

Chicago Fed Letter

Vehicle sales in 2003: A good down-year

by Michael Munley, associate economist, William Strauss, senior economist and economic advisor, and Scott Walster, research intern

Although 2002 was a difficult year for the U.S. economy, light vehicle sales ended the year stronger than expected at 16.7 million units. The consensus forecast is for sales to slow to 16.3 million units in 2003 and rise to 16.7 million units in 2004. This would make 1999–2004 the six strongest sales years in auto industry history.

The year 2002 began with some degree of optimism for a strong economic performance. Following a steep, 18-month contraction, the manufacturing sector recorded eight consecutive months of gains, with production rising 2.7% between January and

August 2002. At the same time, light vehicle sales were flat, but at a historically high rate.

However, the U.S. economy hit a soft patch following the summer of 2002, driven by geopolitical uncertainties, notably the anticipated war with Iraq, which contributed to a pull-back by the business sector. Subsequently, the manufacturing sector stumbled and production declined by 2.1% over the next eight months. Light vehicle

sales slumped to an average of 16.2 million units over the same period. Now that the major fighting in Iraq is over and with it the uncertainty affecting the U.S. economy, many people expect the economy to begin to expand more robustly in 2003.

On May 29 and 30, 2003, participants at the tenth annual Auto Outlook Symposium, held at the Detroit Branch of the Federal Reserve Bank of Chicago, discussed the industry's outlook for this year and the next.

What was expected

Last year's symposium participants had expected real gross domestic product (GDP) to increase by 2.8%, a bit higher than the 2.4% that did occur. The consensus forecast underpredicted the decline of the business sector, expecting business fixed investment to fall by 4.4%; it fell by 5.7%. Real business inventories were forecast to increase by \$10.4 billion versus the actual increase of \$5.2 billion. Although industrial production was anticipated to increase by 0.7%, it fell by 0.7%. The group did better on real net exports, with a forecast of -\$469 billion versus the -\$488.5 billion recorded. The group was right on target with the unemployment rate, which averaged 5.8% during 2002.

Consumer spending was forecast to rise by 3.4%, very close to the actual 3.1% gain. The group underestimated the extremely strong housing market, forecasting housing starts to average 1.60 million units instead of the actual rate of 1.71 million units. Notably, too, light vehicle sales, forecast at 16.5 million

1. Median forecast of GDP and related items

	2002	2003	2004
	(actual)	(forecast)	(forecast)
Real GDP ^a	2.4	2.3	3.5
Real personal consumption ^a	3.1	2.2	3.3
Real fixed investment–nonresidential ^a	-5.7	1.4	6.9
Real fixed investment–residential ^a	3.9	3.7	0.5
Change in private inventories ^b	5.2	19.0	40.0
Net exports of goods and services ^b	-488.5	-508.0	-508.3
Real govt. consumption and gross investment ^a	4.4	3.4	2.3
Industrial production ^a	-0.7	1.4	4.0
Auto and light truck sales ^c	16.7	16.3	16.7
Housing starts ^c	1.71	1.69	1.65
Unemployment rate ^d	5.8	6.0	5.7
Inflation rate (Consumer Price Index) ^a	1.6	2.2	2.2
1-year Treasury (constant maturity) ^d	2.00	1.50	2.45
10-year Treasury (constant maturity) ^d	4.61	4.08	4.80
J. P. Morgan trade-weighted dollar ^a	-1.0	-4.4	-0.9
Oil price (West Texas Intermediate) ^e	26.1	28.1	24.0

^aPercent change from previous year; ^bchained 1996 dollars, billions; ^cmillions of units; ^dpercent; ^edollars per barrel.

SOURCES: Actual data from Haver Analytics; median forecasts from Auto Outlook Symposium participants.

units, ended 2002 stronger than expected at 16.7 million units.

Consensus outlook

Economic activity growth was restrained in the first quarter of 2003, primarily due to the imminent war with Iraq. Real GDP increased by 1.9% in the first quarter. Light vehicle sales slowed to 15.8 million units in the first quarter, the slowest quarterly selling pace in four and a half years, but rose to 16.4 million units in April.

