2	1.4	1.7
Mazda	95.2	76.2	65.0	81.9	1.1	0.8	0.7	0.9
Mitsubishi	96.0	53.4	37.5	34.7	1.1	0.6	0.4	0.4
Nissan	289.4	449.6	504.5	465.8	3.2	4.8	5.4	5.3
Subaru	70.5	65.7	74.6	75.1	0.8	0.7	0.8	0.9
Suzuki	35.9	26.8	24.3	37.9	0.4	0.3	0.3	0.4
Toyota	870.3	958.8	970.9	1,084.4	9.6	10.2	10.5	12.4
Others	113.0	147.9	144.4	158.1	1.3	1.6	1.6	1.8
Total domestic-built	7,801.4	8,114.7	8,065.4	7,375.3	86.4	86.7	86.9	84.6
Total imported	1,227.2	1,227.1	1,215.3	1,346.6	13.6	13.1	13.1	15.4
Total light truck sales	9,028.6	9,361.0	9,280.7	8,721.9	100.0	100.0	100.0	100.0
Total domestic-built cars & trucks	13,328.8	13,471.6	13,545.9	12,811.3	80.1	80.0	79.9	77.6
Total imported cars & trucks	3,310.2	3,376.2	3,401.8	3,691.4	19.9	20.0	20.1	22.4
TOTAL MOTOR VEHICLE SALES	16,639.1	16,847.8	16,947.8	16,502.7	100.0	100.0	100.0	100.0

Note: Totals may not add due to rounding. *Chrysler division only of DaimlerChrysler.

Source: Ward's Automotive Reports.

CAR & TRUCK SALES AND TREND DEMAND*(In millions of units)*Source: *Ward's Automotive Reports.*

is contributing to the cost increases being experienced for raw materials used by tire manufacturers.

To address the higher raw materials prices, industry participants have implemented a series of mid-single-digit price increases. Further price increases are likely, as selling prices still lag increased costs.

US sales down in 2007, could fall again in 2008

Customers continued to visit dealerships in 2007, where automakers offered a wide array of brand-new models, updated older models, and innovative features, together with incentives such as rebates and lower prices. Nevertheless, consumers were not buying as much as they did in 2006. Heavy price competition enhanced vehicle affordability, but pressured industry profitability.

As of late November 2007, Standard & Poor's was projecting that US light vehicle sales volume would total about 16.1 million units in 2007, down 2.4% from more than 16.5 million in 2006. For 2008, we are projecting a slight decline to 15.9 million. Standard & Poor's economic forecast for 2008 includes 1.9% growth in the US economy (as measured by real GDP) and an improved stock market, partly offset by a higher unemployment rate and a weak housing market.

Our near-term outlook for the relative performance of the Detroit Three automakers is negative. We expect that, overall, the Detroit Three will lose share to foreign carmakers — principally, the Asian brands.

The highly profitable light truck, minivan, and SUV segment is of special concern. Once

dominated by the Detroit Three, this segment faces increasing pricing pressure from successful foreign makers, as well as a shift to smaller, newer, more fuel-efficient vehicles. Standard & Poor's expects the Detroit Three's market share and profit margins in this sector to decline in coming periods. We anticipate that the category will continue to see the effects of heightened competition, with increased pricing pressure and discounting. We expect the domestic brands to continue to lose market share.

Parts and used vehicle markets

After a strong 2006, growth in the US replacement parts market may be limited in 2007 and 2008. According to estimates from the Automotive Aftermarket Industry Association, a trade group, the aftermarket industry's revenues totaled \$294 billion in 2006, up 9% from \$270 billion in 2005.

Automakers have been trying to wean themselves from aggressive incentives while reducing new vehicle inventory levels. This should help used vehicles retain or improve their value. According to Manheim Auctions of Atlanta, Georgia, which produces a used vehicle value index, the index, while down sequentially, was up, year over year, in October 2007 to 113.9 (January 1995=100). Although this level is below the multiyear peak of 116.3 reached in January 2006, it reflects an upward October year-over-year trend since the low in 2004. ■



INDUSTRY PROFILE

Competition goes into overdrive

The United States is the world's largest consumer market for light vehicles, a category that comprises passenger cars and light trucks. For 2007, Standard & Poor's expects new light vehicle sales in the United States to fall to about 16.1 million, compared with more than 16.5 million in 2006 and 16.95 million in 2005. As of late November 2007, we were forecasting another slight volume decline for 2008, to 15.9 million.

According to the US Census Bureau, revenues (including service, insurance, and other items) for new car dealers in the United States totaled an estimated \$683 billion in 2006. Standard & Poor's estimates that sales of new vehicles accounted for more than \$400 billion of that total and should exceed that amount again in 2007 and 2008.

In recent years, light trucks have become popular passenger vehicles. The category includes minivans, sport utility vehicles (SUVs), and pickup trucks that are used as substitutes for cars, as well as lightweight commercial vehicles such as delivery vans. In terms of units sold, light trucks (less than 10,000 pounds gross vehicle weight, or GVW) accounted for more than 94% of the total truck market in 2006.

Approximately 545,000 medium- and heavy-duty trucks were sold in the United States in 2006, up from about 495,000 in 2005 and 430,000 in 2004, and exceeding the prior high of 520,000 in 1999. (Medium-duty trucks weigh 10,000 to 33,000 pounds; heavy-duty trucks exceed 33,000 pounds.) Sales in 2006 benefited from buying ahead to comply with regulatory changes effected in 2007. Standard & Poor's expects sales volume of such vehicles to retreat to 410,000 in 2007 and 450,000 in 2008.

Participants in the medium-weight and heavy-duty commercial truck markets include Daimler AG, Freightliner Corp. (a subsidiary of Daimler that makes Freightliner brand trucks), Volvo Trucks North America Inc., PACCAR Inc., Navistar International Transportation Corp., and Mack Trucks Inc.

(acquired by Volvo in 2001). These segments of truck manufacturing are covered in the "Heavy Equipment & Trucks" issue of *Industry Surveys*.

The Detroit Three see dwindling market share

The "Detroit Three" (formerly known as the "Big Three") US automakers — General Motors Corp. (GM), Ford Motor Co., and Chrysler LLC — accounted for approximately 41.5% of passenger cars sold in the United States in 2006, with individual market shares of 20.8%, 14.1%, and 6.6%, respectively.

The balance of US car sales (58.5% in 2006, up from 34.0% in 1988) came from foreign nameplates. Most of these vehicles are produced in so-called transplant facilities — foreign-owned plants located in North America. In 2006, the top three foreign companies had a combined US car market share of 36.6%: Toyota Motor Corp. (18.7%), Honda Motor Co. Ltd. (10.8%), and Nissan Motor Co. Ltd. (7.1%).

In the light truck category, the Detroit Three dominate the US market. Ford, GM (maker of Chevrolet and GMC trucks), and Chrysler (maker of Dodge trucks and Jeep SUVs and recreational vehicles) account for some 67% of light truck sales. Among foreign automakers now expanding into the US light truck market are Toyota, Honda, and Nissan.

Overall, Detroit Three brands commanded 54.9% of the US light vehicle market (a category that comprises cars and light trucks) in 2006, according to industry publication *Ward's Automotive Reports*. This was down from 58.2% in 2005, 60.1% in 2004, and 61.8% in 2003.

Auto parts sector highly fragmented

The auto parts sector of the US auto industry is highly fragmented, consisting of thousands of parts suppliers that range in size from small shops to large multinational corporations. It comprises four lines of business: original equipment manufacturing, re-

placement parts manufacturing, replacement parts distribution, and rubber fabrication.

◆ **Original equipment manufacturers (OEMs).** These companies manufacture parts and components that automakers use in the assembly of new vehicles. Thousands of OEMs are independent firms; among the largest independents are Dana Corp., Delphi Corp., Goodyear Tire & Rubber Co., Johnson Controls Inc., Magna International Inc., Superior Industries Inc., Tenneco Automotive Inc., TRW Inc., and Visteon Corp. Some OEMs are subsidiaries of large diversified companies, such as Allied Signal Inc., Eaton Corp., General Electric Co., 3M Co., PPG Industries Inc., Textron Inc., and United Technologies Corp.

◆ **Replacement parts manufacturing.** Participants in the replacement market, also known as the aftermarket, produce parts and components to replace or supplement parts that were included in a vehicle's original assembly. Among the field's important players are ArvinMeritor Inc., Cooper Tire & Rubber Co., Dana Corp. (through its acquisition of Echlin Inc.), and Federal-Mogul Corp. As in the original equipment segment, aftermarket parts suppliers and distributors may be independent companies or subsidiaries of larger companies. Some firms, like Dana, participate in both the original equipment and replacement sectors.

◆ **Replacement parts distribution.** Companies in this category distribute automotive accessories and parts, such as air filters, light bulbs, and fuses, which replace or supplement original vehicle parts. Sales are primarily to automotive parts retail stores and fleet owners.

Genuine Parts Co. is by far the largest independent distributor of automotive parts. As of year-end 2006, it operated 58 US warehouse/distribution centers associated with the National Automotive Parts Association (NAPA), a leading US franchiser of auto parts/accessories stores and distribution centers, owned about 1,000 jobbing stores, and served more than 5,000 independent automotive parts jobbers. Its size and leading position in the industry notwithstanding, Genuine Parts represents only an estimated 5% to 6% of the highly fragmented automotive aftermarket.

◆ **Rubber fabricating.** Rubber fabricators manufacture the tires, belts, hoses, and other rubber products used in vehicles. Approximately 60% of rubber production for the auto industry is tire-related.

About half of worldwide tire production is estimated to come from three companies: Compagnie Générale des Établissements Michelin (France), Goodyear Tire & Rubber (United States), and Bridgestone/Firestone Inc. (Japan). Foreign-based tire manufacturers now own a substantial portion of US domestic capacity. Only two US tire companies are now publicly traded: Cooper and Goodyear.

According to estimates by the Rubber Manufacturers Association, a trade organization, US light vehicles (both new and used) accounted for shipments of about 288 million tires in 2006. The 4.6% decline (from 302 million units in 2005) primarily reflects lower demand for both original equipment and replacement tires. Standard & Poor's estimates that light vehicle volume will be down in both 2007 and 2008.

INDUSTRY TRENDS

The most important trends in the automotive industry generally involve two related developments: competition and globalization.

As more producers enter new markets around the globe, competition escalates worldwide. One consequence is the reduction of market share for the "Detroit Three" US automakers — General Motors Corp. (GM), Ford Motor Co., and Chrysler LLC — in their domestic market due to challenges from import brands.

Demand from automakers for larger, global suppliers has contributed to the consolidation of the US auto parts industry. Profit-margin pressure from rapidly rising costs has also been a factor.

In recent years, demand has grown for more safety features in vehicles and for high-end luxury models. Luxury vehicles often have the most advanced technology and features, including the latest safety and electronic devices.

Detroit Three losing market share

General Motors (GM) has led the US automobile industry in sales since 1930,

when it first overtook Ford. In 1978, GM's market share peaked at 47.7%. Afterward, it declined steadily, hitting 24.6% in 2006 (for cars and light trucks combined), down from 26.3% in 2005. In the first 10 months of 2007, GM's share was 24.0%, down from 24.8% in the corresponding period of 2006.

Ford and Chrysler also have lost ground in recent years. Ford's share declined to 17.3% in 2006, from 18.3% in 2005 and a peak of 26.2% in 1995. Chrysler's share fell to 13.0% in 2006 from 13.6% in 2005, and remains below its peak of 16.8% in 1998. In the first 10 months of 2007, Ford's share dipped to 15.7%, from 17.6% in the comparable period in 2006. Chrysler's share dipped to 12.7%, from 12.9%, during the same period.

Overall, the Detroit Three brands commanded 54.9% of the US market in 2006, according to weekly trade publication *Ward's Automotive Reports* — down from 58.2% in 2005, 60.1% in 2004, 61.8% in 2003, and 63.0% in 2002. For the first 10 months of 2007, the Detroit Three together claimed just 52.4% of the market, versus 55.3% in the comparable year-earlier period. The decline reflects their rivals' well-received new products, including light trucks, SUVs, and crossover-utility vehicles (CUVs), consumers' growing attraction to Asian and European nameplates, and relative weakness at Ford and GM.

Pace of market share losses should slow

J.D. Power Automotive Forecasting predicts that the Detroit Three will continue to suffer market share losses in the near term. The pace of losses should slow toward the end of the 2007–11 forecast period, as shown in the table entitled “US light vehicle production forecast.” (J.D. Power and Associates is a unit of the McGraw-Hill Companies Inc., which is the parent company of Standard & Poor's.)

GM is expected to show continued volume and share decline through 2009 but then stabilize as its restructuring begins to take hold. The automaker has a group of smaller CUVs that will be coming out in 2008; all are expected to focus on design, craftsmanship, and content. Ford has the most risk associated with its competitive position: its share is expected to bottom out near 15% of the market, which would place it in the No. 3 position behind Toyota Motor Corp. in 2008. Overall, Ford's product activity is expected to pick up after 2010. Chrysler's outlook is currently clouded by its recent sale to a private equity company, and we expect a further erosion of share over the forecast horizon to 14.2% by 2011. Chrysler suffers from new products that are not bringing in new customers, but rather are cannibalizing sales of other Chrysler products.

It is very difficult to argue with the success the Toyota Group has had. We expect

US LIGHT VEHICLE PRODUCTION FORECAST

(In thousands of vehicles)

VOLUME	2006	2007	2008	2009	2010	2011	2006–2011 CHANGE	
							VOLUME	%
General Motors	4,065	3,892	3,882	3,871	3,978	3,974	(91)	(2.2)
Ford	2,869	2,697	2,690	2,641	2,564	2,565	(304)	(10.6)
DaimlerChrysler	2,390	2,413	2,381	2,400	2,406	2,413	23	1.0
Honda	1,509	1,513	1,525	1,555	1,550	1,611	101	6.7
Nissan	1,019	1,091	1,095	1,105	1,112	1,120	100	9.9
Toyota	2,542	2,621	2,726	2,796	2,816	2,849	307	12.1
Total, top 6	14,395	14,226	14,299	14,367	14,427	14,532	137	1.0
TOTAL, all models	16,516	16,457	16,568	16,665	16,830	17,011	496	3.0
MARKET SHARE (%)								
General Motors	24.6	23.6	23.4	23.2	23.6	23.4	(1.3)	...
Ford	17.4	16.4	16.2	15.8	15.2	15.1	(2.3)	...
DaimlerChrysler	14.5	14.7	14.4	14.4	14.3	14.2	(0.3)	...
Honda	9.1	9.2	9.2	9.3	9.2	9.5	0.3	...
Nissan	6.2	6.6	6.6	6.6	6.6	6.6	0.4	...
Toyota	15.4	15.9	16.5	16.8	16.7	16.7	1.4	...
Total, top 6	87.2	86.4	86.3	86.2	85.7	85.4	(1.7)	...
TOTAL, all models	100.0	100.0	100.0	100.0	100.0	100.0	...	...

