Q3 2013

NADA Used Vehicle Price Report: Age-level Analysis and Forecast

AT A GLANCE

The impact of economic growth and appealing new vehicle incentives on consumer demand for new vehicles

How changes in used vehicle supply are affecting later- and older-model prices

Why advancements in quality and dependability have stimulated demand for older vehicles

How used prices are predicted to change through 2014

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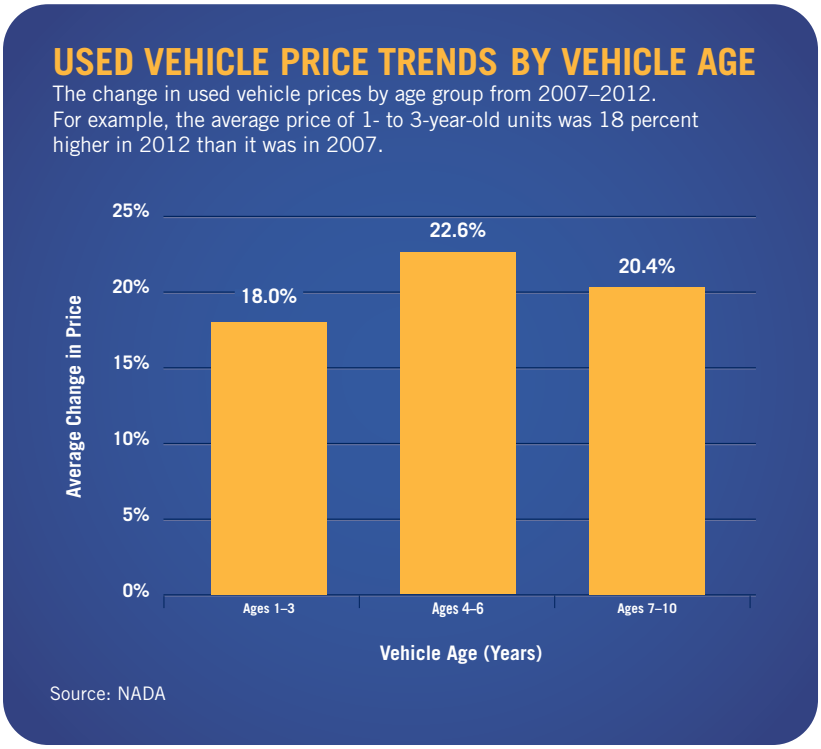
It is widely known that used vehicle prices have experienced an extraordinary period of growth over the past few years due to falling supply, robust consumer demand and higher new vehicle transaction prices. Perhaps lesser known is the extent that prices grew across the vehicle age spectrum.

From 2007 to 2012, prices for units up to three years of age grew by 18 percent. But even more dramatically, prices for units from four to 10 years of age grew by a combined average of 21.5 percent.



Over the first half of the year, used vehicle prices were essentially equal to 2012's historically high average of $15,664, when measuring movement on an aggregate basis. However, a deeper analysis reveals discernible shifts across model years, with later-model (those less than four years of age) prices softening more than those of their older counterparts. Through June, prices for units up to three years of age fell by 1.2 percent, while prices for units from four to 10 years of age remained flat.

NADA primarily attributes these divergent trends in price movement to new market pressures and changes in used vehicle supply, and expects these factors to continue to have similar effects on used prices through 2014.

