

2018 USED CAR MARKET REPORT & OUTLOOK



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WELCOME TO THE 2018 COX AUTOMOTIVE USED CAR MARKET REPORT & OUTLOOK.

The Cox Automotive Economic Industry Insights team, led by chief economist Jonathan Smoke, has reinvented and expanded what used to be the Manheim Used Car Market Report. We think this new report is our best ever; but we've maintained a decades-long tradition of packing these pages with salient data, smart insights and keen observations about the used car industry with an eye toward 2018 and beyond.

2017 was another good year for the industry. Economic conditions improved throughout the year, and with them came higher used-car sales and new-car sales only slightly below recent record levels. We expect used-car sales to climb even higher in 2018 and new-car sales to experience another minor dip from their soaring heights.

However, headwinds are strengthening. Technological advancements and consumer expectations are evolving rapidly, and we're all trying to stay ahead of a change curve that is getting steeper every year – in the automotive industry and well beyond.

So, we've put our best thinking in one place to help our partners make sense of the trend lines and headlines that will shape the market in 2018.

Our crystal ball is no clearer than anyone else's in this time of rapid and abrupt change. But the collection of insights in this book is based on our reams of data, years of experience, and millions of touch points with dealers, lenders, manufacturers, consignors and consumers. This is the power behind Cox Automotive's products and services, and it can be the power behind your business as well.

We hope this report helps you navigate 2018 and the years that follow. It should be another good period for this fast-growing and fast-changing industry. If you have feedback, please let us know. We always appreciate hearing from you.

Sandy Schwartz President

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U.S. ECONOMY RIPE FOR STRONG VEHICLE SALES, ESPECIALLY USED ONES

The table is set for a robust U.S. economy to support further strength in vehicle sales, especially used vehicles, in 2018.

With the inauguration of President Donald Trump in January 2017, expectations for more economic growth triggered a stock market rally. Improved expectations were based on the belief that lower taxes, lower regulation and more infrastructure spending would power the economy toward a higher level of growth than had been experienced in this economic expansion, which has been the weakest in history.

The stock market saw impressive gains in 2017, leading to records on most indices. The Dow Jones Industrial Index increased 25 percent, while the S&P 500 Index rose 19 percent.

In the housing market, a limited supply of homes for sale against continued strong demand resulted in another year of abnormally high price gains. Median existing home prices increased 6 percent.

HOUSEHOLD NET WORTH RISES

Rising stock and home values led to gains in the net worth of households. In aggregate, the net worth of households increased by 7 percent.

Unemployment fell to 4.1 percent, near a 17-year low. The underemployment rate, the broadest measure of unemployment, ended 2017 at 8.1 percent.

Job creation slowed as the economy began to contend with a record number of job openings without enough qualified applicants to fill them. Employment increased by 2.2 million jobs, while the prior three years averaged employment growth of 2.5 million jobs.

The current level of unemployment is already beneath the level of what economists and the Fed consider the non-accelerating inflation rate of unemployment. In other words, at this level of unemployment with continued job growth, we would expect to see inflation rise as competition for employees should lead to substantial wage growth.

We are seeing stronger wage growth than had been seen previously in this recovery, but average hourly earnings increased only 2.5 percent in 2017, down from 2.6 percent in 2016. The lack of more substantial wage growth has been perplexing to economists, but that lack of growth has been a factor in inflation's not becoming a problem.

CONSUMER CONFIDENCE SOARS

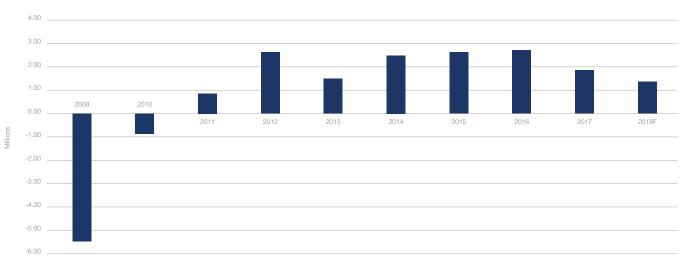
At this low level of unemployment, it is not surprising to see consumer confidence at a 17-year high. Consumers feel better about their circumstances when they and everyone they know are employed. With wages growing - and growing faster than inflation - consumers are increasingly in better financial shape. In addition, with the rise in stock and home prices, the household financial obligations ratio continues to be very healthy despite an increase in consumer lending.

The consumer is vital to the entire economy, not just the automotive market. Consumers power 70 percent of the U.S. economy. Retail sales grew 4.8 percent in 2017, the first year with greater than 4 percent growth since 2012.