Source: J.D. Power.

growth to continue, just at a slower pace. J.D. Power estimates that Toyota will approach 17% of the market by 2009 and then hold in that area through 2011. Honda Motor Co. Ltd. appears content with slow managed growth. The new Accord and Pilot models will drive near-term growth, according to J.D. Power. Honda's lack of a V8 engine and true body-on-frame trucks are roadblocks to higher levels of growth, even as the market transitions to more fuel-efficient vehicles. Nissan is expected to see growth in 2008 with the new Altima and Altima Coupe and the launch of the Rogue in September 2007. Beyond 2008, the outlook is for share stability combined with mild volume growth. [For additional information on this topic, contact J.D. Power and Associates at <http://www.jdpower.com> or (248) 267-6800.]

Dawning of the age of CUVs

The automotive industry has been buzzing about crossover-utility vehicles, or CUVs, for the better part of 10 years. Crossovers are loosely defined as vehicles that have attributes from cars and trucks. They typically offer the ride, handling, and better fuel economy associated with cars, but the visibility, styling, and interior flexibility of trucks.

Until 2007, CUVs were always referred to as the next big "future trend." According to J.D. Power, the future is here, as the CUV has emerged as the only vehicle bodystyle that experienced growth in 2007. J.D. Power

is projecting that CUVs will end the year at a market share of more than 16%, surpassing the SUV bodystyle, with less than 13% of the market. In addition, CUVs are experiencing greater sales volume than SUVs. This is the first full year that US sales of CUVs will exceed 2.5 million units, up 18% from 2.2 million in 2006, and overshadow the SUV bodystyle by more than 500,000.

Over the next couple of years, J.D. Power believes the trend toward consumers purchasing CUVs will only intensify, as it sees a push toward midsize CUVs such as the GMC Acadia, Toyota Highlander, and Ford Edge. These vehicles act as the perfect substitutes for the midsize SUVs that owned the US market from 2000-04. Success in this segment will result in a 40% increase in the number of models, to more than 20 vehicles in the midsize CUV segment, by 2010. In addition to growth in midsize models, J.D. Power expects to see the smaller and more affordable premium CUV segment (BMW X3 and Acura RDX) explode over the next three years. Compact premium CUV volume of 65,000 units is forecasted for 2007 and is expected to grow to 225,000 units by 2010; this volume growth is supported by model activity. This segment will expand from four models by the end of this year to nearly 15 models by 2010.

Overall CUV sales volume is expected to reach 3.4 million units, up 30% from 2007 levels, by 2010, representing more than 20% of total light vehicle sales. In comparison,

US RETAIL SALES OF MOTOR VEHICLES, BY WEIGHT CLASS

CATEGORY	2002		2003		2004		2005		2006	
	UNITS	% OF TOTAL	UNITS	% OF TOTAL	UNITS	% OF TOTAL	UNITS	% OF TOTAL	UNITS	% OF TOTAL
PASSENGER CARS	8,103,223	47.3	7,610,481	44.9	7,505,932	43.4	7,667,066	44.0	7,780,758	45.7
Domestic	5,877,647	34.3	5,527,430	32.6	5,356,873	31.0	5,480,533	31.4	5,435,994	31.9
Import	2,225,576	13.0	2,083,051	12.3	2,149,059	12.4	2,186,533	12.5	2,344,764	13.8
TRUCKS	9,035,423	52.7	9,356,961	55.1	9,792,641	56.6	9,777,263	56.0	9,244,787	54.3
Light trucks, total	8,713,139	50.8	9,028,572	53.2	9,360,988	54.1	9,280,688	53.2	8,723,641	51.2
0-6,000 lbs.	6,068,352	35.4	6,266,475	36.9	6,457,738	37.3	6,585,786	37.8	6,143,299	36.1
6,001-10,000 lbs.	2,564,745	15.0	2,671,249	15.7	2,795,971	16.2	2,528,046	14.5	2,430,498	14.3
10,001-14,000 lbs.	80,042	0.5	90,848	0.5	107,279	0.6	166,856	1.0	149,844	0.9
Medium-duty trucks, total	176,253	1.0	186,425	1.1	228,456	1.3	243,783	1.4	260,573	1.5
14,001-26,000 lbs.	106,925	0.6	119,636	0.7	153,366	0.9	154,925	0.9	169,781	1.0
26,001-33,000 lbs.	69,328	0.4	66,789	0.4	75,090	0.4	88,858	0.5	90,792	0.5
Heavy-duty trucks (over 33,000 lbs.)	146,031	0.9	141,964	0.8	203,197	1.2	252,792	1.4	260,573	1.5
Total US sales	17,138,646	100.0	16,967,442	100.0	17,298,573	100.0	17,444,329	100.0	17,025,545	100.0

Source: Ward's Automotive Reports.

J.D. Power is expecting SUV volume to level off to 1.8 million units, down 10% from 2007. The CUV bodystyle will drive most of the industry growth over the next few years and will continue to be divided into various shapes and sizes.

Rise of certified preowned vehicles

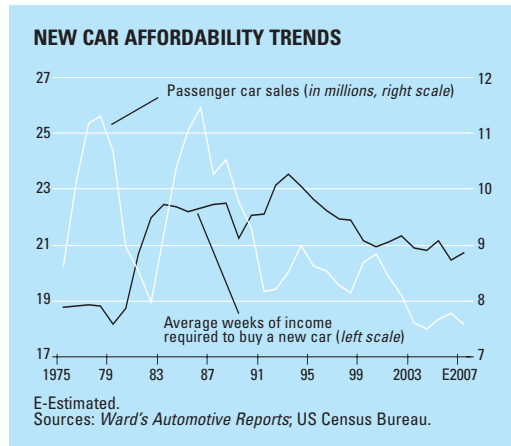
The buying and selling of certified pre-owned (CPO) vehicles has been steadily rising in recent years. CPOs are used vehicles, usually relatively late model year vintages, which are refurbished and tested by the dealership and are often offered to consumers with a manufacturer's warranty. CPOs reduce the uncertainty of used vehicle purchases for consumers, which are able to buy vehicles that are almost like new, with guarantees for a lower price and without the depreciation in value that is typical of new vehicles. Although the cost of refurbishing vehicles is greater for dealerships, the retailers are able to sell these vehicles to consumers at higher prices than typical used vehicles.

As a result of the aforementioned benefits to buyers and sellers, CPO sales volume rose 28% between 2002 and 2006 to 1.64 million vehicles per year. Although the pace of growth slowed in 2006, we expect this marketing technique to continue its uptrend.

In a conference call for investors in October, publicly traded auto dealer Group 1 Automotive Inc. attested to this trend, as it noted that CPO sales as a proportion of its used car sales continued to rise, reaching 25% in the third quarter of 2007 versus 16% in the year-earlier period. It said CPO vehicles are "better" vehicles and typically cost more. We think other dealers will push CPO sales to offset weakness in new vehicles markets and as an alternative to traditional used vehicles sales.

More hybrids coming

Spurred by the success of Toyota's Prius hybrid vehicle, other automakers are presenting their own hybrid vehicles. A hybrid vehicle utilizes two distinct but interdependent forms of propulsion, usually a gasoline engine coupled with an electric motor. After starting with a hybrid truck, the Chevrolet Silverado, GM recently introduced its first hybrid sedan, the Saturn Aura. We view this



as only the beginning of the emergence of hybrid vehicles. We expect other companies that have not already done so to introduce hybrid vehicles in the next several years.

These alternative fuel plans are not limited to hybrid gas-electric vehicles. Other proposed technologies include E85 ethanol, biodiesel, and other flexible fuels around the world. E85 ethanol is an alternative fuel that is a blend of 15% unleaded gasoline and 85% ethanol. Biodiesel is under development and is a clean alternative diesel fuel that is produced from renewable sources.

According to a J.D. Power and Associates report, the US hybrid-electric vehicles market should see a 247% rise in sales volume between 2007 and 2011. Growth — from about 346,000 vehicles in 2007 to 854,000 in 2011 — should be driven by an increase in hybrid models available in the US. As a percentage of US market volume, this translates into an increase from 2% of sales in 2007 to 5% in 2011.

Emerging markets more important to US automakers and suppliers

With greater competition, along with relatively slow growth and high manufacturing costs in the mature markets of the United States and Europe, US automakers and their suppliers are increasing their presence in emerging markets. Emerging markets, especially China, offer opportunities to carmakers, in terms of both sales in the faster growing markets and lower manufacturing costs due to lower labor rates. According to statistics from the China Automobile Industry Association, China's auto production advanced from more than 2.0 million cars in

2001 to over 7.2 million in 2006. For 2007, the country's automobile production volume is expected to climb to 8.5 million, providing additional opportunities for US automakers.

Automakers and their parts suppliers have been closing plants in higher-cost regions and opening plants in lower-cost countries. Cost savings from production in lower-cost regions have helped companies' manufacturing margins and have offset other negative factors, such as higher raw material costs. In addition, suppliers have been following their clients globally to serve corporate customers that seek components and systems from suppliers that can produce or deliver in multiple markets, as well as manufacture at lower prices.

While growth rates may vary, and manufacturers report their regional revenues and profit contributions with different methodologies that make direct comparisons difficult, the growing importance of Asian and other emerging markets is clear. The trend of generally higher sales and profits coming from regions such as Asia is illustrated by GM. The company saw revenues from Asia-Pacific more than double in 2006 to \$15.5 billion, from almost \$7.0 billion in 2004. As a percentage of revenues, the region climbed from 3.6% to 7.5% of GM's sales. During the same time, the company's profits from that region jumped 62% to \$1.2 billion.

Among large US suppliers, bankrupt Delphi Corp. saw its Asia-Pacific revenues surge 75% between 2004 and 2006, even as it struggled in the market. The region accounted for 7.3% of Delphi's revenues at the end of the period, up from 3.8% at the beginning. Even as overall sales at Visteon Corp. have shrunken, it saw sales in Korea, China, India, Japan, and other Asian countries collectively advance 42% to \$2.7 billion during the same period; the region accounted for nearly 25% of Visteon's sales in 2006, up from 10% in 2004.

As these regions grow economically, we expect local demand for their vehicles to rise and American manufacturers to cater to producing parts in these regions. This should partly offset weakness in the US market for suppliers of the Detroit Three automakers.

Shrinking supply base

The number of US automotive suppliers, currently counted in the thousands, has been

steadily shrinking. Globalization and reduced sales volume from traditional US automakers have contributed to this trend. High material and labor costs have hurt the financial condition of domestic automotive suppliers and have contributed to a series of supplier bankruptcies. Other suppliers have been (or are in the process of being) acquired or divested, or they are just exiting the business, further reducing the ranks.

Suppliers have been consolidating as they have become more global. They have expanded their product offerings and gained economies of scale to remain price-competitive.

While the number of companies filing for bankruptcy protection peaked in October 2005 (when Delphi filed for Chapter 11 bankruptcy protection), the trend has continued. Companies continue to struggle with high labor and healthcare costs, rising prices for raw materials and transportation, lower production at the Detroit Three automakers, and pricing pressure.

In October 2006, Dura Automotive Systems Inc. of Rochester Hills, Michigan, with \$2.1 billion in sales in 2006, became the latest publicly traded US parts maker to file for voluntary petitions for reorganization under Chapter 11 of the US Bankruptcy Code. If the pressure does not let up, other parts makers could file for bankruptcy protection, go out of business, or put themselves up for sale.

Changing aftermarket distribution channels

According to Tenneco Inc., an automotive parts supplier, the number of retail parts stores in North America increased 50% in the 10 years ended 2006, while the number of jobber stores fell more than 17%. Large automotive aftermarket retailers are expanding their commercial business with auto parts installers that have historically purchased from local warehouse distributors and jobbers. As a result, retailers can offer premium brands to commercial customers that prefer them, and standard products to individual customers.

Rising costs

For automakers and their suppliers, the cost of doing business has increased. Raw materials costs, as well as employee benefit costs (including healthcare and retirement costs), have been growing in recent years. Rising oil

prices have increased the cost of production for companies using its derivative products as input, as well as the cost of transportation and distribution.

Increased demand from China and other foreign producers for raw materials, such as steel and resins, has driven prices sharply higher for these manufacturing inputs. Steel prices have also been rising because of the steel industry's consolidation, which has reduced automakers' bargaining power. According to Standard & Poor's Equity Research, contract steel prices should continue to rise for automobile manufacturers and parts suppliers.

Employee benefit costs have been increasing. Although healthcare costs, in particular, have risen faster than inflation in recent years, the recently negotiated contracts between the Detroit Three and the United Auto Workers (UAW) union will lead to a shift in healthcare costs from the automakers to the unions. However, due to the transitional time needed to implement the agreements, the automakers will likely not see the benefits until 2010.

Growth in electronics

Consumer demand for improved safety features, entertainment systems, and communications devices in vehicles is driving growth in automotive electronics. The global automotive electronics market is projected to grow at an annual pace of 7.5%, from \$86.5 billion in 2004 to \$124.0 billion in 2009, according to industry research firm Freedonia Group. By 2010, electronics are expected to account for nearly 40% of an average vehicle's value. Electronics are used in a wide variety of safety features, including tire pressure monitoring devices; electronic damping controls, which

adjust shocks to road conditions to increase stability and comfort; and electronic stability programs (ESPs), which apply distinct pressure on each wheel to prevent the loss of control that leads to rollovers.

Entertainment and information systems, such as global positioning system navigation systems and satellite radios, are becoming increasingly popular with consumers. These value-added products are particularly proliferating in premium vehicles. Automakers can typically charge higher prices for vehicles that include more of these features. In addition, premium car buyers are willing to pay more for increased safety.

The leading parts suppliers in the development of automotive electronics are Delphi, Visteon, Germany's Robert Bosch GmbH and Siemens AG, and Japan's Denso Corp. Notably, Delphi is focusing on growth in its electronics, safety, and entertainment product lines, as it plans to sell off noncore operations. Just as automakers can generally charge higher prices for vehicles that include value-added parts, they are typically willing to pay greater prices to suppliers for these parts.