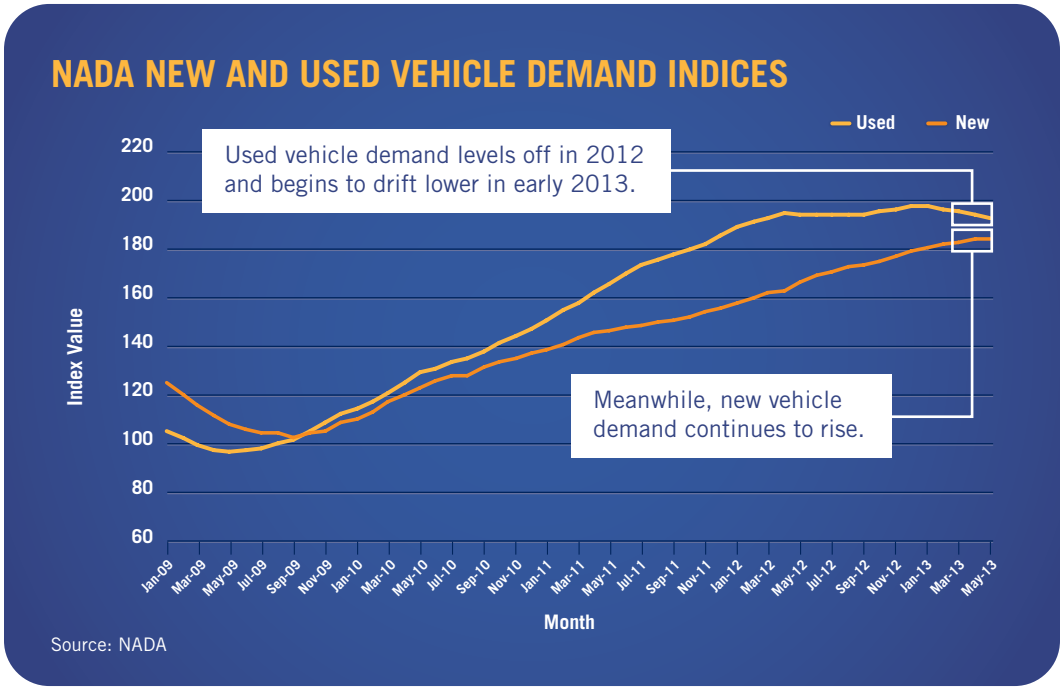
With this in mind, NADA's latest report provides greater detail on the specific elements driving used price performance at a vehicle age level in order to help rental company, dealership and financial professionals better manage future fleet purchases, remarketing activities, inventory acquisition and loan origination policies.

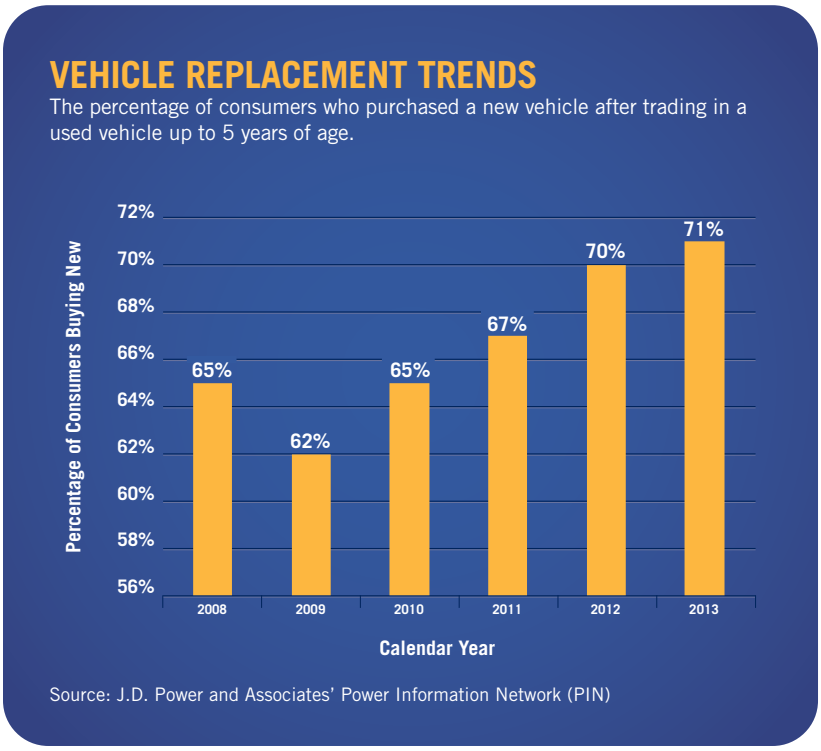
NEW MARKET FORCES ARE TAKING A TOLL ON LATER-MODEL PRICES