Consumer spending was a crucial part of accelerating economic growth in 2017, but contributing as well were manufacturing and energy. The gross domestic product

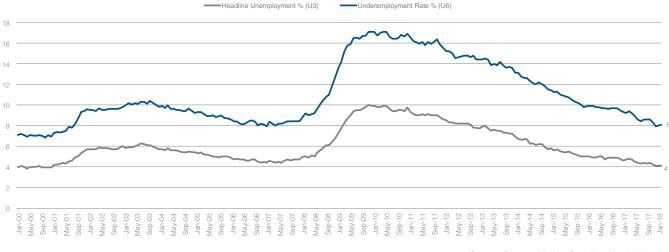
2018 COX AUTOMOTIVE FORECAST

ANNUAL EMPLOYMENT GROWTH



Source: Bureau of Labor Statistics, Moody's Analytics

UNEMPLOYMENT RATES



Source: Bureau of Labor Statistics, Moody's Analytics

(GDP) experienced real growth in 2017 of 2.3 percent, which was substantially improved over the 1.5 percent growth recorded in 2016.

Inflation as measured by the increase in the Consumer Price Index was 2.1 percent in 2017. On the Fed's preferred gauge of prices, the Personal Consumption Expenditure Index, inflation was only 1.7 percent in 2017, under the Fed's target of 2 percent.

The lack of more evidence of inflation did not keep the Fed from moving away from an accommodative monetary policy to monetary tightening in 2017. The Fed raised the official

short-term policy rate three times in 2017. The final raise for the year in December brought the rate range to 1.25 to 1.5 percent and the official discount rate to 2 percent.

The Fed also began the unwinding of its balance sheet late in 2017. The objective is to slowly sell off the excess holdings of Treasury- and mortgage-backed securities accumulated during the quantitative easing program. Quantitative easing was the approach the Fed took to lower long-term rates while also providing stability to the financial markets during the time of heightened uncertainty following the financial crisis. This unwinding process will continue for several years and should put upward pressure

The Fed is communicating that it plans to raise short-term rates three times in 2018, most likely in March, June and December.

BIGGEST RISK IS CLIMBING INTEREST RATES

Monetary tightening and the corresponding increase in interest rates on loans are the biggest negative factors working against consumer spending, especially for bigticket items like homes and vehicles, which are dependent on financing.

Auto loan rates, especially for new vehicles, did not move as rapidly as the Fed's discount rate in 2017; but that does not mean that rates couldn't move more rapidly in 2018.

Perhaps the most important new factor for 2018 was introduced to the economy at the very end of 2017. President Trump signed the \$1.5 trillion tax cut on Dec. 22, which lowers corporate and personal tax rates that should result in lower taxes for most businesses and households in 2018. The economic impact of the tax cut should result in an incremental increase to real GDP growth of at least 30 basis points. Consensus growth prior to the policy change was 2.5 percent, already an improvement on 2017; but now the growth is likely to be at least 2.8 percent and possibly as high as 3.0 percent.

2018: TABLE SET FOR STRONG ECONOMY AND VEHICLE SALES

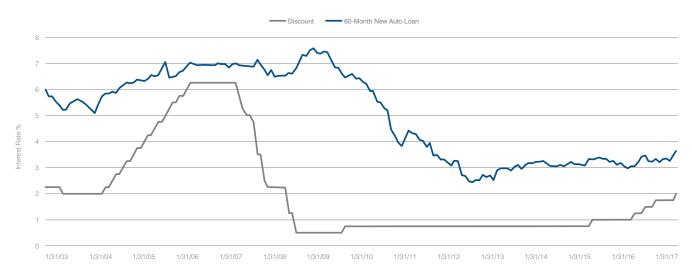
For 2018, the U.S. economy is ripe for continued strength in vehicle sales, especially used ones.

With the economy driven by the consumer, consumer confidence at a 17-year high and employment at a 17-year high combined with more economic growth should lead to continued growth in spending, including on motor vehicles.

Cox Automotive forecasts that new and used vehicles will total 56.2 million units in 2018, down from 56.4 million. New vehicle sales will dip to 16.7 million vehicles in 2018, from 17.1 million in 2017. Used vehicle sales will edge higher to 39.5 million units from 39.3 million.

The biggest economic risk is that this growth triggers inflation, which would require more aggressive tightening by the Fed. Higher rates and tighter credit are already impacting the automotive market. The next recession will likely be triggered by higher interest rates, but that recession is not likely in 2018.