While US automakers have squeezed parts suppliers' profit margins in recent years, forcing long-time suppliers to lower prices or risk losing critical contracts, they have continued to pay higher prices for automotive electronics.

Governments, consumers demand safety features

Evolving government regulations and a shift in consumer sentiment toward improved safety are boosting sales of automotive safety features. In particular, the number of airbags in new vehicles is escalating. While front driver and front passenger airbags have become standard features in almost all cars, automakers are adding side airbags and inflatable curtains because of strong consumer demand. The percentage of new North American light vehicles with side-impact airbags is projected to increase from 36% in 2005 to 57% in 2010, while vehicles with inflatable curtains will grow from 25% in 2005 to 58% in 2010, according to economic and market forecaster Global Insight.

Inflatable curtains, which deploy from the ceiling, protect an occupant's head in a side-impact crash. Side airbags, which protect the chest during side-impact crashes, are general-

LIGHT VEHICLE PRODUCTION BY REGION

(In thousands of vehicles)

	2002	2003	2004	2005	R2006
North America	16,369	15,874	15,773	15,753	15,255
South America	1,901	1,922	2,517	2,816	3,026
European Union	16,444	17,472	17,765	17,793	17,962
Other Europe	2,512	1,909	2,355	2,259	2,521
Asia & Oceania	18,110	20,363	22,588	23,860	26,094
Africa	364	379	401	491	555
Total	55,700	57,918	61,399	62,973	65,413

R-Revised.

Source: International Organization of Motor Vehicle Manufacturers.

ly situated in the door or seat. Although not yet government-mandated, consumers are increasingly requesting these features. Head-protecting side airbags reduce the risk of a fatality during a side-impact collision by 53%, according to research conducted by the Insurance Institute for Highway Safety, an independent research organization funded by the automotive insurance industry. Knee airbags also are beginning to appear in luxury vehicles, although they are not generally included as a standard feature.

Other safety features that are rapidly growing in popularity include antilock braking systems (ABSs) and ESPs. ABSs automatically pump the brakes and apply pressure selectively to prevent brake lockup. ESPs, which utilize antilock braking systems, straighten the trajectory of a vehicle by applying brake pressure when a computer senses it is moving off-course.

New government regulations are forcing automakers to install additional safety features. In the spring of 2005, after three years of wrangling, the National Highway Traffic Safety Administration (NHTSA), part of the US Department of Transportation, passed a rule requiring that new vehicles be equipped with tire pressure monitors. (The rule was a response to the recall in 2000 of Firestone tires linked to more than 270 fatal highway accidents.) In December 2004, the NHTSA also announced a new regulation requiring lap and shoulder belts in all rear seats. (Many vehicles come equipped with only a lap belt for the middle rear seat.) The rule was established to protect young children seated in that position. The new rules are being phased in during the 2006–08 model years.

In the United States, new safety features are usually forced on automakers by regulation; in Europe, in contrast, such changes are most often generated by customer demand. In fact, many safety devices were first offered in European vehicles before migrating to the United States. As a result, European parts suppliers are leaders in this segment. European producers were the first to make airbags standard in most models. European manufacturers have also added side airbags at a more rapid pace. Mercedes-Benz and Volvo began installing side airbags (or chest bags) in 1994 and 1995. (Ford acquired Volvo in 1999.)

Affordability improves

After years in which price increases outstripped income growth, several developments — including heightened competition, consumer demand for affordability, currency fluctuations, and cost cutting by manufacturers — have kept a lid on automotive prices. In 1973, the average US citizen needed 17.5 weeks of annual family income to buy an average-priced car, a figure that rose to 22.6 weeks by 1995. By 2006, the figure had declined to 20.5 weeks. Standard & Poor's estimates that this figure will remain in the area of 20.5 weeks in 2007.

Heated competition has contributed to the weak automotive pricing environment. With overall improved quality among most manufacturers, buyers are more inclined to use price to differentiate similar offerings. When one manufacturer offers incentives, such as rebates or discounted financing, the others generally follow suit or risk losing market share. Customers, armed with dealer cost information from consumer publications and the Internet, have learned to drive a hard bargain when negotiating the purchase of a vehicle.

HOW THE INDUSTRY OPERATES

The automobile industry is engaged in the design, production, marketing, sale, and servicing of motor vehicles. Many different companies and participants are involved in production and sales, and these processes require collaborative efforts.

Made in Detroit — and elsewhere

Automobiles are built in factories around the world: in North and South America, in Eastern and Western Europe, and in Asia. Despite the industry's globalization, however, the plants of the Detroit Three US automobile manufacturers — General Motors Corp. (GM), Ford Motor Co., and investment firm Cerberus Capital Management, L.P.'s Chrysler LLC unit — are still concentrated in the area of Detroit, Michigan.

Foreign companies have significant production capacity in the United States, mostly in the Midwest. By increasing in-region development and procurement, these companies can better adapt to US tastes and preferences while insulating

themselves from currency fluctuations. Although foreign companies' share of US production had not changed much over the decade that began in 1992 — it was 25% in 2002, up slightly from 23.5% in 1992 — it is up dramatically from zero before 1982, the year that Honda Motor Co. Ltd. opened the first transplant factory in Ohio. Nissan Motor Co. Ltd. followed in June 1983, while Toyota Motor Corp. started its US manufacturing operations in December 1984 through a joint venture company. In addition, because of lower production at each of the Detroit Three and higher overall foreign brand production, foreign brand share of US production climbed to 36% in 2006, according to *Ward's Automotive Yearbook*.

We expect further increases in foreign-owned capacity as Japanese and European automakers transfer production of luxury vehicles to North America. In addition, more capacity is being added as Japanese automakers address their lack of penetration in the light truck market by introducing new products. Given the increasing presence of non-US automakers, intense competition will likely continue in the US automotive market for the foreseeable future, regardless of economic conditions.

From drawing board to dealership

In the manufacturing process, raw materials such as steel, glass, plastic, and rubber are first procured from numerous suppliers. They are made into parts at component facilities and shipped to assembly plants, where thousands of workers put the vehicles together on assembly lines. When going full throttle, plants operate two or three eight-hour shifts per 24 hours. In North America and Europe, automakers' work forces are often organized by labor unions.

Automakers' operations are integrated to varying degrees. However, all work with independent parts producers is frequently located near the assembly plants. Recently, automakers have come to depend on suppliers to assume greater design and engineering responsibilities in creating new parts and systems.

Computers revolutionize design

Before production begins, automakers undertake extensive efforts to ensure that new

designs will appeal to consumers. In the past, the time between a new model's first sketch and its production was as long as five years. Today, most automakers have reduced that time to about three years, and they aim to reduce it to less than two years. In fact, it is now possible to move from a sketch or a concept to an actual prototype in less than a year. A "concept car" or prototype may not be brought to production, however, if it is not well received in market testing or is not cost-effective to produce.

The design process, in particular, has been greatly expedited with the help of computers. For example, it once took 12 Ford workers 12 weeks to produce a clay model, an essential step in the design process. Now, a single designer can take an idea on a computer screen to an animated video of a vehicle in three weeks. In addition, the Detroit Three US automakers are implementing a labor practice called "simultaneous engineering." It calls for designers and engineers from various specialties to collaborate during a vehicle's design phase in order to reduce or eliminate redesign work during the later developmental stages.

Simplifying parts and processes

In automobile manufacturing, fewer parts mean lower production costs and a reduced likelihood of assembly errors. Thus, the Detroit Three are trying to cut the number of parts used in each component and vehicle by redesigning existing models as well as by creating altogether new vehicles. Typically, with each product overhaul or redesign, part counts have dropped by 20% to 30% for individual car models, and by as much as 50% for certain subsystems like bumpers and airbags.

When redesigning vehicles, automakers try to save production costs and improve quality by reducing the number of stampings on sheet-metal parts, such as hoods, trunks, fenders, and doors. In the past, these parts usually required between five and seven stampings; today, three stampings are common.

Manufacturers are lowering costs by minimizing industrial waste and pollution. Nearly all component manufacturers now deliver their goods in reusable shipping containers. This saves money for the automakers and their suppliers by eliminating excess packaging and disposal costs.

Reducing the number of labor hours required for the final assembly stage has been a high priority for automakers. Greater proportions of components are being made at parts facilities and delivered to the assembly plants on a just-in-time basis. For example, virtually all seating today is produced off-site. Automakers send daily or even hourly orders for specific seats, which are then produced and delivered. Years ago, seats were produced at the assembly plant as needed from an inventory of seating parts, components, and other materials.

Close ties with dealers

Finished vehicles are sold to franchised dealerships, which are independent businesses. Automakers record these sales (net of marketing costs) when the vehicles are shipped to the dealers. They work closely with and share many costs with dealers in developing national, regional, and local marketing plans, and they offer discounts to dealers as well as directly to retail customers. In addition, automakers' financing divisions sometimes offer deals to consumers that may be better than those available from other financing sources, such as banks and credit unions. For example, a manufacturer's in-house finance unit might offer consumers 0% financing on auto purchases in order to stimulate sales of that automaker's vehicles.

As independent businesses, dealers assume the risk of reselling the vehicles they buy. Today, dealers are normally well-capitalized firms that operate multiple franchises in order to protect themselves from sales swings in individual brands and models. While automakers offer guidance in making marketing and pricing decisions, dealers are free to set vehicle prices, and they may or may not offer customers the discounts that automakers provide.

Matching production to inventories

Car dealers usually aim to stock a 60-day supply of vehicles in inventory. When the daily sales rate is rising, however, dealers increase their inventories so that they will not lose sales due to a lack of supply.

Changes in dealer inventory levels have a ripple effect on auto production. For example, the US domestic branded inventory of light trucks stood at 85 days of supply

(based on the prior month's selling rate) at the end of August 2006, a number considered above optimum by Standard & Poor's. As a result, GM, whose brands we believe had inventory levels above the industry average, announced overall fourth-quarter 2006 US vehicle production cuts of 12% (versus the levels in 2005, including 15% lower truck volume), to bring inventories more in line with demand.

These cuts, and production reductions at other domestic automakers, helped the industry inventory of light trucks drop to levels that were somewhat more reasonable by year-end 2006. While the total US and foreign light truck inventory rose to 77 days (above the traditional 60-day target), total sedans were at a lean 44 days, with even domestic brands at only 50 days, suggesting the need to replenish car inventory levels amid a consumer shift to smaller vehicles. As of November 1, 2007, total sedan industry inventory was 64 days, although domestic brands were slightly higher (70 days). Light trucks were somewhat more inflated: 81 days for the overall group and 85 days for domestic brands.

Regulatory crosscurrents

Automakers are often caught between conflicting regulatory requirements and market demands. They must comply with government regulations regarding safety, fuel consumption, and pollution control, each of which typically has repercussions on the vehicle's performance in other areas. For instance, the most effective way to improve a car's fuel economy is to lighten its weight. However, doing so increases its vulnerability in collisions, making the job of designing a safe vehicle more challenging. Meanwhile, pollution regulations, which are periodically tightened, require emissions equipment that hurts fuel economy.

Compliance with government rules can also clash with consumer demand. For much of the past decade, consumers have clamored for sport utility vehicles (SUVs) and for larger and more powerful engines. These desires have been in direct conflict with the government's goal of reducing fuel consumption, because large-engine cars and SUVs consume more fuel than do smaller vehicles. The need to satisfy opposing regulatory and consumer

demands has generally driven vehicle costs up, forcing automakers to turn to ever-more complex solutions.

Alternative fuel and hybrid vehicles

All domestic and most foreign automakers are developing the technology to use alternative fuels (such as ethanol, methanol, propane, or natural gas) or electricity derived from batteries or solar power. Some are actually marketing modified vehicles that can run on either gasoline or alternative fuels. Sales of such alternative fuel vehicles are still relatively small, but demand is rising, and some automakers have waiting lists of buyers.

Hybrid vehicles are those with two or more sources of energy. In this category, foreign companies have taken the lead. Toyota and Honda, for example, offer hybrid vehicles that alternate between gasoline and battery-powered electricity. US automakers have been resistant to hybrid vehicles, which they see as money losers; instead, they have been focusing on alternative fuel technologies, such as fuel cells. The hybrid market, however, has become difficult to ignore. GM began selling hybrid vehicles in late 2005, after Ford had already begun selling its Ford Escape, the first hybrid SUV. Since then, additional models have been offered for sale or are in development. (For more information, see the "Industry Trends" section of this *Survey*.)

The benefits of hybrid and alternative fuel vehicles include cleaner emissions and lower operating costs compared with traditional vehicles. California, a huge auto market that typically sets precedents for federal environmental acts, has enacted increasingly strict emissions regulations. In addition, when gasoline prices rise sharply, as they have in 2007 through late November, the appeal of hybrid cars, such as Toyota's updated Prius, which can get mileage upward of 45 miles per gallon, is further enhanced.

Recall rules passed

Beginning in the summer of 2000, reports that faulty Firestone brand tires mounted on Ford Explorer SUVs had resulted in more than 200 deaths spurred regulatory changes affecting the automotive industry. In November 2000, the Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act was signed into law.

The TREAD Act requires automotive vehicle manufacturers to quickly inform the

National Highway Traffic Safety Administration (NHTSA) about problems with their products in the United States or abroad. Under the law, the NHTSA developed and implemented a new dynamic test on auto rollovers in order to inform consumers. The legislation's goal is to enhance information flow in detecting and speeding the correction of safety-related defects in automobiles, equipment, and parts.

Heavy capital commitments

Large capital commitments are required to keep pace with product development and model changeovers. Capital budgets vary among the Detroit Three, with Ford and GM generally spending the most, and Chrysler, which is less vertically integrated, spending the least. With outsourcing on the rise, some automakers are requiring that their suppliers pick up an increasingly large share of capital spending.

◆ **General Motors.** GM's capital investments peaked in 1985 and 1986, when spending on product redesign and plant construction and modernization for the two years totaled \$22.8 billion. For 1991 through 1994, the average annual global expenditure dipped to about \$5.4 billion.

By 2001, as the company invested in new plants and machinery upgrades in the United States and Europe, it increased its capital expenditures to \$8.1 billion (excluding \$472 million of capital expenditures for Hughes Electronics). This increase is even more astounding because it excludes outlays from GM's Hughes Defense Operations and the Delphi Automotive parts business, which were divested and spun off, respectively. (GM sold the remaining parts of Hughes Electronics in 2003.)