However, symposium participants forecast a better performance in the second half of the year. Real GDP is expected to grow by 2.3% in 2003 and 3.5% next year (figure 1). The unemployment rate is anticipated to rise to 6.0% in 2003, then ease to 5.7% in 2004. The consensus forecast for light vehicle sales is an average of 16.3 million units in 2003 and a rise to 16.7 million units in 2004. This would make 1999–2004 the six strongest auto sales years in history. The participants expect inflation to increase to 2.2% this year and remain at that rate next year.

Light vehicle sales

The executive director for market analysis at one large automaker said that consumer sentiment has improved following the end of major combat in Iraq, but deteriorating labor market conditions and a contracting manufacturing sector have stifled any bounce in real economic activity. This sluggish economy has contributed to a fall-off in sales, but has mostly prompted downward pricing adjustments and the subsequent record vehicle affordability.

Vehicle original equipment manufacturers (OEMs) had used incentives to fuel several strong sales years, but they had pulled some sales ahead and now their incentives are less effective. Sales volumes have been off about 1.5 million units from the peak, and competition has grown even more intense, with foreign nameplates increasing their penetration into the American market. Automakers have pushed vehicle inventories to record levels in order to be well positioned to gain share (and, in part, to hedge against potential supply

disruptions from any labor disputes). Despite the diminishing effectiveness of incentives, many automakers continue to increase incentive activity and all remain aggressive on pricing.

In the near term, the speaker forecast total vehicle sales to be 16.3 million units for all of 2003. Given the high inventories, this automaker planned to keep production relatively flat (on a seasonally adjusted basis) for the last two quarters of the year. Next year, though, as the economy gains momentum, sales should increase to near-trend levels (16.9 million units) and automakers should see some easing in price pressures. Nonetheless, the speaker emphasized the need for OEMs to develop a viable business model against pricing pressure. Automotive competition will only intensify as automakers continue to expand the number of product offerings. In this environment, OEMs need to increase their efficiency through productivity and quality improvements, but also their effectiveness with differentiation and brand management.

Heavy trucks

Last year was a volatile year for the commercial transportation industry. It went through the tail-end of an insurance and lending crisis; a significant change in engine emission requirements that led to a pull-ahead in heavy truck orders; and rising fuel prices, which hurt motor carrier profitability. The co-principal from a commercial transportation research firm explained that there are four key issues facing motor carriers, and subsequently heavy truck producers, in the near term. One is the lack of any significant growth in freight shipments, which have been held back by the weakness in manufacturing activity. Two additional issues are stubbornly high fuel costs and high insurance rates, with both contributing to below normal profit margins for many motor carriers. Fuel surcharges have been difficult to implement because many large clients resist the increased costs. High insurance rates have been a problem for the past two years and continue to be a problem, as many truckers have yet to renew their insurance contracts in the higher rate environment. Finally,

many small truckers have found it difficult to get financing for their truck purchases.

Demand has varied by truck class, but generally is slowly improving, despite those issues. The speaker noted that class 8 truck orders began 2003 at “healthy levels,” order backlogs were “inching higher,” and, as a result, build was rising quickly. Also, an April pick-up in class 8 retail sales reversed the accumulation in truck inventories, but inventories remain high given the current sales pace. Furthermore, trailer orders have been increasing and order cancellations have fallen to low levels. However, net orders for class 5–7 trucks have been “muddling along” at low levels.

Any real recovery in truck demand will lag a rebound in manufacturing activity. The speaker forecasts that economic growth will continue to struggle through at least the fall, and, as a result, heavy truck demand will struggle as well. North American class 8 truck retail sales in 2003 are forecast to be off 8.8% from the artificial spike in 2002, class 5–7 truck sales should fall 1.6%, but trailer shipments should pick up from the trough in 2002. As the economy gains momentum in 2004, class 8 truck sales should climb around 17.1%, class 5–7 truck sales should increase 8.8%, and trailer shipments should grow 17.5%.

The dealers' perspective

The chief economist from an auto dealers' trade association discussed profitability and the changing structure of the auto retail environment.

According to one survey, dealers' sentiment about their profitability in the next year is basically in the middle of the range from the past 25 years. Lower costs, by way of low interest rates and improving inventory management techniques, have helped profitability. But, sluggish economic growth and vehicle sales have left dealers somewhat guarded about their profit outlook.

