

Motor Vehicles, Model Year 1998

By Ralph W. Morris

SALES OF new motor vehicles in the United States totaled 15.7 million units in model year 1998 (chart 1).¹ This level of sales was the highest in the current economic expansion, which began in 1991. Sales increased 2.2 percent in model

year 1998 after decreasing 0.5 percent in model year 1997. Sales of domestic trucks and sales of both imported cars and trucks increased; sales of domestic cars decreased (table 1).²

The share of total sales of new motor vehicles that is accounted for by trucks increased to 48.7 percent in 1998 from 46.2 percent in 1997. This share has increased every year since 1991, when

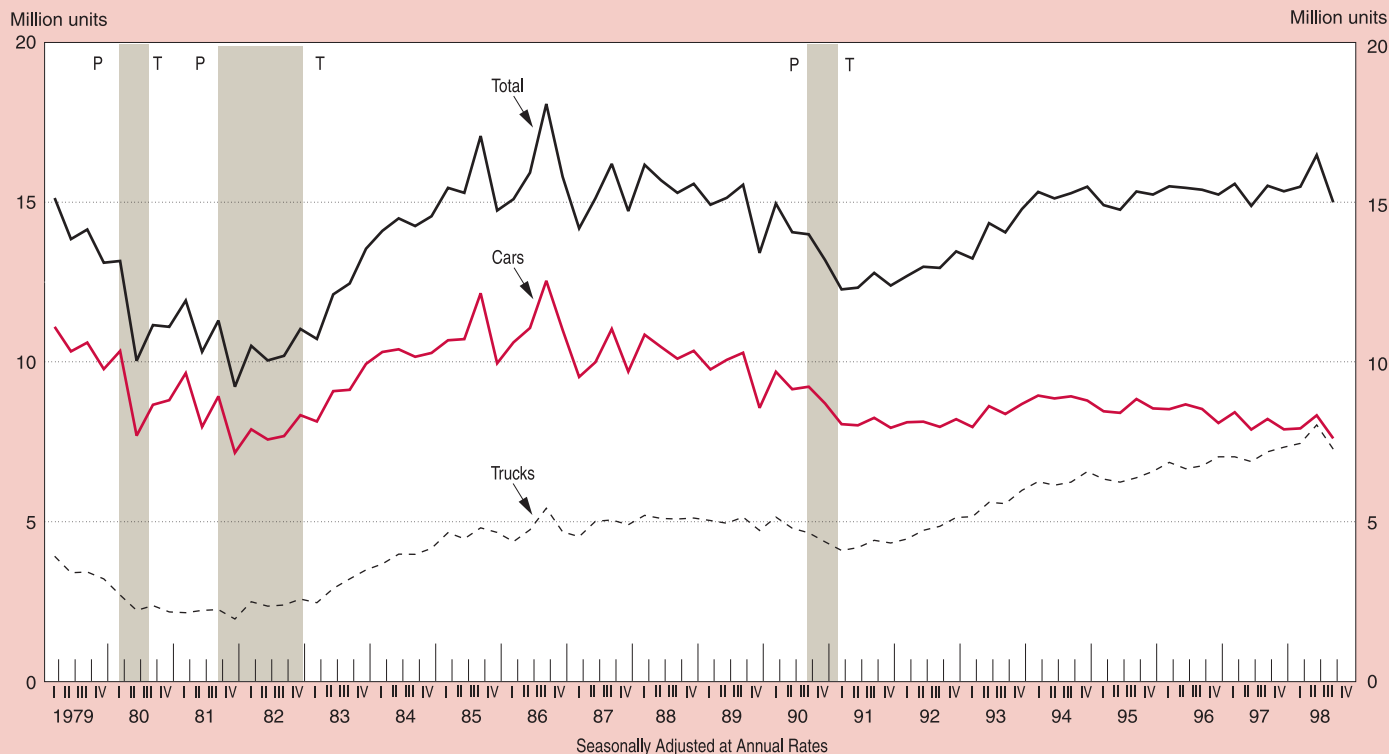
1. The data on unit sales, inventories, and production in this article are mainly from *Ward's Automotive Reports* and the American Automobile Manufacturers Association, Inc., and the data on prices are mainly from the Bureau of Economic Analysis (BEA). These data underlie the estimates of auto and truck output in the national income and product accounts. The quarterly data for domestic and imported cars and light trucks are seasonally adjusted by BEA using seasonal factors from the Federal Reserve Board.