GM's worldwide capital expenditures totaled \$7.9 billion in 2006. This level of commitment reflects the company's efforts to improve plant efficiency and product quality, introduce new and updated products more frequently, and expand its global presence. While this total is substantial, it is still lower than the mid-1980s peak, both in absolute dollars and as a percentage of sales. For 2007, we expect capital outlays to rise slightly, to about \$8 billion. We think that number could remain at around \$8 billion in both 2008 and 2009.

◆ **Ford.** Up from an average of \$3.5 billion in the early to mid-1980s, Ford's annual capital expenditures had generally exceeded \$8.0 billion worldwide in recent years, as the firm spent heavily to update its vehicles and power trains (engines and transmissions). Outlays, however, were just \$6.8 billion in 2006; we think they will rise to about \$7.0 billion in 2007, followed by a similar amount in 2008.

◆ **Toyota.** Although Toyota is not a Detroit Three member, at year-end 2006, Toyota was the second largest vehicle manufacturer in the world based on annual sales volume, and it has a growing sales and production presence in the United States. For the fiscal year ended March 2007, the company had worldwide automotive capital outlays of ¥1.57 trillion (about \$12.8 billion at June 7 exchange rates), up from ¥1.53 billion spent in the fiscal year ended March 2006. We project continued strong investment in a similar range for the fiscal year ending March 2008.

Competition redesigns the market

The US motor vehicle market, which domestic automakers divided among themselves as an oligopoly from the 1950s through the early 1970s, has since become the world's most vigorously competitive auto market. Many foreign automakers entered the open US market in the early 1980s. Once established, they seized significant market share by addressing shifting consumer tastes and the quality shortfalls of domestic products. Japanese vehicle manufacturers were particularly successful in these regards, steadily expanding their market share at the expense of the Detroit Three.

Foreign competition forced domestic automakers to solve underlying organizational problems and address poor product quality. After a two-decade slide in market share, which culminated in disastrous financial performances in the early 1990s, the Detroit Three took extensive actions to improve their designs and streamline their manufacturing processes. As a result, product quality and design are becoming less of an issue in differentiating foreign and domestic manufacturers.

Rising competition in North America and Europe has restricted manufacturers' pricing power. Vehicle price increases have been limit-

ed in these markets; in some cases, vehicles are priced the same as or lower than previous models, despite containing more features.

The selling process

The battle for sales takes place mainly on the dealership floor, where price and service are the primary weapons. Although price competition is generally intense, dealers have some flexibility to raise or lower prices in response to consumer interest in a given vehicle model. Today, many products sell within a tight price range.

In such a market, dealers are differentiated by their customer service. Service quality must be honed day in and day out; any gains in this area can be achieved only over a long period. Any advantage can quickly be lost if poor service generates unfavorable publicity.

Pricing factors

Several factors can force retail auto prices to rise. Over time, consumers come to expect as standard equipment features once offered as optional. New safety or emissions-control items may be required to comply with government regulations. Prices may also rise as consumer demand for a model increases.

Competition pressures manufacturers and dealers to lower prices. Lower automobile prices can be achieved through higher unit production volume, cost savings on parts and labor, and improved manufacturing efficiencies. When costs are reduced through innovation, savings can be shared between manufacturer and consumer, so profits can still rise. However, when prices are reduced solely to stimulate demand and there are no offsetting cost savings, profitability declines.

When sales lag, automakers use numerous tactics to stimulate demand, including discounts and cash rebates. Dealers can — and often do — give their own discounts in addition to those offered by manufacturers. An auto company's captive finance subsidiary can spur sales by offering car buyers financing at lower interest rates than those available elsewhere. Alternatively, manufacturers may eliminate options on a particular model to offer buyers a low-priced alternative.

Costs for rebates and other marketing tactics, such as cash back, discounted financing, and employee-discount-for-all-buyers, have been rising since the end of 1996. This trend

of using rebates and incentives to stimulate demand likely will continue, reflecting greater competition.

Leasing plays a role

In the distant past, the practice of leasing cars was largely limited to businesses that maintained fleets of vehicles and to individual drivers, generally professionals, who traded in their cars frequently. During the 1990s, however, the practice became widespread among ordinary consumers as well. Automakers and dealers regard leasing as a way to overcome buyer resistance to high prices and fears that vehicle resale values will not hold up.

Leasing protects consumers from the uncertainties of resale values when the time arrives to trade in their cars or trucks. After the two- or three-year leases expire, consumers return the vehicles to the dealer. The automaker's finance subsidiary then assumes the risk of reselling the car. Thus, the automakers themselves take the gain (or loss) on the used vehicle. This strategy has concerned the investment community. If automakers misjudge their vehicles' resale values and do not charge sufficiently high monthly lease prices, they could suffer losses when reselling the vehicles, hurting profits and possibly stock values. In fact, declining vehicle residual values had caused some car companies, such as GM, to reduce their commitment to leasing earlier in this decade. Since 2005, though, leasing as a percent of retail vehicle has been rising.

In the first half of 2007, 20% of retail vehicle sales were accomplished via leasing, according to the Power Information Network, a division of J.D. Power and Associates. (J.D. Power and Associates is a unit of the McGraw-Hill Companies Inc., which is the parent company of Standard & Poor's.) This is flat with the comparable year-earlier period, but is higher than in 2005 and 2004. Standard & Poor's believes that with higher interest rates compared to 2004 and 2005 levels, some automakers are looking to use attractive lease rates (instead of cut-rate financing) to lure customers into dealerships.

Demand factors

The economic environment naturally affects demand for automobiles. Cars are a

major purchase for most families, and consumers need to feel comfortable before they spend so much of their hard-earned money. During periods of sustained economic growth and plentiful employment, sales typically rise as customers feel flush and confident enough to buy new vehicles. Conversely, when the economy weakens and jobs are hard to come by, consumers are more likely to delay the purchase of new vehicles.

Other factors affecting new car sales include changes in style, engineering, safety, and quality (which hasten the obsolescence of existing models), and the cost and availability of gasoline and insurance.

Safety has captured vehicle buyers' attention in recent years and has become a pervasive theme in automakers' ad campaigns. In response to consumer demand for safer vehicles, automakers have made wide use of components such as airbags and antilock brake systems.

The world of auto parts

Auto parts manufacturers produce original parts and accessories for new vehicles, replacement parts and accessories for older vehicles, or both. The automotive business provides the majority of revenues and profits at most of these companies. At some diversified firms, however, nonautomotive operations (usually some sort of manufacturing business) account for more than half of total sales and earnings.

Online procurement has changed the automotive parts business. Because of the increased price transparency created by online competitive bidding, selling prices for commodity items are often pressured. However, value-added products are generally less affected.

A dependent relationship

Parts suppliers are an important part of the vehicle manufacturing process. Automakers such as GM and Ford design and market vehicles, but they outsource production of the vehicle parts to relatively large parts manufacturers called Tier 1 (T1) suppliers. T1 suppliers, in turn, subcontract production of some parts among thousands of smaller manufacturers called Tier 2 (T2) and Tier 3 (T3) suppliers.

T1 suppliers typically have multiple sources for parts. Nonetheless, they often strive to maintain a diversified T2/T3 parts supplier base in order to guarantee a steady flow of parts.

If T2 and T3 suppliers run into financial difficulties, they can create costly problems for the automobile and T1 parts makers by interrupting the production of vehicles. Therefore, when suppliers farther down the supply chain have financial or manufacturing difficulties, carmakers and Tier 1 suppliers are likely to help in order to maintain timely parts production.

The cost of supplier distress can absorb more than just cash; it also can demand management time and attention. In addition to providing loans and making higher than contractually required payments for parts, some T1 companies, such as Delphi Corp., have committed staff to help the smaller companies with purchasing and manufacturing.

Original and replacement parts

Original equipment manufacturers (OEMs) and replacement parts makers alike tend to specialize in a few items that require a high degree of skill and efficiency to manufacture. Their ability to spread outlays for research, product development, and tools and dies over several contracts gives them an important cost advantage over automakers' parts divisions. In addition, OEMs and aftermarket parts suppliers are less likely to be unionized and thus more likely to have lower labor costs than auto manufacturers that run unionized plants.

While they are similar in some respects, OEMs and replacement parts makers diverge in others, as outlined following.

◆ **Original equipment sales.** For OEMs, equipment sales depend on the number, size, and complexity of cars and trucks produced in a given year. Another variable is the percentage of any given part that automakers produce captively.

The equipment made by OEMs usually is sold directly to auto manufacturers. However, some of it is distributed as replacement parts to the aftermarket, which comprises new car dealers, a few major parts distributors, thousands of smaller jobbers, and other local firms.

For many large manufacturers of auto parts, the backbone of the business is original equipment sales. With the US market's annual sales of more than 16 million light vehicles, OEMs benefit from the ability to leverage their expertise across models and customers and into the aftermarket. Original equipment is a cyclical business, however, and changes in the economic environment can cause sales to fluctuate considerably from year to year.

◆ **Replacement parts sales.** Sales of replacement parts have traditionally been more stable than original equipment sales, because the number of cars on the road, especially older models, is in a long-term uptrend. Variables affecting replacement part demand include the quality of original equipment (longer-lasting, higher-quality equipment reduces demand for replacement parts) and the number and age of cars on the road. Replacement parts are distributed to the aftermarket via car dealers, gas stations, parts distributors, small jobbers, and other local firms.

Automakers are less likely to produce replacement parts captively, as demand is unknown. This increases opportunities for aftermarket vendors. In recent years, however, replacement parts have experienced declines in unit sales, largely because of the improved quality of the original equipment.

OEMs' integral role in auto production

In the past, original equipment manufacturers sold their products to manufacturers largely by signing annual contracts that covered one model year. The contracts were generally elastic with respect to price and volume deliveries.

Today, however, manufacturers normally award contracts for the life of a vehicle model, provided the supplier agrees to specific targets for productivity increases that offset inflation for the manufacturer and also can lower per-unit prices. Automakers share with suppliers part of the savings that they help to achieve, in order to encourage and reward their loyalty to corporate goals.

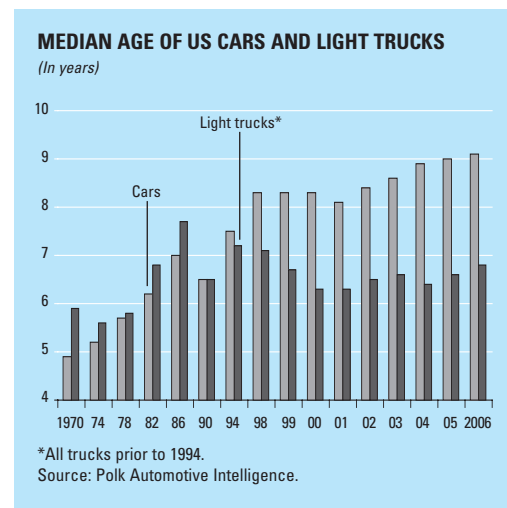
Original equipment parts suppliers thus play a large role in production programs and bear greater responsibility for the programs' outcomes. While automakers give parts mak-

ers specific goals for cost, quality, performance, timing, and product features, they leave them to their own devices to find the appropriate solutions. Given just-in-time inventory pressures, suppliers must locate their facilities near the automakers' production sites or risk losing business. Companies that meet the automakers' needs can expect to receive long-term contracts and expand their businesses.

Parts makers help automakers by enabling them to accelerate the introduction of new car lines, by sharing the high cost of developing new models, and by minimizing automakers' exposure to damaging strikes (supplier strikes tend to be smaller and less frequent than those of carmakers). Key suppliers are now involved in the earlier design phases of new products or processes, helping to reduce component costs.

The tire market

According to estimates by *Modern Tire Dealer*, a monthly trade publication, 54 million tires were shipped to automakers in 2006 for new cars and light trucks, and 234 million replacement tires were delivered for sale. According to *Modern Tire Dealer*, total industry (original and replacement) sales volume for light vehicles decreased 4.6% in 2006, dragged down by lower vehicle production figures and diminished demand. As tire replacements cannot be deferred indefinitely and as we expect overall vehicle production to fall in 2007, tire volume should be flat to down slightly for the year. However, we expect a rebound of 1% to 3% in 2008.



With the exception of bias-ply temporary spare tires, radial tires have accounted for all original tires installed on new light vehicles (passenger cars, minivans, SUVs, and pickup trucks) for many years. The increased popularity of high-performance speed-rated radial tires, which wear out much faster than do conventional radials, has helped to boost tire replacement frequency.

On a unit basis, tire sales to the aftermarket are much more profitable than those to automobile producers. One reason is that automakers wield enormous buying power and can negotiate favorable prices. Nonetheless, tire makers strive to obtain original equipment contracts, which can mean a larger market share than a supplier can get in the aftermarket. In addition, when a supplier ships huge numbers of tires directly to an auto manufacturer, its distribution expenses are greatly reduced, and it incurs no advertising costs. Furthermore, car owners have a marked propensity to replace tires on their cars with the same brand that was originally installed. Thus, OEM contracts can mean future profits for tire manufacturers.

The rest of the auto-related rubber fabricating industry includes manufacturers of items such as belts, hoses, motor mounts, bushings, window and door moldings and seals, and other rubber parts that go into most vehicles. These manufacturers participate in the original equipment market and aftermarket, and their fortunes closely resemble those of makers of traditional original equipment parts and aftermarket parts.

KEY INDUSTRY RATIOS AND STATISTICS

▶ **Seasonally adjusted annual rate (SAAR) of vehicle sales.** Adjustment factors for production and motor vehicle imports and exports are distributed once a year by the Bureau of Economic Analysis, a division of the US Department of Commerce. These factors adjust motor vehicle sales in order to account for seasonal changes in demand and production and are based on the prior five years' experience.

The best known of these factors is the SAAR for vehicle sales. This measure calculates the annualized rate of vehicle sales or production, based on one month's results.

In October 2001, the annualized rate of US sales reached a record 21.30 million light vehicles, reflecting unprecedented 0% financing offered to consumers following the terrorist attacks of September 11, 2001. In contrast, in October 2007, the SAAR was just 16.05 million vehicles.

► **Monthly sales report.** Companies typically report their unadjusted monthly vehicle sales volumes a few days after the end of each month. These data give the analyst a good sense of how individual companies are performing and are the timeliest indicators of overall industry sales trends. When one company's report is compared with those of other companies, it provides a snapshot of what's hot and what's not, who's gaining share and who's losing it.

Individual monthly sales reports, seen in isolation and without seasonal adjustments, may not give a full picture of what is occurring in the industry. However, each month's numbers can be compared with year-earlier levels and with preceding months to get a broader view of industry trends.