Although sales have been slower than in recent years, incentives have kept them at a higher rate than some fundamentals suggest. For example, net household financial assets, which are closely

tied to stock market fluctuations, have fallen below the level from 1997, but incentives have kept sales higher than the 1997 sales rate of 15.5 million. Also, new incentives on luxury cars have allowed some consumers to move up market, allowing luxury vehicle sales to avoid a typical decrease during the recent stock market correction.

The speaker noted that the Dealer Optimism Index, which tends to lead sales performance by 18–24 months, suggests light vehicle sales will average around 16.0 million units in 2003. At the same time, the speaker expects improving fundamentals for the economy as a whole and increasing consumer willingness to spend.

Long-term issues facing auto dealers include the continuing decline in the number of dealerships in the U.S. In the early 1990s, there were nearly 25,000 dealerships, in 2002 there were around 22,000. This partly reflects the increasing popularity of large auto dealer franchises. But, dealerships are still primarily family-run businesses, and a good portion of the decline is a result of smaller dealers buying two or three dealerships in their area. As this orderly consolidation continues, the speaker estimated that the number of dealerships would fall to 18,000 by 2013.

Labor negotiations

The United Auto Workers (UAW) union's and the Big Three's current labor agreement expires on September 14, 2003. Both sides are much weaker going into this round of negotiations than in previous years. The manufacturers have been tossing record incentives at consumers to retain sales and they are also facing market share losses to foreign competition. The UAW is struggling with its lowest reported working membership ever, at 639,000 in 2002 down from 1.53 million in 1979.

The director of economics at an automotive think tank explained that each of the Big Three automakers has substantially different objectives for the next contract. General Motors (GM) is dealing with expensive legacy costs for their retirees, who outnumber its current

work force by three to one. GM will be willing to trade wage increases and employment level guarantees for a health cost sharing program and possibly switching to generic drugs from brand names. Ford needs to restructure its work force. Since the last round of negotiations, Ford's sales have dropped 20%; however, job cuts have been limited to 6%. Ford will be looking for the UAW to agree to a 20% to 25% cut in jobs over the next three to four years and a number of plant closures. In return, Ford would not cut health care benefits and would keep Visteon UAW jobs under its name. DaimlerChrysler, the most integrated of the manufacturers in terms of parts production, would like to spin off or close a number of its parts plants and is looking for productivity gains through employment reductions to stay in line with Ford. Similar to Ford, DaimlerChrysler would offer not to cut health care and also to guarantee a certain level of UAW workers.

The UAW will probably have to choose between cuts in benefits and restructuring. But, why would an aging UAW work force, with up to 40,000 employees expected to retire over the next four years from GM alone, ratify a plan that cuts their retirement benefits? The speaker expects Ford to lead the negotiations and get its restructuring accepted by the UAW. Then GM will also have to restructure heavily to cover its legacy costs. Overall, the speaker expects some 47,000 UAW job cuts to occur, but some of those memberships could be brought back through suppliers.

Suppliers' perspective

Since 1997, the Consumer Price Index for new automobiles has declined 4.9%. This led the chief economist for suppliers to point out that suppliers are experiencing a different set of issues. With supplier input costs, such as steel and chemical prices, rising faster than the prices they are able to charge the OEMs, they have shrinking margins and very little pricing power. The speaker also questioned how much longer OEMs and suppliers could go on increasing their global capacities in an industry that has continued to underperform the overall equity markets: Over the past five years,

global OEM and parts suppliers' equity values are down 60% and 20%, respectively, compared with the 12% decline in the S&P 500.

Used vehicles

The vice president of a market research firm discussed the used vehicle market, which is important to consumers because it determines how much equity they will have available for their next purchase. Sales of used vehicles increased by 1% in 2002 over 2001, but a strong incentive push on new vehicles slowed used vehicle sales down over the last half of 2002 and into the first quarter of 2003. At the same time, average used car prices are down 6.3%, year over year, with late model prices suffering the most.