For this article, the model year is defined as beginning on October 1 and ending on the following September 30. Thus, model year 1998 covers the fourth calendar quarter of 1997 and the first, second, and third calendar quarters of 1998. All years mentioned in this article are model years unless otherwise stated.

2. Sales of domestic vehicles consist of the sales in the United States of domestic-nameplate vehicles and "transplant" vehicles manufactured in North America—that is, in Canada, the United States, and Mexico. Domestic-nameplate vehicles are manufactured at factories owned by U.S. companies, and transplant vehicles are manufactured at factories owned by foreign companies. Sales of imported vehicles consist of vehicles manufactured outside North America and sold in the United States.

CHART 1

New Motor Vehicle Sales



Note.— Peak (P) indicates the end of business cycle expansion and the beginning of recession (shaded area). Trough (T) indicates the end of business cycle recession and the beginning of expansion. Business cycle peaks and troughs designated by the National Bureau of Economic Research, Inc.

Data: American Automobile Manufacturers Association, Inc. and *Ward's Automotive Reports*, seasonally adjusted by BEA.

truck sales accounted for 34.4 percent of total sales.

The relative strength of truck sales reflects the continuation of a trend in which truck purchases have been substituted for car purchases. Most of these purchases are of light truck models—such as sport-utility vehicles, pickup trucks, and vans—that include the additional equipment and refinements usually found in cars but that also retain many of the functional aspects of trucks, such as greater passenger, load-carrying, and towing capacity and four-wheel drive capability. The composition of truck sales has continued to shift toward upscale models that offer more power, luxury, and options than the basic models. In recent years, gasoline prices have remained relatively low and thus have not constrained the sales of trucks, most of which are fuel inefficient.

The high level of motor vehicle sales in 1998 reflected favorable developments in many of the factors that are usually considered in analyses of consumer spending. The unemployment rate decreased for the sixth consecutive year and dropped below 5 percent for the first time in more than 20 years. Real disposable personal income increased 3.0 percent. The Index of Consumer Sentiment (prepared by the University of Michigan's Survey Research Center) increased to its highest level in more than 30 years. In addition, consumer spending may have been

stimulated in recent years by the considerable additions to consumer wealth that resulted from rising stock market prices.

Several factors that are specific to the motor vehicle industry also helped boost sales. Manufacturers offered sales-incentive programs to consumers throughout the year. Many of these programs, particularly those offered beginning in the spring, were more attractive than those offered in 1997. In addition, several programs were expanded to cover a broader selection of car and truck models. Manufacturers' incentives included rebates and below-market-rate financing. For selected models, manufacturers improved incentives by offering consumers both a rebate and low-interest financing on the same purchase. Other incentives included discounts on optional equipment, such as air conditioning, automatic transmissions, and power windows and door locks.

The consumer price index (CPI) for new cars decreased 1.1 percent in 1998, the first decrease in 25 years, after increasing 1.1 percent in 1997; the CPI for new trucks decreased 0.3 percent after increasing 2.7 percent.³ The decreases in both

3. The data are from the fixed-weighted indexes that presently constitute the official consumer price index (CPI), which is prepared by the Bureau of Labor Statistics (BLS). BLS also publishes geometric-mean-type CPI's as experimental series and plans to incorporate these indexes into the official CPI when the data for January 1999 are released. BEA currently uses the geometric-mean-type CPI's to deflate many of the detailed categories of