Detailed monthly sales reports, broken down by brand, are available from *Ward's Automotive Reports* (see this *Survey's* "Industry References" section). In addition, monthly sales by company are usually available in the *Wall Street Journal*.

► **Days' supply of inventory.** This statistic is calculated by dividing the number of units in inventory (including those in transit)

by average daily sales to determine how long sales can continue out of present stock. It can be calculated for a single model, a particular automaker, or the entire industry. US automakers often disclose inventory data on request; some may also calculate days' supply. Analysts and other observers take the individual company data and perform industrywide analyses.

Automakers typically urge dealers to keep 60 days' worth of inventory on hand. The actual number of vehicles needed to meet this target can swing wildly, as actual sales fluctuate. The supply of US light vehicles decreased slightly to 74 days as of November 1, 2007, from 75 days in the prior-year period, but increased from 62 days in the prior month.

► **Scrap rates.** This eagerly awaited statistic, released annually in April, records the number of vehicles scrapped or sent to a junkyard in a 12-month period (July 1 to June 30). An increase in scrapped vehicles is generally believed to precede a rise in demand for motor vehicles.

For the year ended June 30, 2006 (latest available), 5.0% of all passenger cars and trucks in use were scrapped, according to R.L. Polk & Co., a premier provider of automotive information solution services. This number represents a rebound from a record low of 4.3% in the year ended June 30, 2005.

► **Consumer confidence.** The most widely followed consumer confidence survey is conducted by the Conference Board, a private research organization, which polls 5,000 representative US households to gauge consumer sentiment. This qualitative measure of consumer attitudes is expressed as an index, with 1985 used as a base year (1985=100).

The index is compiled from monthly surveys that tally responses to a series of questions. It has two components: the present situation index, which measures consumers' feelings about their current economic situation, and the expectations index, which tracks consumers' feelings about the future.

A high level of consumer confidence generally signals that people feel good about the economy, their job prospects, and their future earnings ability. Rising index levels indicate that consumers expect further economic growth in the months ahead, which generally bodes well for automotive sales.

VEHICLE SCRAPPAGE

(In thousands of vehicles, except as noted)

YEAR*	TOTAL VEHICLES IN USE†	NEW REGISTRATIONS	SCRAPPAGE	SCRAPPAGE AS % OF NEW REGISTRATIONS	SCRAPPAGE AS % OF ALL VEHICLES IN USE		
					CARS	TRUCKS	TOTAL
2006	NA	NA	NA	NA	4.9	5.1	5.0
2005	238,697	16,690	9,989	59.8	4.5	4.0	4.3
2004	231,398	17,419	11,903	68.3	4.8	6.0	5.3
2003	225,882	16,940	12,085	71.3	5.2	7.7	5.5
2002	221,027	17,640	13,296	75.4	5.6	7.0	6.1
2001	216,683	17,505	14,122	80.7	6.0	7.6	6.6
2000	213,299	18,089	14,299	79.0	6.4	7.5	6.8
1999	209,509	16,130	11,664	72.3	5.7	5.6	5.6
1998	205,043	15,638	11,665	74.6	5.5	6.3	5.7
1997	201,070	15,286	12,509	81.8	6.6	5.8	6.2
1996	198,293	15,664	10,811	69.0	6.1	4.7	5.5

*Year ending June 30. †Registered. NA-Not available.
Sources: *Auto Exec*; Polk Automotive Intelligence.

The consumer confidence index stood at 87.3 in November 2007, down from 95.6 in October 2007, and the lowest level in more than two years. According to the Conference Board, the decline reflected volatility in financial markets, rising prices at the pump, the likelihood of larger home heating bills this winter, and job market concerns.

HOW TO ANALYZE AN AUTOMOBILE MANUFACTURER

Automobile manufacturing is one of the largest industries in the United States. As such, it is scrutinized closely by economists, investors, and consumers, as well as by government regulators and legislators. A plethora of statistics is available to help track the state of the industry and its participants. Because the auto industry is so highly concentrated, industry statistics are generally a good proxy for individual company trends.

Automakers disclose four important figures concerning their operations: motor vehicle production, retail sales, dealer inventories (all disclosed monthly), and factory sales (released quarterly). In addition, they also release forward-looking numbers, such as quarterly vehicle production plans. To make projections about an automaker's financial results, an analyst should first track production plans in order to generate an estimate of factory vehicle sales in upcoming fiscal periods.

Other important factors to consider are automakers' inventories and market share. Inventory levels are available from sources such as the US Department of Commerce's Bureau of Economic Analysis and the industry publication *Ward's Automotive Reports*. In general, automakers consider inventory equivalent to 60 days' worth of sales to be sufficient. When inventories exceed 75 days on a particular model, action is usually imminent. The automaker needs either to slow production or to bolster demand through heightened marketing efforts. If inventories are too low (traditionally, fewer than 60 days), production must be increased or sales could be lost.

Market share comparisons are important when analyzing an automaker. By comparing a manufacturer's percentage of industrywide vehicle production with its share of retail sales, the analyst can determine if the automaker is producing more (or fewer) vehicles than de-

mand warrants. Such a comparison would indicate whether the automaker needs to increase production or reduce discounts to catch up to demand and prevent inventories from falling or, in the case of weak demand, to slow production or offer discounts to bolster demand and prevent inventories from rising too much.

Seasons and cycles

Motor vehicle sales and production exhibit two kinds of patterns: seasonal and cyclical. When studying an automaker, it is important to consider the impact of each on production and sales.

For most motor vehicle sales, the seasonal pattern is distinct: sales are strongest from March through June and weakest from November through January. An analyst might be able to detect abnormal monthly sales results by observing fluctuations in the seasonally adjusted annual rate (SAAR) provided by the Bureau of Economic Analysis.

Production is strongest from February through June. It slows in July and August, when shutdowns for annual model changeovers coincide with workers' summer vacations. December is also a weak month for production, as holiday vacation shutdowns usually last one or two weeks. These two vacation periods are also a popular time for automakers to rebalance their inventories. Because plants are already closed, shutdowns are frequently extended on a plant-by-plant basis to correct excessive inventories for any particular models.

The cyclical pattern is evident in long-term sales trends. In the past decade, annual US vehicle sales have ranged from a low of 12.5 million units in 1991 to a record 17.8 million units in 2000. Such wide divergences in annual sales have occurred repeatedly over the past four decades.

Model changeovers

The analyst should examine an automaker's plans for model changeovers. Annual model changes do not usually cause severe disruptions in automakers' operations, because a two- to four-week changeover period is normally scheduled during the summer. However, a major model redesign, which puts billions of dollars in expenditures at stake, can severely disrupt production, sales, and liquidity.

Major changeovers frequently require extensive plant renovations and slow start-ups as equipment is proven and debugged. Significant glitches often occur in new equipment or production processes. These problems may slow the start-up and saddle an automaker with low production levels for an extended period. Such events can have a severe impact on the automaker's cash flow, and seriously distort its balance sheet and income statements for several quarters.

Qualitative factors regarding model changeovers must be taken into account. An analyst should attempt to gauge the prospects of new or modified products. Are the features and styling attractive to consumers? Is the price perceived to be a good value? What sales volume and margins are expected for the vehicle? Is the product in a favorable segment — a profitable truck or sport utility vehicle (SUV) — or is it a money-losing sedan? If the answers are favorable, then the company may have a hit on its hands.

The income statement

Among the major items to examine on an automaker's income statement are revenues, gross margins, and marketing costs. Automakers typically include them in two different statements.

In accordance with financial accounting standards, automakers since 1988 have presented consolidated statements of income. These statements separate and detail the income from, and expenses for, automotive manufacturing and financial services.

Automakers are allowed to present a second set of financial statements, in which the finance subsidiaries' results are reported on an equity basis. This means that the company's income statement gives only the net operating income for financial services, rather than a detailed breakdown of income and expenses.

Revenues

Automakers derive the bulk of their revenues from the sale and financing of light vehicles, which are defined as cars and light trucks weighing less than 10,000 pounds.

◆ **Sales revenues.** Automobile companies listed on US stock exchanges report their revenues on a quarterly basis. Most revenues

are derived from wholesale (or factory) vehicle shipments that are recorded when automakers ship vehicles to dealerships.

Monthly vehicle sales reports record retail volume of motor vehicle sales by dealerships. These numbers are disclosed to the public and followed closely by economists, analysts, and the media.

In the long term, factory shipments and retail sales should balance out. As a practical matter, however, differences usually arise due to the timing of shipments and retail sales, and the impact of imports and exports.

Average revenue per vehicle sold can be tracked by dividing an automaker's revenues from vehicle sales by the number of vehicles shipped during the same period. Generally, the trend should be upward; if an automaker has flat or declining revenues per vehicle, it may have discounted heavily to sustain unit shipments, or it may be selling more of its cheaper models. A sharp rise in revenues per vehicle could indicate that an automaker has seen a shift in production volume to models that are more expensive.

◆ **Financing revenues.** Automakers receive revenues from dealer inventories and retail customer sales that they finance. In addition to generating revenues, financing is an important sales tool: automakers use their financing divisions to support various marketing initiatives. These include encouraging dealers to keep larger inventories on hand (by offering a favorable interest rate on inventory purchases) and subsidizing customers' vehicle purchases (via rebates, below-market interest rates, and the like). US automakers also generate revenues by offering a variety of services, including insurance and extended service contracts.

An automaker's financing revenues may rise or fall with the general level of interest rates without dramatically affecting income from financing operations. This is because the automaker earns a markup on the interest it pays to borrow funds. Auto financing loans are usually made for a period of 24 to 48 months. Automakers attempt to match their borrowings with loan maturities to minimize their exposure to interest rate fluctuations. The low interest rates of the past several years aided finance operations. In addition, borrowing costs benefited from favor-

able market conditions in the asset-backed security market.

Gross margins

Gross margins in the automobile industry fluctuate greatly with production volume because many of the costs related to vehicle production are fixed. Even labor costs have become largely fixed because of union contracts. Such contracts may restrict layoffs and require automakers to pay certain laid-off workers benefits worth up to 95% of their take-home pay.

Therefore, automakers must sustain relatively high production levels to break even. Once the break-even point has been passed and fixed costs are spread over more units, however, the automaker can earn substantial profits. For each additional unit of production beyond the break-even point, variable profit for high-end vehicles can exceed \$10,000 per unit.

Even so, it is rare for an automaker's gross margin to exceed 25% of its revenues. By the time the company has deducted marketing, selling, general, and administrative costs, its average return on sales (*i.e.*, net income from operations as a percentage of revenues) may be as little as 5% over the automotive cycle, which may run more than four years. Over the past two decades, US automakers' return on sales has often been even lower due to strenuous competition.

Marketing costs

Marketing costs tend to rise and fall with the underlying level of demand for motor vehicles. Normally, automakers devote about 10% of sales revenue to marketing costs (which may include financial incentives). However, to stimulate demand, they may spend 14% or more. Nevertheless, when it is clear that demand is declining severely due to recession, automakers may have to face reality and curtail advertising and marketing expenditures.

This has not been the case since late 2001, however, when the highly competitive market prompted automakers to boost incentives in order to spur sales. In particular, during the fourth quarter of 2001, automakers responded aggressively to stimulate moribund demand in the aftermath of the September 11 terrorist attacks.

The balance sheets

As with their income statements, automakers produce two sets of balance sheets. One set uses the full consolidation method, and one accounts for financial operations on an equity basis.

An equity balance sheet separates the automaker's financial services operation (which customarily operates with high debt leverage ratios) from its manufacturing operation. Auto analysts usually focus on the equity-method balance sheets because these documents make it easier to determine the financial strength of a company's manufacturing operations.

When studying an automaker's balance sheets, it is easy to be impressed with the strong cash position the company may have accumulated during a favorable economic period. When business slows, however, an automaker's cash position can quickly erode for several reasons. First, the company receives less revenue. Second, the float created by timing differences between the purchase of supplies and materials and payment of accounts payable diminishes, as fewer materials are purchased and more bills are paid. Third, the automaker must continue to pay its fixed costs even as its business volume decreases. Thus, an automaker can see wide swings in liquidity in a short time. ■

GLOSSARY

Accessories — Comfort, convenience, and safety products not essential to the performance of a vehicle, such as audio, security products, floor mats, and covers.

Aftermarket — Replacement or add-on purchases for a product after its original sale. The automotive aftermarket includes replacement parts, accessories, lubricants, fuel, appearance products, and repairs.

Axle — A shaft on which the wheels revolve.

“Block exemption” — A network of distribution agreements that makes penetration of the market difficult for other players is forbidden under European antitrust law, unless the industry is granted what is referred to as a block exemption. The exemption is a set of provisions designed by the European Commission establishing competitive procedures for an industry that does not meet antitrust standards. The auto industry has a block exemption, which was recently revised.

Captive import — Car or truck made overseas with a domestic nameplate.

CFCs — Chlorofluorocarbons; used in motor vehicle air conditioning units.

Changeover — The task of assigning a production machine to perform a different operation, such as changing a press tool or jig, but could also mean changing the color of paint in a paint plant or loading a new part program into a lathe.

Diesel engine — An internal combustion engine that uses diesel oil for fuel. Rather than utilizing a traditional ignition system, it functions by injecting diesel oil into the cylinders when the piston has compressed the air to make it hot enough to ignite the diesel fuel without a spark.

Driveline — All the individual components beyond the engine up to the wheels, including the clutch and drive shaft, but not the engine or transmission.

Fuel injection — Using pressure to deliver fuel into an engine’s combustion chamber.

General service parts — Spark plugs and electrical parts (tune-up kits, wiring, switches); filters (oil, air, and gas); batteries; belts and hoses; engine accessories (speed control, carburetors, oil and water pumps, alternators).

Gross vehicle weight (GVW) — The weight of a vehicle, including passengers, options, and all cargo.

Heavy parts — Chassis (shock absorbers, mufflers and exhaust system products, struts); drive train (U-joints, transmission parts, clutches); brake parts (brake pads, rotors, discs); crash parts (body repair kits, fenders and bumpers, fiberglass panels, glass).

High performance — Products that enhance the speed and handling of a motor vehicle.

Hybrid — A vehicle utilizing two distinct but interdependent forms of propulsion, usually a gasoline engine coupled with an electric motor.

Just-in-sequence — A further refinement of just-in-time, in which parts are delivered not only at the right time and in the right quantity, but are synchronized to the customer’s schedules so that they match the customer’s own product flow, completely eliminating stock held next to the assembly track. Just-in-sequence delivery requires effective systems for sharing information between customer and supplier, and a high degree of integration between the two operations.