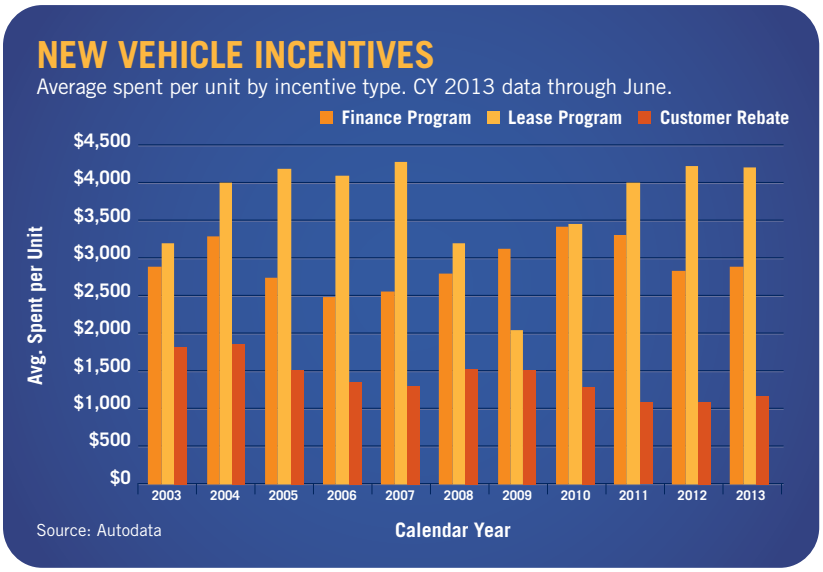
Lower unemployment levels, a resurgent housing market, equity market gains and a competitive lending environment are benefitting auto demand in general at the moment—but these forces are doing more to cultivate new vehicle demand than they are to grow demand for used vehicles.

NADA has stated in the past that the duration and depth of the last recession caused consumers who normally purchase new vehicles to turn to the used market during that economically stressful period of time. Now, as economic conditions have incrementally improved, the purchase habits of these consumers have gradually shifted back over to the new vehicle market.

The beginnings of this migration can be observed in NADA's new and used demand indices. After reaching a trough in 2009, both new and used demand grew substantially through 2011. New demand has continued to grow unabated ever since, but used demand leveled off in 2012 and began to drift lower over the first part of 2013.







These trends are also evident in consumers' purchase decisions. Using data from J.D. Power and Associates' Power Information Network® (PIN), we see that the percentage of consumers purchasing a new vehicle after trading in a used one up to five years of age fell from 65 percent in 2008 to 62 percent in 2009, before steadily rising each year thereafter.

In addition to an improving economy, it is likely that increasingly favorable new vehicle incentives are helping to facilitate this shift in later-model used-to-new demand.

Per Autodata™, incentive spending over the first half of 2013 grew by 2.1 percent on a prior-year basis to an average of $2,555 per unit. With respective averages of $2,879 and $4,193 per unit, finance and lease subsidies remained the two most prominent forms of incentives. While monies allocated to each have not changed much year-to-date (up 0.8 percent for the former and down by 1.0 percent for the latter), spending for both was either equal to or greater than pre-recession levels.

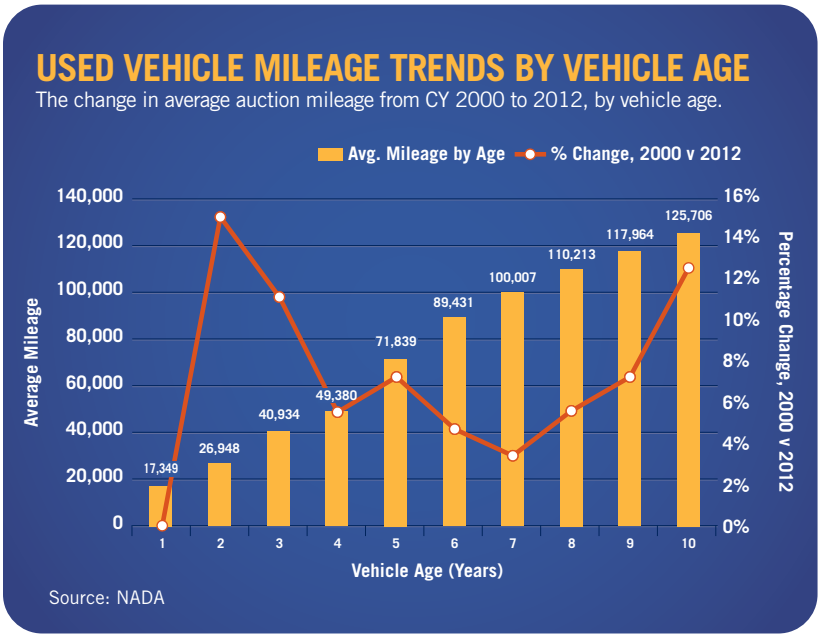
Furthermore, manufacturers increased consumer cash rebates by an average of 7.3 percent over the first half of the year. That being said, further analysis shows that the year-to-date consumer cash growth has been largely isolated to segments with older product (i.e., large pickups and SUVs), and spending in these segments remains 12 percent below the $1,329 per unit average recorded from 2006 to 2007.