Vehicle owners have discovered their trade-ins are not getting them as much value at the dealerships, spurring an increase in private transactions—up 10% in 2002 from a year earlier. This trend is expected to continue as the number of drivers taking ownership of new vehicles increases and leasing becomes a less attractive option next to new vehicle purchasing incentives. The increase in private market transactions and the simultaneous decrease in off-lease late model cars at dealerships should help prices firm after 2003.

Technology and regulation

According to the director of environmental and energy planning for one

Michael H. Moskow, *President*; William C. Hunter, *Senior Vice President and Director of Research*; Douglas Evanoff, *Vice President, financial studies*; David Marshall, *team leader, macroeconomic policy research*; Daniel Sullivan, *Vice President, microeconomic policy research*; William Testa, *Vice President, regional programs and Economics Editor*; Helen O'D. Koshy, *Editor*; Kathryn Moran, *Associate Editor*.

Chicago Fed Letter is published monthly by the Research Department of the Federal Reserve Bank of Chicago. The views expressed are the authors' and are not necessarily those of the Federal Reserve Bank of Chicago or the Federal Reserve System. Articles may be reprinted if the source is credited and the Research Department is provided with copies of the reprints.

Chicago Fed Letter is available without charge from the Public Information Center, Federal Reserve Bank of Chicago, P.O. Box 834, Chicago, Illinois 60690-0834, tel. 312-322-5111 or fax 312-322-5515. *Chicago Fed Letter* and other Bank publications are available on the World Wide Web at <http://www.chicagofed.org>.

ISSN 0895-0164

automaker, energy policy formulation should be preceded by a clear definition of goals and numerical targets, such as balancing atmospheric CO₂ at a particular level and/or reducing foreign oil imports to a certain percentage.

Along with numerical targets, policymakers and manufacturers must incorporate the views of the consumer into future standards. The speaker stressed light-duty diesel engines as the technology with the most market potential in near term due to OEM familiarity. Internal combustion hybrid engines offer a more practical solution in the mid-term, along with alternative ethanol and biodiesel fuels for reducing imported petroleum levels. Fuel cell vehicles, with motive power from hydrogen, make a more viable solution for the long term (20 years) as a better understanding of the technology develops and the costs of production become reasonable.

A presenter from a scientific and technology marketing research firm also stressed light diesel engines as the alternative with the most potential in the near term to accommodate corporate average fuel economy (CAFE) and CO₂ standards. Light diesels also offer consumers fuel cost savings and high residual values, both of which help offset the price premium, and produce the driving performance consumers demand.

Domestic OEMs have some hurdles to clear before light diesels can come to market. Despite the diesel motors' ability to meet CAFE and CO₂ requirements, Tier II nitrous oxide emission standards still pose a problem. In addition, capital requirements to start production of light diesels in North America may constrain manufacturers, who are already financed heavily with debt. The speaker warned that if domestic OEMs were not successful in creating the technology, foreign producers would be looking to move into the market. Consumers' negative attitudes, due to the exhaust odor and starting problems typical of the 1970s diesel engines, are another hurdle. The speaker believes the subsidized hybrid electric vehicles (HEV), which currently fail to match the driving performance of gasoline and diesel engines, are not necessarily a more attractive alternative.

A speaker from a consumer research group reported that 66% of consumers would consider purchasing a clean diesel automobile, citing fuel efficiency and durability as the attractive benefits. Also in a survey conducted by the group, respondents who reported they would not consider clean diesels claimed engine noise, exhaust odor, and the lack of advantages affected their decision, along with worries about the availability

of diesel fueling stations and maintenance shops. Since clean diesel engines have dramatically less noise and odor than older model diesels, the speaker suggested that skeptical consumers may be taking a wait and see approach.

A similar study showed a comparable proportion of consumers would consider purchasing an HEV as a clean diesel, but in a hypothetical situation where fuel prices were higher than current averages people showed more interest in buying diesel over the HEV. Consumers hesitant about HEVs raised questions on engine performance, costs, and reliability.

Conclusion

Despite strong purchasing incentives, the consensus is for light vehicle sales to moderate in 2003, but then rise in 2004 as the economy gains momentum. In addition to concerns about short-term sales and incentives, OEMs must be mindful of future environmental regulations and the technologies they choose to meet these standards. The attitudes of consumers must also be taken into account when formulating long-term strategies for the environment and attempting to defend market share against foreign competition.