Table 1.—Selected Motor Vehicle Indicators

	Model year ¹								Seasonally adjusted at annual rates				
	1991	1992	1993	1994	1995	1996	1997	1998	1997		1998		
									III	IV	I	II	III
	Thousands of units												
New motor vehicle sales	12,756	12,868	13,913	15,179	15,231	15,458	15,380	15,719	15,618	15,441	15,587	16,578	15,099
New-car sales	8,373	8,160	8,428	8,936	8,736	8,654	8,259	8,071	8,323	8,001	8,027	8,440	7,716
Domestic	6,276	6,195	6,595	7,173	7,167	7,361	6,924	6,704	6,928	6,627	6,646	7,065	6,378
U.S. nameplates	5,137	5,048	5,348	5,707	5,518	5,428	4,964	4,665					
Transplants	1,140	1,146	1,247	1,466	1,649	1,933	1,960	2,039					
Import	2,097	1,966	1,833	1,763	1,570	1,293	1,335	1,367	1,396	1,374	1,381	1,375	1,338
New-truck sales	4,384	4,707	5,486	6,243	6,495	6,804	7,118	7,648	7,294	7,440	7,560	8,138	7,383
Light	4,131	4,446	5,167	5,868	6,068	6,387	6,704	7,155	6,864	6,983	7,089	7,644	6,841
Domestic	3,582	4,026	4,789	5,499	5,666	5,976	6,155	6,549	6,271	6,435	6,504	7,026	6,170
Import	549	421	378	369	402	411	550	606	593	548	585	618	671
Other	253	261	320	375	427	417	414	493	431	457	471	494	542
Domestic-car production	5,454	5,643	5,827	6,548	6,466	6,194	5,879	5,570	6,088	5,859	5,616	5,059	5,748
Domestic-car inventories ²									1,320	1,342	1,354	1,097	1,207
Domestic-car inventory-sales ratio ³									2.29	2.43	2.45	1.86	2.27
	Dollars												
Average expenditure per new car ⁴	15,892	16,893	17,526	18,431	18,751	19,275	20,273	20,787	20,578	20,535	20,928	20,855	20,828
Domestic	15,499	16,281	16,595	17,406	17,591	17,943	18,520	18,632	18,789	18,490	18,767	18,652	18,618
Import	17,067	18,861	20,998	22,598	24,038	26,852	29,412	31,313	29,455	30,396	31,326	32,171	31,359

1. A model year begins on October 1 and ends on September 30. Thus, it covers the fourth quarter of one calendar year and the first three quarters of the next calendar year. Model year 1998, for example, encompasses the fourth quarter of 1997 and the first, second, and third quarters of 1998.

2. End of quarter, not at annual rate.

3. Ratio of end-of-quarter inventories to average monthly sales for the quarter.

4. BEA estimate, using average base price and adjustments for options, transportation charges, taxes, discounts, and rebates for each model, weighted by that model's share of sales; not at annual rate.

Source: American Automobile Manufacturers Association, Inc., and Ward's Automotive Reports; data are seasonally adjusted by BEA.

car and truck prices were partly a result of the extensive sales-incentive programs.

Finance terms on new-vehicle loans remained favorable in 1998. Interest rates on new-car loans decreased for the third consecutive year: Rates for new-car loans made by motor vehicle finance companies averaged 6.3 percent in 1998, down from 7.9 percent in 1997, and rates for loans made by commercial banks averaged 8.8 percent, down from 9.0 percent (chart 2). The sharper drop

personal consumption expenditures, including new autos and trucks. In addition, effective with the release of the January 1999 data, the CPI will no longer make quality adjustments for changes in vehicles that are made in response to air-pollution mandates.

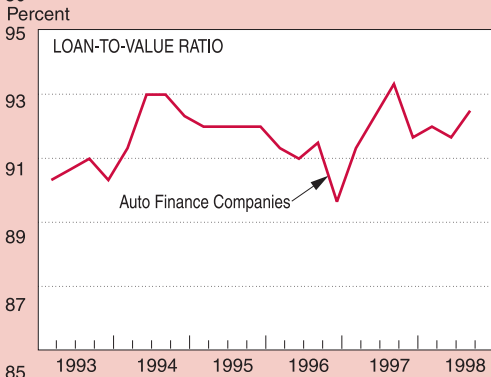
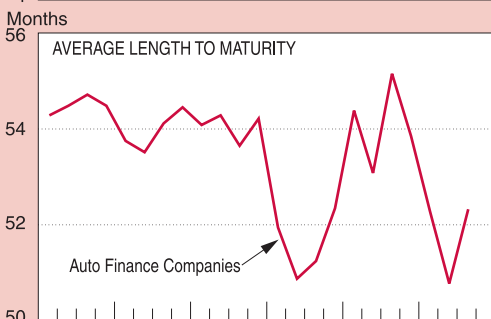
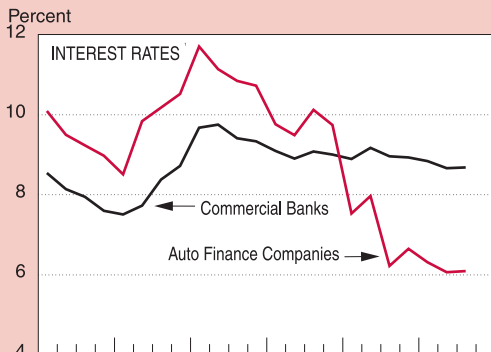
in the finance companies' rates partly reflected the effect of the below-market rates offered by manufacturers' sales-incentive programs through their financial subsidiaries.