NADA does expect that incentives will continue to rise as prior-year new sales comparisons become less favorable and manufacturers feel added pressure to maintain targeted growth rates. However, the restrained tactical use of cash incentives, coupled with more limited production capacity, indicates that overall spending should remain below the destructive levels observed last decade.

When combined, these two points—a shifting of preference from used-to-new and higher incentives—will increasingly apply greater downward pressure to later-model used vehicle prices as we move through 2014.

OLDER-MODEL PRICES ARE BENEFITTING FROM ADVANCEMENTS IN QUALITY AND DEPENDABILITY

Historically speaking, vehicles over five years of age have taken a back seat to their younger, in-warranty counterparts in terms of demand, and as a consequence have comprised a small percentage of the available stock on a franchised dealer's used lot. This was due in large part to concerns over reliability and costs associated with unexpected repairs.

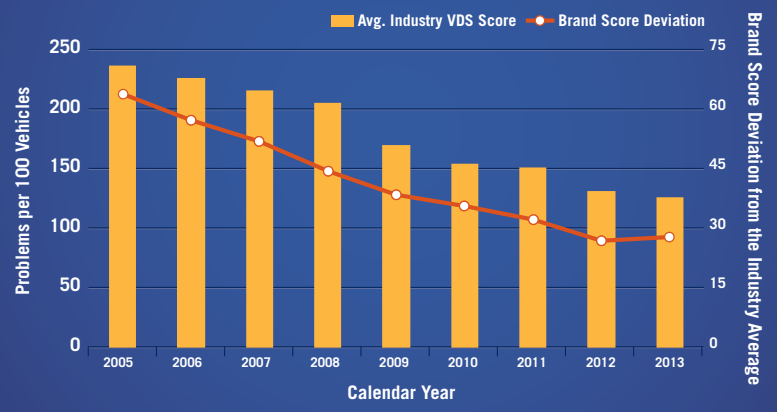


For the better part of a decade, however, manufacturers have taken major strides toward improving quality and dependability, which has helped to assuage consumer concerns in this area. This point can be validated through a variety of metrics, including a rise in vehicle age (per R.L. Polk, the average age of vehicles on the road increased from 9.6 years in 2002 to 11.4 years in 2013) and an increase in average mileage (accumulated mileage on units at auction grew by an average of 8 percent between 2000 and 2012).

More telling are the annual improvements in J.D. Power and Associates' Vehicle Dependability Study (VDS), which measures problems experienced by original owners of three-year-old vehicles during the past 12 months.

J.D. POWER AND ASSOCIATES' VEHICLE DEPENDABILITY STUDY (VDS)

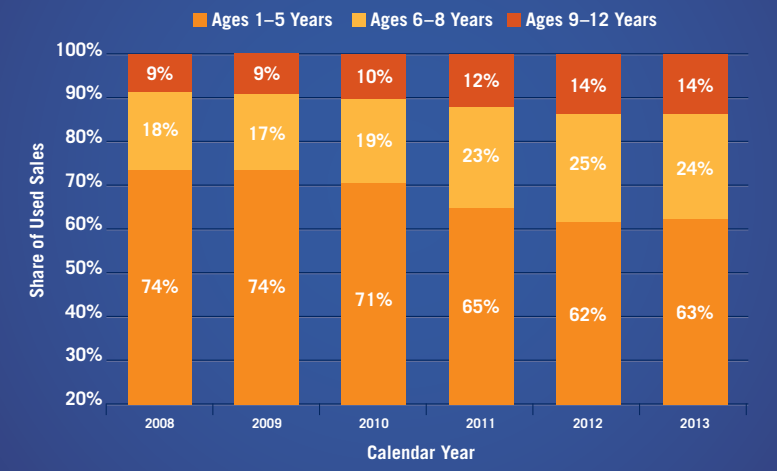
Measures problems experienced during the past 12 months by original owners of 3-year-old vehicles. Overall dependability is determined by the number of problems experienced per 100 vehicles (PP100).