Just-in-time (JIT) — A system based on frequent, small deliveries of parts to maintain minimum on-site inventory.

New Domestic — A reference to foreign owned automakers with manufacturing plants in North America, typically referring to Asia-based companies.

Platform — Mechanical underpinnings of a vehicle.

Powertrain — An engine and transmission combination, which sometimes includes the drive shaft and drive axle.

Six Sigma — A process improvement methodology based on statistical analysis of the production process. Sigma is the symbol for standard deviation (SD) and Six Sigma refers to the condition where control limits are at least six standard deviations apart (*i.e.*, plus or minus three SD from the mean). This equates to a 3.4 parts-per-million defect rate. Six Sigma philosophy focuses on a quantitative analysis of defects and identification of the opportunity for defects to occur, in processes as well as products.

Specialty repair — Establishment specializing in one facet of automotive repair (*i.e.*, transmission, ignition, exhaust). The outlet’s specialty accounts for more than 50% of total sales receipts.

Stamping — A sheet metal part created by pressing rolled sheet metal between metal dies.

Tier 1 (T1) suppliers — Automotive parts manufacturers that supply final equipment directly to automakers (OEMs or original equipment manufacturers). Increasingly, Tier 1 suppliers are becoming “systems integrators” or producers of major subassemblies and modular components that can be installed into a vehicle as a unit, such as a complete chassis.

Tier 2 (T2) suppliers — Manufacturers that produce components for Tier 1 suppliers.

Tier 3 (T3) suppliers — Manufacturers that supply raw materials used in the production of components.

Tire dealer — An automotive store that generates at least 50% of its sales from tires.

Transplant — Car or truck with a foreign nameplate made within a country where it will be distributed.

Truck weights — Light trucks are less than 10,000 pounds gross vehicle weight (GVW). Medium-duty trucks weigh 10,000 to 33,000 pounds. Heavy-duty trucks exceed 33,000 pounds.

Turbocharging — A way to generate increased power and lower emissions by sending exhaust gases through a turbine, which drives a pump, forcing more air into the engine cylinders.

Upside down trade — This occurs when what a buyer owes on a trade-in vehicle exceeds its current value.

INDUSTRY REFERENCES

PERIODICALS

Automotive Industries

Worldwide Purchasing Ltd.
116 S. Main St., Versailles, KY 40383
(313) 262-5702
Web site: <http://www.ai-online.com>
Monthly; covers the automotive industry, targeting those in automotive engineering, design, manufacturing, and purchasing.

Automotive News

Crain Communications Inc.
1155 Gratiot Ave., Detroit, MI 48207
(313) 446-6000
Web site: <http://www.autonews.com>
Weekly; covers the automotive industry.

Car and Driver

Hachette Filipacchi Media US Inc.
2002 Hogback Rd., Ann Arbor, MI 48105
(734) 971-3600
Web site: <http://www.caranddriver.com>
Monthly; covers the auto industry from an enthusiast/consumer angle.

Modern Tire Dealer

Bobit Publishing Co.
3515 Massillon Rd., Ste. 350, Uniontown, OH 44685
(330) 899-2200
Web site: <http://www.mtdealer.com>
Monthly; covers the tire industry.

Motor Trend

Primedia Inc.
6420 Wilshire Blvd., 7th Fl., Los Angeles, CA 90048
(323) 782-2220
Web site: <http://www.motortrend.com>
Monthly; covers the auto industry from an enthusiast/consumer angle.

Rubber and Plastics News

Crain Communications Inc.
1725 Merriman Rd., Akron, OH 44313
(330) 836-9180
Web site: <http://www.rubbernews.com>
Biweekly; covers the rubber and plastics industries.

Rubber World

Lippincott & Peto Inc.
PO Box 5451, 1867 W. Market St., Akron, OH 44313
(330) 864-2122
Web site: <http://www.rubberworld.com>
Monthly; covers the tire and rubber industry.

Ward's Automotive Reports

Ward's AutoWorld

Ward's Automotive Yearbook

Prism Business Media Inc.
3000 Town Center, Ste. 2750, Southfield, MI 48075
(248) 357-0800
Web site: <http://www.wardsauto.com>
Weekly, monthly, and annual publications, respectively, that provide information on the auto industry; the weekly includes the latest production and sales statistics.

TRADE ORGANIZATIONS

The Alliance of Automobile Manufacturers

1401 Eye St. NW, Ste. 900, Washington, DC 20005
(202) 326-5500
Web site: <http://www.autoalliance.org>
Trade association comprising nine car and light truck manufacturers; advocates for the auto industry on public policy matters.

Automotive Aftermarket Industry Association (AAIA)

7101 Wisconsin Ave., Ste. 1300, Bethesda, MD 20814
(301) 654-6664
Web site: <http://www.aftermarket.org>
Represents 2,700 member companies that conduct business in the motor vehicle aftermarket industry; provides legislative, legal, research, and operational services and information. The AAIA was created when the Automotive Parts & Accessories Association and the Automotive Service Industry Association joined together.

National Automobile Dealers Association

8400 Westpark Dr., McLean, VA 22102
(703) 821-7000
Web site: <http://www.nada.org>
A national association representing national franchised new car and truck dealers in legal and legislative affairs. Provides services and training programs to help members improve their operations.

Rubber Manufacturers Association (RMA)

1400 K St. NW, Ste. 900, Washington, DC 20005
(202) 682-4800
Web site: <http://www.rma.org>
National organization for the rubber products industry; works with numerous industry groups on common issues.

CONSULTING AND RESEARCH FIRMS

The Conference Board

845 Third Ave., New York, NY 10022
(212) 759-0900
Web site: <http://www.conference-board.org>
Publishes the monthly consumer confidence survey, which measures consumer sentiment.

Global Insight

1000 Winter St., Waltham, MA 02451
(781) 487-2100
Web site: <http://www.globalinsight.com>
Provides economic and market forecasting services.

J.D. Power and Associates

2625 Townsgate Rd., Westlake Village, CA 91361
(805) 418-8000
Web site: <http://www.jdpower.com>
An international marketing and information firm that studies consumer opinion and customer satisfaction; supplies statistics and survey information on the automotive industry. (J.D. Power is independent of Standard & Poor's, but like S&P, is part of the McGraw-Hill Cos. Inc.)

R.L. Polk & Co.

26955 Northwestern Hwy., Southfield, MI 48033
(800) 464-7655
Web site: <http://www.polk.com>
An international consumer marketing firm.

GOVERNMENT AGENCIES**Bureau of Economic Analysis**

US Department of Commerce
1441 L St. NW, Washington, DC 20230
(202) 606-9900
Web site: <http://www.bea.gov>
A federal agency that produces and disseminates economic accounts statistics that provide a comprehensive, up-to-date picture of economic activity.

DEFINITIONS FOR COMPARATIVE COMPANY ANALYSIS TABLES

Operating revenues

Net sales and other operating revenues. Excludes interest income if such income is "nonoperating." Includes franchised/leased department income for retailers and royalties for publishers and oil and mining companies. Excludes excise taxes for tobacco, liquor, and oil companies.

Net income

Profits derived from all sources, after deductions of expenses, taxes, and fixed charges, but before any discontinued operations, extraordinary items, and dividend payments (preferred and common).

Return on revenues

Net income divided by operating revenues.

Return on assets

Net income divided by average total assets. Used in industry analysis and as a measure of asset-use efficiency.

Return on equity

Net income, less preferred dividend requirements, divided by average common shareholder's equity. Generally used to measure performance and to make industry comparisons.

Current ratio

Current assets divided by current liabilities. It is a measure of liquidity. Current assets are those assets expected to be realized in cash or used up in the production of revenue within one year. Current liabilities generally include all debts/obligations falling due within one year.

Debt/capital ratio

Long-term debt (excluding current portion) divided by total invested capital. It indicates how highly "leveraged" a company might be. Long-term debt includes those debts/obligations due after one year, including bonds, notes payable, mortgages, lease obligations, and industrial revenue bonds. Other long-term debt, when reported as a separate account, is excluded; this account generally includes pension and retirement benefits. Total invested capital is the sum of stockholders' equity, long-term debt, capital lease obligations, deferred income taxes, investment credits, and minority interest.

Debt as a percent of net working capital

Long-term debt (excluding current portion) divided by the difference between current assets and current liabilities. It is an indicator of a company's liquidity.

Price/earnings ratio

The ratio of market price to earnings, obtained by dividing the stock's high and low market price for the year by earnings per share (before extraordinary items). It essentially indicates the value investors place on a company's earnings.

Dividend payout ratio

This is the percentage of earnings paid out in dividends. It is calculated by dividing the annual dividend by the earnings. Dividends are generally total cash payments per share over a 12-month period. Although payments are usually calculated from the ex-dividend dates, they may also be reported on a declared basis where this has been established to be a company's payout policy.

Dividend yield

The total cash dividend payments divided by the year's high and low market prices for the stock.

Earnings per share

The amount a company reports as having been earned for the year (based on generally accepted accounting standards), divided by the number of shares outstanding. Amounts reported in *Industry Surveys* exclude extraordinary items.

Tangible book value per share

This measure indicates the theoretical dollar amount per common share one might expect to receive should liquidation take place. Generally, book value is determined by adding the stated (or par) value of the common stock, paid-in capital, and retained earnings, then subtracting intangible assets, preferred stock at liquidating value, and unamortized debt discount. This amount is divided by the number of outstanding shares to get book value per common share.

Share price

This shows the calendar-year high and low of a stock's market price.

In addition to the footnotes that appear at the bottom of each page, you will notice some or all of the following:

NA—Not available.

NM—Not meaningful.

NR—Not reported.

AF—Annual figure. Data are presented on an annual basis.

CF—Combined figure. In this case, data are not available because one or more components are combined with other items.

COMPARATIVE COMPANY ANALYSIS — AUTOS & AUTO PARTS

Operating Revenues

Ticker	Company	Yr. End	Million \$										Compound Growth Rate (%)					Index Basis (1995 = 100)				
			2006	2005	2004	2003	2002	2001	1996	10-Yr.	5-Yr.	1-Yr.	2006	2005	2004	2003	2002					
AUTOMOBILE MANUFACTURERS:																						
COA	\$ COACHMEN INDUSTRIES INC	DEC	564.4 D	702.4 D	865.1 D	711.1	665	594 A	606 C	93	(1)	(20)	116	143	117	110						
FLE	\$ FLEETWOOD ENTERPRISES	# APR	2,007.9	2,432.4	2,374.7 D	2,608.0	2,318	2,280 C	2,874 D	70	(3)	(17)	85	83	91	81						
FL	* FORD MOTOR CO	DEC	160,123.0 A	176,896.0 A,C	171,852.0 A,C	164,196.0 D	162,586 D	162,412	146,991	109	(0)	(9)	120	117	112	111						
GM	* GENERAL MOTORS CORP	DEC	207,349.0 C	190,215.0 F	190,812.0 C,F	182,005.0 D,F	184,214 F	175,353 F	160,121 D	129	3	9	119	119	114	115						
MNC	\$ MONACO COACH CORP	DEC	1,298.0	1,236.2 A,C	1,397.2	1,168.3	1,223 A	937 A	366	14	7	5	355	338	320	334						
THO	† THOR INDUSTRIES INC	JUL	3,066.3	2,558.4 A	2,187.7 A	1,571.4 A	1,245 A	827	602	18	30	20	425	363	261	207						
WGO	\$ WINNEBAGO INDUSTRIES	AUG	864.4	932.0	1,114.2	845.2 D	828 C	682	485 D	178	5	(13)	205	230	174	171						
AUTO PARTS & EQUIPMENT†:																						
ARM	† ARVINMERITOR INC	SEP	9,195.0 D	8,903.0 D	8,033.0 D	7,788.0	6,882	6,805	3,144	292	6	3	283	256	248	219						
BWA	† BORGWARNER INC	DEC	4,585.4	4,293.8 A	3,525.3	3,069.2	2,731	2,352	1,540 A	298	14	7	298	279	229	199						
DW	\$ DREW INDUSTRIES INC	DEC	729.2 A	669.1	530.9 A	353.1 A	325 A,C	269 A	168 A	434	16	22	398	316	210	194						
GNTX	† GENITEC CORP	DEC	572.3	536.5	505.7	469.0	395	310	149	385	14	13	361	340	315	266						
JCI	* JOHNSON CONTROLS INC	SEP	32,235.0 A,C	27,479.4 D	26,553.4 C	22,646.0	20,103	18,427 A	10,009	322	12	17	275	285	226	201						
LEA	† LEAR CORP	DEC	17,838.9 C	17,089.2	16,960.0	15,746.7	14,425	13,625	6,249 A	285	6	4	273	271	252	231						
MOD	† MODINE MANUFACTURING CO	# MAR	1,757.5 C	1,628.9 A,C	1,543.9 A	1,199.8	1,092	1,075 A	999	176	10	8	163	155	120	109						
SPAR	\$ SPARTAN MOTORS INC	DEC	445.4	343.0	312.3	237.4 D	260 D	226 D	175	255	15	30	196	179	136	149						
SWP	\$ STANDARD MOTOR PRODS	DEC	812.0	830.4 D	824.3	678.8 A	598 D	608	722 A	112	6	(2)	112	115	114	94						
SUP	\$ SUPERIOR INDUSTRIES INTL	DEC	789.9 D	844.9 C	901.8	840.3	783	643	504	157	4	(7)	168	179	167	155						
MOTORCYCLE MANUFACTURERS†:																						
HOG	* HARLEY-DAVIDSON INC	DEC	6,185.6 F	5,673.8 F	5,320.5 C,F	4,903.7 F	4,302 C,F	3,545 F	1,578 D,F	392	15	12	360	337	311	273						
TIRES & RUBBER†:																						
GT	* GOODYEAR TIRE & RUBBER CO	DEC	20,258.0 C	19,723.0 C	18,370.4	15,119.0 C	13,850	14,147	13,113 A,C	154	4	7	150	140	115	106						
OTHER COMPANIES WITH SIGNIFICANT AUTOS AND PARTS OPERATIONS																						
AIT	\$ APPLIED INDUSTRIAL TECH INC	JUN	1,900.8	1,717.1	1,517.0	1,464.4	1,447 C	1,626	1,144	166	5	3	150	133	128	126						
DAI	DAIMLER AG	DEC	200,087.6	177,384.7	192,319.5 A	171,869.7 D	156,838	136,072	62,132 C	322	12	8	285	310	277	252						
GPC	* GENUINE PARTS CO	DEC	10,457.9	9,783.0	9,097.3	8,449.3	8,259	8,221	5,720	183	6	7	171	159	148	144						
MGA	MAGNA INTERNATIONAL -CL A	DEC	24,180.0 A	22,811.0 A	20,853.0 A	15,345.0 A,C	12,971 A	11,026 A	4,260 A,C	568	19	17	535	485	360	304						
TEN	TENNECO INC	DEC	4,685.0	4,441.0 A	4,219.0	3,766.0	3,459 C	3,364 C	6,572 A,C	71	7	5	68	64	57	53						

Notes: Data as originally reported. † S&P 1500 Index group. * Company included in the S&P 500. † Company included in the S&P MidCap. ‡ Company included in the S&P SmallCap. # Of the following calendar year. ** Not calculated; data for base year or end year not available. A - This year's data reflect an acquisition or merger. B - This year's data reflect a major merger resulting in the formation of a new company. C - This year's data reflect an accounting change. D - Data exclude discontinued operations. E - Includes excise taxes. F - Includes other (nonoperating) income. G - H - Some or all data are not available, due to a fiscal year change.