However, new-vehicle sales may have been constrained by developments in the used-vehicle sales market. A growing number of 2- and 3-year-old vehicles that had been leased as new vehicles became available for sale as leasing arrangements expired; this growth reflects the sharp increase in new-vehicle leasing in previous years. These used vehicles provide a particularly attractive alternative to new cars because they tend to have low mileage, to be well equipped with options, and to be well maintained. The CPI for used cars and trucks decreased 4.1 percent in 1998.

Motor vehicle sales may also have been dampened by a tendency for owners to keep their cars and trucks for longer periods; according to estimates by R.L. Polk and Company, the average age of cars on the road reached 8.7 years in calendar year 1997, compared with 7.9 years in 1991 (data for 1998 are not yet available). The average age of trucks on the road has increased less dramatically, 8.3 years in calendar year 1997, compared with 8.1 years in 1991. The smaller increase in the average age of trucks may reflect the shift to new-truck purchases from new-car purchases.

CHART 2

Finance Terms on 48-Month New Car Installment Loans



1. Most common interest rates (annual percentage rate) at reporting institutions. Data: Federal Reserve Board.

New Cars

Sales of new cars decreased 2.3 percent to 8.1 million units in 1998 after decreasing 4.6 percent in 1997. The 1998 decrease was more than accounted for by the decrease in sales of domestic cars; a decrease in the sales of domestic-nameplate cars more than offset an increase in the sales of "transplant" cars. Sales of imported cars increased.

Sales of domestic cars decreased 3.2 percent to 6.7 million units, the lowest level since 1993. Sales of domestic-nameplate cars decreased 6.0 percent after decreasing 8.5 percent. Sales of transplant cars increased 4.0 percent after increasing 1.4 percent.

Sales of imported cars increased 2.4 percent to 1.4 million units. Sales of cars imported from Europe more than accounted for the increase. Despite a strengthening of the U.S. dollar against the Japanese yen, sales of cars imported from Japan continued to decrease, as Japanese firms transfer production of some

models from overseas plants to plants in North America.

The market share (the percent of total new-car sales) of sales of domestic-nameplate cars decreased to 57.8 percent in 1998 from 60.1 percent in 1997 (chart 3). The share of transplant-car sales increased to 25.3 percent from 23.7 percent, and the share of imported-car sales increased to 16.9 percent from 16.2 percent.

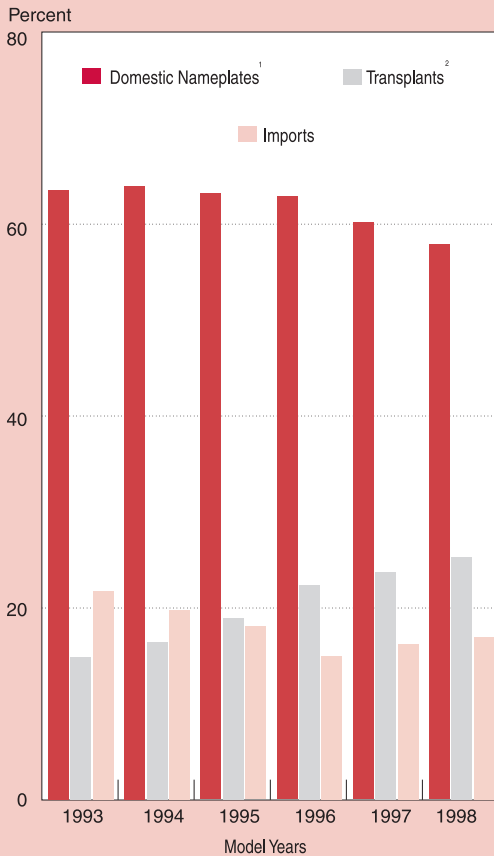
Sales of small cars decreased to 2.1 million units, and their market share decreased to 25.6 percent from 27.1 percent. Sales of middle-sized cars increased to 4.1 million, and their market share increased to 50.8 percent from 48.2 percent. Sales of large cars decreased to 0.6 million, and their market share decreased to 8.0 percent from 10.0 percent. Sales of luxury cars increased to 1.3 million, and their market share increased to 15.6 percent (chart 4).