Source: J.D. Power and Associates

FRANCHISED DEALER DISTRIBUTION OF USED VEHICLE SALES BY VEHICLE AGE

The percentage of used vehicle sales for units up to 12 years of age, by age group.



Source: J.D. Power and Associates' Power Information Network (PIN)

From 2005 to 2013, the average number of problems experienced per 100 vehicles (PP100) fell from 237 to 126—nearly a 50 percent improvement—while the standard deviation of brand-level scores, or brand score distance away from the overall industry average, fell from 63.9 to 28.0, indicating more similarity among brands.

Given rapid advances in dependability, consumers have shown more positive attitudes toward purchasing older used vehicles, and as a result, demand for these units has blossomed. In response, franchised dealers now retail more and more older units acquired via trade to retail, instead of sending them to auction as they had historically done, and are now promoting these units as value-priced alternatives to cost-conscious consumers.

Per J.D. Power and Associates' PIN data, as a percentage of all franchised dealer used transactions up to 12 years of age, units six to 12 years of age comprised 38 percent of all transactions in 2012—up from 26 percent in 2008—while the percentage of units of five years of age and below fell from 74 percent to 63 percent over the same period.

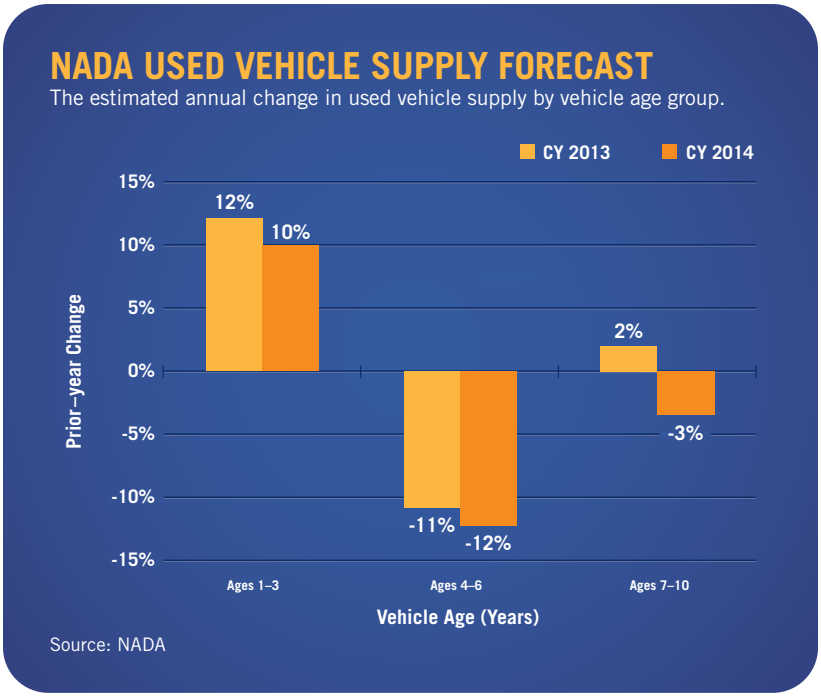
Taking into account the ongoing improvements in quality and dependability, combined with the sales, service and parts opportunities afforded franchised dealers, NADA expects demand for older-model units will remain strong through the forecast term.

USED SUPPLY BY VEHICLE AGE IS MOVING IN DIFFERENT DIRECTIONS

NADA has frequently discussed the benefit of falling supply on used vehicle prices over the past few years. We have also shared how the revival of new vehicle sales and leasing following 2009—the year new deliveries hit a nearly 30-year low of 10.4M units—would lead to a sharp increase in later-model volume this year.

Specifically, NADA estimates that the supply of units up to three years of age will grow by respective figures of 12 and 10 percent in 2013 and 2014.

But while later model supply is picking up, older model volume continues to fall. This is due to the simple fact that new vehicle sales progressively declined over the course of 2007 to 2009. Therefore, supply will continue to trend lower for this group of model years, relative to the group preceding them.