Net Income

Ticker	Company	Yr. End	Million \$								Compound Growth Rate (%)			Index Basis (1996 = 100)				
			2006	2005	2004	2003	2002	2001	1996	10-Yr.	5-Yr.	1-Yr.	2006	2005	2004	2003	2002	
AUTOMOBILE MANUFACTURERS†																		
COA	\$ COACHMEN INDUSTRIES INC	DEC	(33.2)	(19.4)	13.4	7.4	9.9	(4.0)	27.3	NM	NM	(122)	(71)	49	27	36		
FLE	\$ FLEETWOOD ENTERPRISES	# APR	(87.7)	(6.1)	(72.6)	(22.3)	(70.7)	(81.3)	90.1	NM	NM	(97)	(7)	(81)	(25)	(79)		
F	\$ FORD MOTOR CO	DEC	(12,615.0)	1,644.0	3,634.0	921.0	284.0	(5,433.0)	4,446.0	NM	NM	(284)	37	82	21	6		
GM	* GENERAL MOTORS CORP	DEC	(1,978.0)	(10,458.0)	2,804.0	2,862.0	1,736.0	601.0	4,953.0	NM	NM	(40)	(211)	57	58	35		
MNC	\$ MONACO COACH CORP	DEC	1.0	4.0	36.7	22.2	44.5	24.9	5.9	(16.4)	(47.6)	17	67	621	376	753		
THO	† THOR INDUSTRIES INC	JUL	163.4	121.8	106.1	78.6	51.2	26.7	16.1	26.1	43.6	1,017	758	660	489	318		
WGO	\$ WINNEBAGO INDUSTRIES	AUG	44.7	65.1	70.6	48.7	54.7	43.8	14.4	12.0	0.4	310	451	490	338	379		
AUTO PARTS & EQUIPMENT†																		
ARM	† ARVINMERITOR INC	SEP	(174.0)	33.0	127.0	140.0	149.0	35.0	114.0	NM	NM	(153)	29	111	123	131		
BWA	† BORGWARNER INC	DEC	211.6	239.6	218.3	174.9	149.9	66.4	41.8	17.6	26.1	506	573	522	418	359		
DW	\$ DREW INDUSTRIES INC	DEC	31.0	33.6	25.1	19.4	15.8	8.9	13.4	8.8	28.3	232	251	188	145	118		
GNTX	† GENTEX CORP	DEC	108.8	109.5	112.7	106.8	85.8	65.2	24.0	16.3	10.8	454	457	470	446	358		
JCI	* JOHNSON CONTROLS INC	SEP	1,033.0	757.2	817.5	682.9	600.5	478.3	234.7	16.0	16.6	440	323	348	291	256		
LEA	† LEAR CORP	DEC	(710.4)	(1,381.5)	422.2	380.5	311.5	34.2	151.9	NM	NM	(468)	(909)	278	250	205		
MOD	† MODINE MANUFACTURING CO	# MAR	42.3	60.8	61.7	40.4	34.4	23.3	63.8	(4.0)	12.6	66	95	97	63	54		
SPAR	\$ SPARTAN MOTORS INC	DEC	16.8	8.3	5.9	4.4	11.4	6.0	2.3	21.9	22.8	725	357	254	191	493		
SMP	\$ STANDARD MOTOR PRODS	DEC	9.2	(1.8)	(8.9)	0.2	6.1	0.3	14.7	(4.6)	96.6	63	(12)	(61)	2	42		
SUP	\$ SUPERIOR INDUSTRIES INTL	DEC	(9.6)	(7.1)	44.7	73.7	78.3	55.4	46.8	NM	NM	(20)	(15)	95	157	167		
MOTORCYCLE MANUFACTURERS†																		
HOG	* HARLEY-DAVIDSON INC	DEC	1,043.2	959.6	889.8	760.9	580.2	437.7	143.4	21.9	19.0	727	669	620	531	405		
TIRES & RUBBER†																		
GT	* GOODYEAR TIRE & RUBBER CO	DEC	(330.0)	239.0	114.8	(802.1)	(1,105.8)	(203.6)	101.7	NM	NM	(324)	235	113	(789)	(1,087)		
OTHER COMPANIES WITH SIGNIFICANT AUTOS AND PARTS OPERATIONS																		
AIT	\$ APPLIED INDUSTRIAL TECH INC	JUN	72.3	55.3	31.5	19.8	14.8	28.0	23.3	12.0	20.8	310	237	135	85	63		
DAI	\$ DAIMLER AG	DEC	4,264.0	3,376.2	3,338.5	(526.6)	5,113.5	(589.2)	1,614.0	10.2	NM	264	209	207	(33)	317		
GPC	* GENUINE PARTS CO	DEC	475.4	437.4	395.6	353.6	367.5	297.1	330.1	3.7	9.9	144	133	120	107	111		
MGA	MAGNA INTERNATIONAL - CL A	DEC	528.0	639.0	692.0	589.0	554.0	580.0	224.8	8.9	(1.9)	235	284	308	262	246		
TEN	TENNECO INC	DEC	51.0	58.0	15.0	27.0	31.0	(130.0)	218.0	(13.5)	NM	23	27	7	12	14		

Note: Data as originally reported. † S&P 1500 Index group. * Company included in the S&P 500. † Company included in the S&P MidCap. † Company included in the S&P SmallCap. † Of the following calendar year. ** Not calculated; data for base year or end year not available.

Ticker	Company	Yr. End	Return on Revenues (%)				Return on Assets (%)				Return on Equity (%)						
			2006	2005	2004	2003	2002	2005	2004	2003	2002	2006	2005	2004	2003	2002	
AUTOMOBILE MANUFACTURERS†																	
COA	\$ COACHMEN INDUSTRIES INC	DEC	NM	NM	1.6	1.0	1.5	NM	NM	4.0	2.4	3.4	NM	NM	6.2	3.5	4.7
FLE	\$ FLEETWOOD ENTERPRISES	# APR	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
F	* FORD MOTOR CO	DEC	NM	0.9	2.1	0.6	0.2	0.6	1.2	0.3	0.3	0.1	0.1	26.2	10.7	10.7	4.0
GM	* GENERAL MOTORS CORP	DEC	NM	NM	1.5	1.6	0.9	0.6	0.7	0.7	0.5	0.5	10.7	17.8	13.0	13.0	18.8
MNC	\$ MONACO COACH CORP	DEC	0.1	0.3	2.6	1.9	3.6	0.2	7.2	4.3	9.1	9.1	12.1	8.1	18.8	18.8	18.8
THO	† THOR INDUSTRIES INC	JUL	5.3	4.8	4.8	5.0	4.1	17.5	15.5	14.2	12.7	12.7	22.9	21.0	18.5	18.5	18.5
WGO	\$ WINNEBAGO INDUSTRIES	AUG	5.2	6.6	6.3	5.8	6.6	11.2	18.3	13.6	16.1	16.1	34.3	25.0	28.2	28.2	28.2
AUTO PARTS & EQUIPMENT†																	
ARM	† ARVINMERITOR INC	SEP	NM	0.4	1.6	1.8	2.2	NM	0.6	2.3	2.8	3.3	NM	3.5	13.5	17.1	21.4
BWA	† BORGWARNER INC	DEC	4.6	5.6	6.2	5.7	5.5	4.9	6.3	6.6	6.1	5.5	12.0	15.1	15.6	15.6	14.4
DW	\$ DREW INDUSTRIES INC	DEC	4.3	5.0	4.7	5.5	4.8	10.0	12.3	12.6	12.7	10.4	16.7	23.2	23.3	23.7	20.8
GNTX	† GENTEX CORP	DEC	19.0	20.4	22.3	22.8	21.7	12.7	12.3	13.9	15.6	15.4	14.1	13.5	15.3	16.8	16.3
JCI	* JOHNSON CONTROLS INC	SEP	3.2	2.8	3.1	3.0	3.0	5.4	4.8	5.8	5.6	5.6	15.4	13.4	17.4	17.7	18.6
LEA	† LEAR CORP	DEC	NM	NM	2.5	2.4	2.2	NM	NM	4.6	4.7	4.1	NM	NM	16.9	19.4	19.3
MOD	† MODINE MANUFACTURING CO	# MAR	2.4	3.7	4.0	3.4	3.1	3.9	5.5	5.8	4.3	3.8	8.5	10.4	9.9	7.2	6.6
SPAR	\$ SPARTAN MOTORS INC	DEC	3.8	2.4	1.9	1.9	4.4	10.7	7.2	5.9	4.9	13.8	19.1	11.8	9.1	7.6	24.5
SMP	\$ STANDARD MOTOR PRODS	DEC	1.1	NM	NM	0.0	1.0	1.4	NM	0.0	0.0	1.2	4.9	NM	NM	0.1	3.6
SUP	\$ SUPERIOR INDUSTRIES INTL	DEC	NM	NM	5.0	8.8	10.0	NM	NM	6.2	10.9	13.2	NM	NM	7.5	13.1	16.0
MOTORCYCLE MANUFACTURERS†																	
HOG	* HARLEY-DAVIDSON INC	DEC	16.9	16.9	16.7	15.5	13.5	19.3	17.9	17.1	17.3	16.6	35.7	30.5	28.8	29.3	29.1
TIRES & RUBBER†																	
GT	* GOODYEAR TIRE & RUBBER CO	DEC	NM	1.2	0.6	NM	NM	NM	1.5	0.7	NM	NM	NA	327.8	384.6	NM	NM
OTHER COMPANIES WITH SIGNIFICANT AUTOS AND PARTS OPERATIONS																	
AIT	\$ APPLIED INDUSTRIAL TECH INC	JUN	3.8	3.2	2.1	1.4	1.0	10.2	8.6	5.5	3.6	2.7	17.9	15.1	9.7	6.5	4.8
DAI	† DAIMLER AG	DEC	2.1	1.9	1.7	NM	3.3	1.7	1.4	1.4	NM	2.7	9.7	7.6	7.5	NM	14.3
GPC	* GENUINE PARTS CO	DEC	4.5	4.5	4.3	4.2	4.4	10.3	9.5	9.2	8.7	8.9	18.1	16.7	16.3	15.9	16.4
MGA	\$ MAGNA INTERNATIONAL -CLA	DEC	2.2	2.8	3.4	3.8	4.3	4.1	5.3	6.5	5.9	6.1	7.7	10.6	13.7	12.0	11.8
TEN	TENNECO INC	DEC	1.1	1.3	0.4	0.7	0.9	1.6	1.9	0.5	1.0	1.2	29.1	40.3	13.8	NA	NA

Note: Data as originally reported. † S&P 1500 Index group. * Company included in the S&P 500. † Company included in the S&P MidCap. \$ Company included in the S&P SmallCap. # Of the following calendar year.

Ticker	Company	Yr. End	Current Ratio					Debt / Capital Ratio (%)					Debt as a % of Net Working Capital					
			2006	2005	2004	2003	2002	2006	2005	2004	2003	2002	2006	2005	2004	2003	2002	
AUTOMOBILE MANUFACTURERS†																		
COA	\$ COACHMEN INDUSTRIES INC	DEC	1.9	1.9	2.2	2.3	2.5	2.3	6.2	6.2	6.2	4.2	4.5	6.2	13.9	12.3	9.8	10.8
FLE	\$ FLEETWOOD ENTERPRISES	#	1.5	1.8	1.4	1.7	1.5	76.7	66.1	71.8	60.4	77.2	77.2	200.4	147.5	181.7	135.7	205.6
F	* FORD MOTOR CO	DEC	NA	NA	NA	NA	NA	99.6	82.2	82.2	85.2	86.2	NA	NA	NA	NA	NA	NA
GM	* GENERAL MOTORS CORP	DEC	NA	NA	NA	NA	NA	109.0	92.6	85.6	85.2	89.0	NA	NA	NA	NA	NA	NA
MNC	\$ MONACO COACH CORP	DEC	1.6	1.6	1.7	1.8	1.5	7.9	9.3	0.0	4.7	9.9	26.5	27.3	0.0	12.4	26.6	
THO	† THOR INDUSTRIES INC	JUL	2.2	2.1	2.1	2.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WGO	\$ WINNEBAGO INDUSTRIES	AUG	3.3	3.2	2.6	2.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUTO PARTS & EQUIPMENT†																		
ARM	† ARVINMERITOR INC	SEP	1.2	1.3	1.3	1.2	1.1	53.3	60.3	57.3	61.5	64.8	64.8	217.6	224.3	208.6	426.9	632.6
BWA	† BORGWARNER INC	DEC	1.4	1.0	1.6	1.8	1.3	21.0	18.9	26.0	33.0	38.8	38.8	141.4	945.5	138.4	178.9	548.4
DW	\$ DREW INDUSTRIES INC	DEC	2.0	2.0	2.1	1.8	1.7	18.3	26.9	32.6	21.0	35.6	35.6	74.5	81.9	103.7	83.6	161.3
GNTX	† GENTEX CORP	DEC	7.8	10.7	11.7	9.6	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JCI	* JOHNSON CONTROLS INC	SEP	1.1	1.0	1.0	1.0	1.0	34.3	19.2	21.7	27.3	32.5	32.5	372.6	530.4	NM	NM	NM
LEA	† LEAR CORP	DEC	1.0	0.9	0.9	0.9	0.8	77.7	63.3	39.2	46.0	54.0	54.0	NM	NM	NM	NM	NM
MOD	† MODINE MANUFACTURING CO	#	1.5	1.4	1.5	2.1	2.2	25.6	21.8	5.5	11.9	14.8	14.8	118.1	129.4	24.8	37.0	44.0
SPAR	\$ SPARTAN MOTORS INC	DEC	2.6	2.0	2.1	2.3	2.1	19.6	1.8	0.2	0.0	0.0	0.0	26.2	2.6	0.3	0.0	0.0
SMP	\$ STANDARD MOTOR PRODS	DEC	1.7	1.6	1.8	1.7	1.7	33.9	34.7	35.5	33.7	37.7	37.7	53.4	58.0	58.7	60.0	66.2
SUP	\$ SUPERIOR INDUSTRIES INTL	DEC	3.1	3.3	4.2	4.6	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOTORCYCLE MANUFACTURERS†																		
HOG	* HARLEY-DAVIDSON INC	DEC	2.2	3.6	2.8	2.9	2.1	24.0	23.6	19.7	17.8	14.4	14.4	44.5	44.0	38.2	37.8	35.3
TIRES & RUBBER†																		
GT	* GOODYEAR TIRE & RUBBER CO	DEC	2.2	1.8	1.7	1.9	1.3	98.2	84.6	82.9	85.6	68.2	68.2	119.0	122.6	126.4	146.1	258.7
OTHER COMPANIES WITH SIGNIFICANT AUTOS AND PARTS OPERATIONS																		
AIT	\$ APPLIED INDUSTRIAL TECH INC	JUN	3.0	2.9	2.9	2.8	2.9	15.5	16.4	18.6	20.3	21.9	21.9	20.6	22.3	26.7	30.3	33.3
DAI	* DAIMLER AG	DEC	1.3	1.3	1.4	1.5	NA	55.4	51.9	53.8	55.7	56.9	56.9	166.9	155.8	141.4	129.0	NA
GPC	* GENUINE PARTS CO	DEC	3.2	3.0	3.2	3.4	3.1	16.1	14.7	15.6	20.2	22.9	22.9	19.0	19.5	20.0	26.0	29.8
MGA	* MAGNA INTERNATIONAL -CL A	DEC	1.5	1.5	1.5	1.6	1.5	7.6	9.2	10.7	5.1	6.8	6.8	26.6	31.6	34.6	15.9	32.9
TEN	TENNECO INC	DEC	1.3	1.2	1.2	1.2	1.0	79.1	85.0	81.9	87.6	97.8	97.8	467.1	622.0	571.8	665.1	NM