The average expenditure per new car increased 2.5 percent to \$20,787 in 1998.⁴ The increase partly reflected the shift in the market toward imported cars, which have a larger average expenditure than domestic cars. For imported cars, the average expenditure increased 6.5 percent to \$31,313; the increase was partly attributable to a shift in the composition of imported-car sales from small cars to middle-sized cars and luxury cars. For domestic cars, the average expenditure increased 0.1 percent to \$18,632; the increase partly reflected increased sales of models equipped with optional equipment, such as air conditioning, antilock brakes, and power windows and door locks.

Domestic-car production—that is, cars manufactured in the United States—declined to 5.6 million units in 1998, the lowest level in 7 years. This low level at least partly reflected strikes by workers at the plants of a major motor vehicle

CHART 3

Share of New Cars by Source



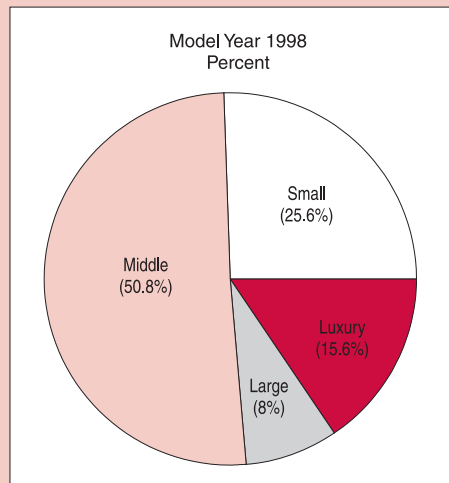
1. Domestic nameplates are cars manufactured in North America at factories owned by domestic companies.
 2. Transplants are cars manufactured in North America at factories owned by foreign companies.
 Data: Motor Vehicle Manufacturers Association, Inc. and Ward's Automotive Reports, seasonally adjusted by BEA.

4. Using data mainly from the Automotive Invoice Service and BLS, BEA derives the average expenditure per new car by using average base price and adjustments for options, transportation charges, taxes, discounts, and rebates for each model, weighted by that model's share of sales. Movements in the average expenditure differ from movements in the new-car component of the CPI for at least two reasons: First, the average expenditure, unlike the CPI (which is a fixed-weighted price index), reflects changes in the mix of models and options sold and includes cars sold to businesses and to governments as well as cars sold to consumers; and second, because the CPI, unlike the average expenditure, is adjusted to remove the influence of quality change on prices.

The upcoming change in the CPI for the treatment of pollution-abatement devices will reduce the difference between these two measures (see footnote 3).

CHART 4

Share of New Car Sales by Size Class



Note—Based on data for October 1, 1997 through September 30, 1998.
 Data: Ward's Automotive Reports

manufacturer; the strikes began in early June and ended in late July.

Domestic-car inventories were 1.2 million units at the end of model year 1998, slightly lower than at the end of 1997. The inventory-sales ratio was 2.3 at the end of 1998; the traditional industry target is 2.4.

By quarter, new-car sales decreased in the first quarter of the model year and changed little in the second quarter. In the third quarter, new-car sales increased sharply as a result of very attractive manufacturers' incentives, and in the fourth quarter, they decreased sharply (chart 5).

New Trucks

Sales of new trucks increased 7.4 percent to a record 7.6 million units in 1998 after increasing 4.6 percent in 1997. Sales of light domestic trucks, light imported trucks, and "other" trucks all increased.⁵

Sales of light trucks increased 6.7 percent in 1998 after increasing 5.0 percent in 1997. The

5. Light trucks have a gross vehicle weight of up to 10,000 pounds; these trucks include light conventional pickups, compact pickups, sport-utility vehicles, and passenger vans. "Other" trucks have a gross vehicle weight of over 10,000 pounds; these trucks range from medium-duty general delivery trucks to heavy-duty diesel tractor-trailers.

strength in sales of pickup trucks and sport-utility vehicles—especially luxury sport-utility models—continued in 1998. Sales of vans contributed slightly to the increase.