Given this, NADA predicts that the supply of units four to six years of age will decline by an average of 11 percent through 2014, and supply for vehicles between seven and 10 years of age will rise by a slight 2 percent in 2013 before falling by 3 percent next year.

This contrasting movement in supply will exacerbate the positive and negative pressures applied to the various vehicle age levels discussed previously.

LOOKING AHEAD, LATER- AND OLDER-MODEL PRICES WILL CONTINUE TO TAKE OPPOSING PATHS

NADA believes the combination of rising supply, combined with stronger new vehicle demand and higher incentives, will translate into a steady softening of later-model used vehicle prices through 2014.

Conversely, it is expected that advances in dependability and affordability relative to newer used models, as well as a rolling wave of lower supply, will keep prices for older models high over the same period.

For the rest of 2013, NADA's forecast indicates that, on average, prices of units one to three years of age will be 1.5 percent lower in 2013 than similarly aged units in 2012, while prices for units four to six years of age—which includes model years 2008 and 2009—will be 1.5 percent higher than like-age unit prices were last year. Slipping by an average of just 0.2 percent, prices for seven- to 10-year-old models are expected to remain essentially unchanged.

CY 2013 USED PRICE FORECAST BY VEHICLE AGE

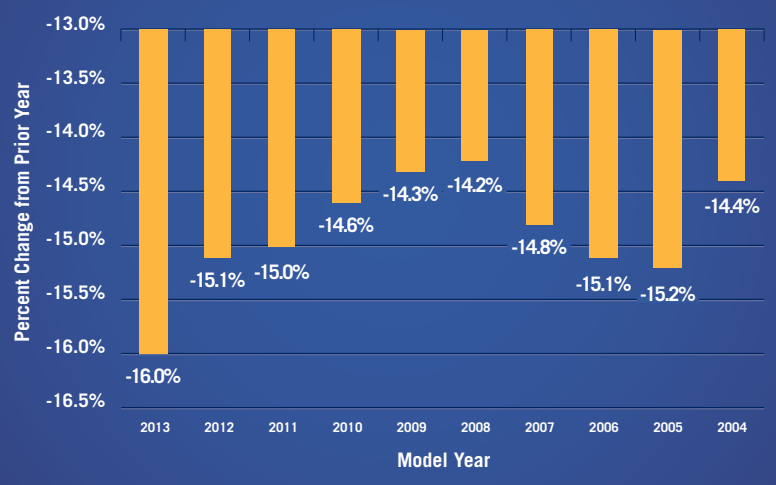
The expected annual change in average wholesale price for similarly aged units. For example, Age 1 compares 2012 model year prices in CY 2012 versus 2013 model year prices in CY 2013.

Calendar Year	Vehicle Age									
	Age 1	Age 2	Age 3	Age 4	Age 5	Age 6	Age 7	Age 8	Age 9	Age 10
CY 2012	$21,840	$17,600	$16,380	$14,735	$12,540	$10,805	$9,100	$7,075	$5,545	$4,640
CY 2013	$21,390	$17,415	$16,175	$14,725	$12,785	$11,085	$9,150	$7,060	$5,520	$4,615
Percent Change	-2.1%	-1.1%	-1.3%	-0.1%	2.0%	2.6%	0.5%	-0.2%	-0.5%	-0.5%
Dollar Change	-$450	-$185	-$205	-$10	$245	$280	$50	-$15	-$25	-$25

Source: NADA

CY 2014 DEPRECIATION FORECAST BY MODEL YEAR

The expected annual rate of value loss from CY 2013 to CY 2014



Source: NADA

In terms of depreciation, or the loss in value associated with the accrual of age and mileage, prices for model year 2013 units are predicted to fall by 16 percent on an annual basis through 2014. Depreciation for other model years is expected to fall from 15.1 percent for model year 2012 to an average rate of 14.3 percent for model years 2008 to 2009. Depreciation will rise back up to an average of 15 percent for model years 2004 to 2007.

In dollar terms, the average price of model year 2013 units will reach $17,970 in 2014, down $3,420 from 2013's predicted average of $21,390. By comparison, prices for model year 2009 units are expected to fall from an average of $12,785 in 2013 to $10,955 in the next year (-$1,830).