Note: Data as originally reported. † S&P 1500 Index group. * Company included in the S&P 500. † Company included in the S&P MidCap. † Company included in the S&P SmallCap. # Of the following calendar year.

Dividend Yield (High-Low, %)

Dividend Payout Ratio (%)

Price / Earnings Ratio (High-Low)

Ticker	Company	Yr. End	2006	2005	2004	2003	2002	2006	2005	2004	2003	2002	2006	2005	2004	2003	2002
AUTOMOBILE MANUFACTURERS†																	
COA	\$ COACHMEN INDUSTRIES INC																
FILE	\$ FLEETWOOD ENTERPRISES	DEC															
F	* FORD MOTOR CO	# APR															
GM	* GENERAL MOTORS CORP	DEC															
MNC	\$ MONACO COACH CORP	DEC															
THO	† THOR INDUSTRIES INC	JUL															
WGO	\$ WINNEBAGO INDUSTRIES	AUG															
AUTO PARTS & EQUIPMENT‡																	
ARM	† ARVINMERITOR INC	SEP															
BWA	† BORGWARNER INC	DEC															
DW	\$ DREW INDUSTRIES INC	DEC															
GNTX	† GENTEX CORP	DEC															
JCI	* JOHNSON CONTROLS INC	SEP															
LEA	† LEAR CORP	DEC															
MOD	† MODINE MANUFACTURING CO	# MAR															
SPAR	\$ SPARTAN MOTORS INC	DEC															
SMP	\$ STANDARD MOTOR PRODS	DEC															
SUP	\$ SUPERIOR INDUSTRIES INTL	DEC															
MOTORCYCLE MANUFACTURERS‡																	
HOG	* HARLEY-DAVIDSON INC	DEC															
TIRES & RUBBER‡																	
GT	* GOODYEAR TIRE & RUBBER CO	DEC															
OTHER COMPANIES WITH SIGNIFICANT AUTOS AND PARTS OPERATIONS																	
AIT	\$ APPLIED INDUSTRIAL TECH INC	JUN															
DAI	DAIMLER AG	DEC															
GPC	* GENUINE PARTS CO	DEC															
MGA	\$ MAGNA INTERNATIONAL -CL A	DEC															
TEN	TENNECO INC	DEC															

Note: Data as originally reported. † S&P 1500 Index group. * Company included in the S&P 500. ‡ Company included in the S&P MidCap. § Company included in the S&P SmallCap. # Of the following calendar year.

Earnings per Share (\$) Tangible Book Value per Share (\$) Share Price (High-Low, \$)

Ticker	Company	Yr. End	2006	2005	2004	2003	2002	2006	2005	2004	2003	2002	2006	2005	2004	2003	2002	2006	2005	2004	2003	2002
AUTOMOBILE MANUFACTURERS†																						
COA	§ COACHMEN INDUSTRIES INC	DEC	(2.12)	(1.24)	0.87	0.48	0.62	9.12	11.19	13.12	12.36	12.16	13.28-8.90	17.49-10.76	20.19-13.22	19.20-10.00	19.50-11.30	56.93-39.16	41.07-26.27	37.99-22.00	33.28-10.73	21.39-9.32
FILE	§ FLEETWOOD ENTERPRISES	# APR	(1.37)	(0.10)	(1.31)	(0.58)	(1.97)	1.21	2.58	2.13	4.61	2.91	12.60-6.33	13.85-7.33	16.14-10.14	11.61-3.06	11.90-2.37	36.72-26.90	39.71-26.14	40.64-25.10	35.50-11.65	25.74-15.93
F	§ FORD MOTOR CO	DEC	(6.72)	0.89	1.99	0.50	0.15	(5.50)	2.53	3.13	2.40	(0.56)	9.48-6.06	14.75-7.57	17.34-12.61	17.33-6.58	18.23-6.90	36.56-18.47	40.80-18.33	55.55-36.90	54.39-29.75	68.17-30.80
GM	* GENERAL MOTORS CORP	DEC	(3.50)	(18.50)	4.97	5.10	3.37	(11.60)	9.73	27.02	24.14	(24.66)	15.28-10.02	20.80-11.85	31.25-16.76	24.96-9.01	30.70-14.30	15.28-10.02	20.80-11.85	31.25-16.76	24.96-9.01	30.70-14.30
MNC	§ MONACO COACH CORP	DEC	0.03	0.13	1.25	0.76	1.55	7.69	7.81	8.98	7.90	7.11	56.93-39.16	41.07-26.27	37.99-22.00	33.28-10.73	21.39-9.32	36.72-26.90	39.71-26.14	40.64-25.10	35.50-11.65	25.74-15.93
THO	† THOR INDUSTRIES INC	JUL	2.89	2.15	1.85	1.38	0.94	9.29	7.31	6.21	4.75	3.35	18.99-13.21	22.62-11.74	26.24-16.25	24.45-12.02	32.50-14.39	56.93-39.16	41.07-26.27	37.99-22.00	33.28-10.73	21.39-9.32
WGO	§ WINNEBAGO INDUSTRIES	AUG	1.39	1.95	2.06	1.32	1.37	7.01	7.15	6.01	5.78	4.81	67.47-50.46	61.73-44.85	54.68-38.35	42.75-21.66	34.47-19.19	36.72-26.90	39.71-26.14	40.64-25.10	35.50-11.65	25.74-15.93
AUTO PARTS & EQUIPMENT†																						
ARM	† ARVINMERITOR INC	SEP	(2.51)	0.48	1.89	2.09	2.24	5.96	0.73	2.12	(1.62)	(1.49)	18.99-13.21	22.62-11.74	26.24-16.25	24.45-12.02	32.50-14.39	18.99-13.21	22.62-11.74	26.24-16.25	24.45-12.02	32.50-14.39
BWA	† BORGWARNER INC	DEC	3.69	4.23	3.91	3.23	2.82	11.59	9.01	11.95	7.40	2.90	67.47-50.46	61.73-44.85	54.68-38.35	42.75-21.66	34.47-19.19	67.47-50.46	61.73-44.85	54.68-38.35	42.75-21.66	34.47-19.19
DW	§ DREW INDUSTRIES INC	DEC	1.43	1.60	1.22	0.96	0.81	6.72	6.28	4.81	3.74	3.13	38.90-22.26	32.30-17.85	21.13-13.60	14.25-7.30	8.57-5.45	38.90-22.26	32.30-17.85	21.13-13.60	14.25-7.30	8.57-5.45
GNTX	† GENTEX CORP	DEC	0.74	0.70	0.73	0.69	0.57	4.95 J	5.59 J	5.03 J	4.50 J	3.76 J	21.00-12.74	20.32-15.38	23.54-15.10	22.49-11.95	16.75-11.76	21.00-12.74	20.32-15.38	23.54-15.10	22.49-11.95	16.75-11.76
JCI	* JOHNSON CONTROLS INC	SEP	1.77	1.32	1.45	1.26	1.12	1.10	3.52	1.94	1.31	0.83	30.00-22.12	25.07-17.52	21.33-16.52	19.37-11.96	15.53-11.52	30.00-22.12	25.07-17.52	21.33-16.52	19.37-11.96	15.53-11.52
LEA	† LEAR CORP	DEC	(10.35)	(20.57)	6.18	5.71	4.77	(18.84)	(13.70)	(5.99)	(10.56)	(18.23)	34.45-15.60	61.19-26.74	69.20-48.84	63.14-32.15	53.84-32.70	34.45-15.60	61.19-26.74	69.20-48.84	63.14-32.15	53.84-32.70
MOD	† MODINE MANUFACTURING CO	# MAR	1.32	1.80	1.81	1.19	1.03	12.80	13.43	17.96	16.14	14.64	34.10-20.68	37.98-26.45	33.99-23.98	28.00-12.46	30.00-15.65	34.10-20.68	37.98-26.45	33.99-23.98	28.00-12.46	30.00-15.65
SPAR	§ SPARTAN MOTORS INC	DEC	0.57	0.29	0.21	0.16	0.44	3.18	2.39	2.23	2.06	1.92	11.04-4.44	5.59-3.83	6.60-4.30	5.36-3.45	7.02-2.49	11.04-4.44	5.59-3.83	6.60-4.30	5.36-3.45	7.02-2.49
SMP	§ STANDARD MOTOR PRODS	DEC	0.50	(0.09)	(0.46)	0.01	0.51	7.56	6.72	7.28	8.03	11.47	15.70-6.75	16.00-7.70	16.80-12.00	15.70-9.10	17.39-9.45	15.70-6.75	16.00-7.70	16.80-12.00	15.70-9.10	17.39-9.45
SUP	§ SUPERIOR INDUSTRIES INTL	DEC	(0.36)	(0.27)	1.68	2.76	2.97	21.05	21.73	22.66	22.12	19.96	23.75-16.25	28.85-19.79	43.90-25.21	46.15-33.62	53.80-35.79	23.75-16.25	28.85-19.79	43.90-25.21	46.15-33.62	53.80-35.79
MOTORCYCLE MANUFACTURERS†																						
HOG	* HARLEY-DAVIDSON INC	DEC	3.94	3.42	3.02	2.52	1.92	10.46	11.05	10.73	9.63	7.21	75.87-47.86	62.49-44.40	63.75-45.20	52.51-35.01	57.25-42.60	75.87-47.86	62.49-44.40	63.75-45.20	52.51-35.01	57.25-42.60
TIRES & RUBBER†																						
GT	* GOODYEAR TIRE & RUBBER CO	DEC	(1.86)	1.36	0.65	(4.58)	(6.62)	(9.03)	(4.10)	(4.61)	(4.55)	(0.67)	21.35-9.75	18.59-11.24	15.01-7.06	8.19-3.35	28.85-6.50	21.35-9.75	18.59-11.24	15.01-7.06	8.19-3.35	28.85-6.50
OTHER COMPANIES WITH SIGNIFICANT AUTOS AND PARTS OPERATIONS																						
AIT	§ APPLIED INDUSTRIAL TECH INC	JUN	1.62	1.25	0.73	0.47	0.34	7.82	7.42	6.44	5.89	5.78	31.67-20.75	25.03-15.19	21.33-8.76	11.05-6.83	9.44-6.53	31.67-20.75	25.03-15.19	21.33-8.76	11.05-6.83	9.44-6.53
DAI	§ DAIMLER AG	DEC	4.17	3.32	3.29	(0.52)	5.07	40.70	36.49	38.59	37.12	31.04	62.24-45.98	55.15-38.77	49.85-39.67	46.85-26.27	50.88-29.78	40.70	36.49	38.59	37.12	31.04
GPC	* GENUINE PARTS CO	DEC	2.77	2.51	2.26	2.03	2.11	14.59	15.21	14.21	12.95	11.88	48.34-40.00	46.64-40.75	44.32-32.03	33.75-27.20	38.80-27.10	48.34-40.00	46.64-40.75	44.32-32.03	33.75-27.20	38.80-27.10
MGA	MAGNA INTERNATIONAL -CL A	DEC	4.86	5.99	7.17	5.93	5.83	54.48	51.31	48.43	43.03	45.90	83.35-68.40	82.77-60.00	85.33-67.48	83.60-50.25	78.09-49.35	83.35-68.40	82.77-60.00	85.33-67.48	83.60-50.25	78.09-49.35
TEN	TENNECO INC	DEC	1.15	1.35	0.37	0.67	0.78	0.20	(2.28)	(1.42)	(3.91)	(7.47)	27.55-19.61	20.06-11.55	17.49-6.73	7.45-2.01	8.32-1.90	27.55-19.61	20.06-11.55	17.49-6.73	7.45-2.01	8.32-1.90

Note: Data as originally reported. † S&P 1500 Index group. * Company included in the S&P 500. † Company included in the S&P MidCap. § Company included in the S&P SmallCap. # Of the following calendar year. J-This amount includes intangibles that cannot be identified.

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<i>Airlines/Asia, Europe</i>	<i>Industrial Machinery/Asia, Europe</i>
<i>Autos & Auto Parts/Asia, Europe</i>	<i>Insurance: Life & Health/Asia, Europe</i>
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