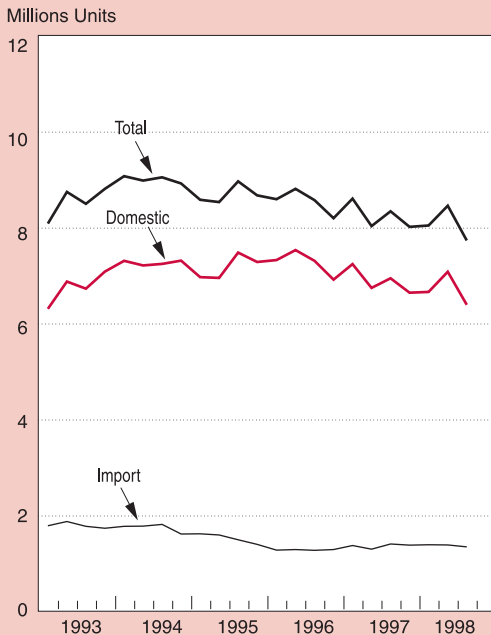
Sales of light domestic trucks increased 6.4 percent to 6.5 million units in 1998 after increasing 3.0 percent to 6.2 million units in 1997. Sales of domestic-nameplate trucks increased 5.5 percent to 6.0 million units after increasing 2.7 percent to 5.7 million units, and their share of total light-truck sales decreased to 83.6 percent. Sales of transplant trucks increased 16.4 percent to 0.6 million units, and their market share increased to 7.9 percent.

Sales of light imported trucks increased 10.2 percent to 0.6 million units, and their market share increased to 8.5 percent of light trucks. Sales of imported sport-utility vehicles increased substantially; in recent years, sales of these vehicles may have been boosted by the introduction of several new models into the small-vehicle segment of the U.S. market. Sales of imported pickups decreased, largely reflecting shifts in production by foreign manufacturers from plants overseas to plants in North America.

Sales of "other" trucks increased 19.1 percent to 0.5 million units. Nearly all of these trucks are purchased by businesses, and domestic models

CHART 5

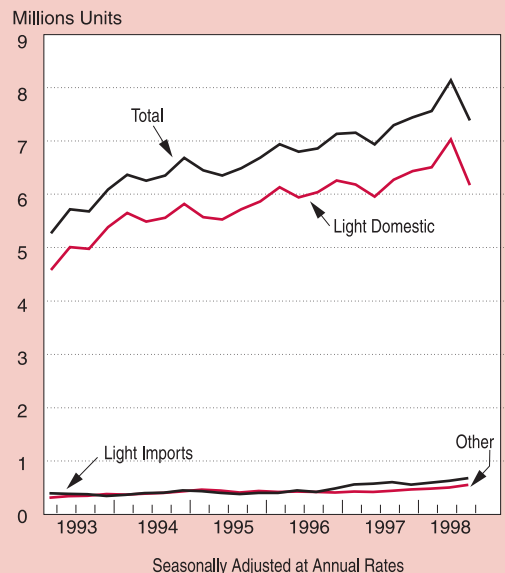
Retail Sales of New Cars



Seasonally Adjusted at Annual Rates
 Data: American Automobile Manufacturers Association, Inc. and *Ward's Automotive Reports*, seasonally adjusted by BEA.
 U.S. Department of Commerce, Bureau of Economic Analysis

CHART 6

Retail Sales of New Trucks



Seasonally Adjusted at Annual Rates
 Note—Retail sales of domestic trucks are classified by gross vehicle weight as light (up to 10,000 pounds) and "other" (over 10,000 pounds). Imported trucks include imports by U.S. manufacturers.
 Data: American Automobile Manufacturers Association, Inc. and *Ward's Automotive Reports*, seasonally adjusted by BEA.
 U.S. Department of Commerce, Bureau of Economic Analysis

accounted for almost 95 percent of total sales. One factor contributing to the high level of demand for heavy trucks in recent years has been the growth in spending on durable goods; these trucks are used extensively to transport goods—such as computers, machine tools, motor

vehicles, and appliances—and the parts for these goods.

By quarter, new-truck sales increased in the first and second quarters of the model year, jumped in the third quarter, and then fell in the fourth quarter ([chart 6](#)). 