CY 2014 USED PRICE FORECAST BY MODEL YEAR

The expected annual change in average wholesale price by model year. For example, 2013 model year prices are expected to decline by an average of 16% from CY 2013 through CY 2014.

Calendar Year	Model Year									
	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004
CY 2013	$21,390	$17,415	$16,175	$14,725	$12,785	$11,085	$9,150	$7,060	$5,520	$4,615
CY 2014	$17,970	$14,785	$13,750	$12,575	$10,955	$9,510	$7,795	$5,995	$4,680	$3,950
Annual Depreciation	-16.0%	-15.1%	-15.0%	-14.6%	-14.3%	-14.2%	-14.8%	-15.1%	-15.2%	-14.4%
Dollar Change	-$3,420	-$2,630	-$2,425	-$2,150	-$1,830	-$1,575	-$1,355	-$1,065	-$840	-$665

Source: NADA

SUMMARY

When viewed through a wider lens, overall market fundamentals remain healthy.

The core drivers of used vehicle demand will undoubtedly experience bumps in the road over the next 18 months, but directional movement will be positive. In fact, many economists believe 2014 will wrap up as the best year of growth since 2005.

As we've discussed, a stronger economy and appealing new vehicle incentives will continue to promote a shift in consumer preference from used vehicles to new ones, and later-model prices will suffer as a result. However, improving financial conditions will also support demand among pre-owned buyers looking to replace their current used vehicle with a newer pre-owned one—a growing percentage of whom will turn to manufacturers' certified pre-owned programs—and the rise in incentive spending is expected to be mild.

And while growing supply will also apply some downward pressure to later-model prices, declines will be tempered by the fact that later-model volume will remain well below pre-recession levels. Given all of this, the decline in later-model prices should be viewed as a reasonable settling of prices following an era of exceptional growth, rather than the beginnings of an acute drop-off.

As far as older vehicles are concerned, product enhancements have gradually made price-sensitive consumers less apprehensive about purchasing an older, higher-mileage unit they may not have been considered in the past, and there is no reason to expect this to change going forward. This strength in demand, coupled with the residual effect of some nine million new vehicle sales lost during the last recession, mean that older used vehicle prices will stay high for at least a couple more years to come.

About NADA

NADA Used Car Guide

Since 1933, NADA Used Car Guide has earned its reputation as the leading provider of market-reflective vehicle valuation products, services and information to businesses throughout the U.S. and worldwide. NADA collects and analyzes more than one million combined wholesale and retail automotive-related transaction prices per month. Its guidebooks, auction data, analysis and data solutions offer automotive, financial, insurance and government professionals the timely information and reliable solutions they need to make better business decisions. Visit nada.com/b2b

NADA Analytics & Consulting

NADA's analytics team is charged with maintaining and advancing NADA's internal forecasting models and for developing customized forecasting solutions for automotive clients. NADA's analytics team has deep industry experience and is well versed in the nuance and complications involved with forecasting in the automotive market.

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AuctionNet data is available either as an annual subscription or in back history for specific years, or it can be customized and/or aggregated based on client needs.

NADA's Used Supply Forecast

NADA's used supply forecast is an estimate of the number of vehicles expected to be offered for sale in the future. NADA calculates used supply volume as the pool of potential vehicles that could return to the market — as represented by all new vehicle sales — and the probability that a vehicle will return from a particular source (e.g., rental, consumer lease, consumer purchase, etc.) after a predicted use period. For example, vehicles sold to rental car companies and consumers each have a specific probability curve associated with the historical likelihood to return to the used market after a given use period. The product of the vehicle pool and the return probability is the expected value of the volume of returned vehicles, which is aggregated to create the used supply volume. NADA calculates used vehicle supply down to the vehicle level.

NADA's Used Vehicle Price Forecast

NADA's used vehicle price forecast is based on expectations for changes to key market drivers, combined with coefficients that estimate how each of these impacts used vehicle prices. Expectations for changes to macroeconomic drivers are based on a consensus view from professional forecasting organizations with adjustments made by NADA economists. Endogenous depreciation, seasonal patterns and expectations for new vehicle prices and incentives are estimated by NADA economists and the editorial team. Relationship coefficients are estimated by NADA's proprietary statistical model.

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