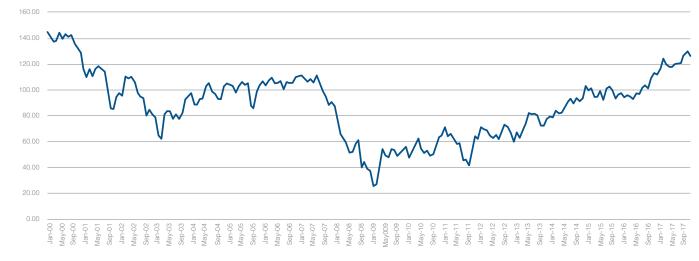
DISCOUNT RATE VS. AUTO LOAN RATES



Source: Federal Reserve, Bankrate.com, Bloomberg

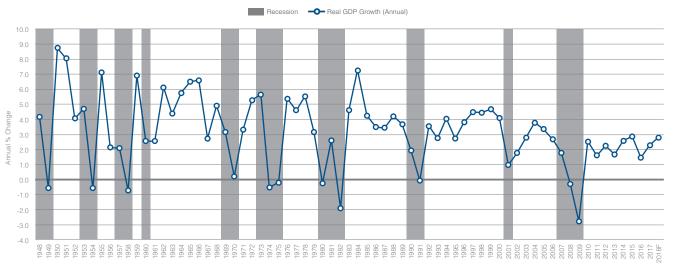


CONSUMER CONFIDENCE



Source: The Conference Board, Moody's Analytics

U.S. ECONOMIC GROWTH SINCE WORLD WAR II



Source: United States Bureau of Economic Analysis



Hurricanes Harvey and Irma, which hit southeast Texas, primarily Houston, and much of Florida in August and September, had a substantial impact on vehicle sales and prices in 2017.

Leveraging detailed information on the storm-impacted areas, including FEMA reports, vehicles in operation and demographic data, Cox Automotive estimated that 600,000 to 1 million vehicles were severely damaged or needed to be scrapped as a result of the storms and related flooding. The Houston area alone lost approximately 600,000 vehicles.

As a result of the losses, Cox Automotive then estimated that the immediate replacement demand would likely be a function of the damage estimate combined with insurance coverage, ownership and financing information. We expected at least 450,000 vehicles to be added to sales that otherwise would not have occurred in September, October and November. We also estimated that a third of the sales would be new vehicle sales with the remainder of need satisfied by used vehicles.

Analyzing actual sales data following the storms, we now estimate that about 170,000 of September through November's new vehicle sales volume was new activity above trend; but that included delayed purchases in Texas. Likely around 150,000 of the incremental sales gain were true replacement demand.

USED VEHICLE SALES, PRICES SURGE, THEN SUBSIDE

On the used side, we estimate that September and October saw about 350,000 more sales than the pre-hurricane trend would have suggested. Again, a portion of that was delayed sales primarily in Texas. We think the true replacement activity was about 300,000 units.

November used sales disappointed as the pace of used vehicle sales was below pre-hurricane trend. This was an important signal that the immediate replacement demand had been met. Used sales in November were also likely impacted by the increase in used vehicle prices caused by the surge in September and October.

rate increases by the Fed

unemployment expected to fall further

Used vehicle prices reflected a surge in demand and a tightening of supply in October and November. The Manheim Index was up 6.3 percent year-over-year in September, when it had been tracking closer to 3 percent previously. Retail used vehicle prices as reflected by average sales price through Cox Automotive's Dealertrack also reflected a 6 percent gain year-over-year in September, when previously retail prices had been trending closer to annual increases of less than 4 percent.

Year-over-year increases peaked in October, when the Manheim Index recorded an 8.1 percent increase and Dealertrack showed a 6.5 percent increase in retail used prices. Prices began to correct following those peaks. Wholesale prices ended the year up 5.6 percent on the Manheim Index, while retail used prices were flat in Dealertrack.

COMPARING IMPACT OF HURRICANES

The impact to pricing was faster following these hurricanes compared to prior major storms such as Sandy and Katrina, but the magnitude of impact was similar. Following Sandy, wholesale prices increased 4 percent from where they had been, while Katrina saw 5 percent gains similar to what we just experienced.

The market and economic circumstances from Harvey and Irma were different relative to Sandy and Katrina. Katrina

occurred a bit earlier in the year at the peak of a boom market. Sandy occurred later in the year as the recovery was just beginning and when the used market was much tighter following the Great Recession and Cash for Clunkers.

There was also quite a bit of difference observed in how prices were impacted by segment following these different hurricanes. This time, we saw price gains in every major segment but luxury cars and pickups, which was ironic given the prevalence and perceived need of pickups in these Texas and Florida markets. We think the price gains for compact cars and midsize cars reflected that used vehicles were satisfying the basic transportation needs while the scarcity and higher prices of used pickups led consumers who absolutely needed a pickup to buy new.

In contrast, Sandy's wholesale price gains favored both midsize cars and pickups. Following Katrina, only the lower-priced compact cars and midsize cars experienced price gains.

Technology has advanced substantially since Katrina and Sandy such that insights into pricing and inventories are now far more complete and dynamic. Indeed, much of the needed used car inventory acquired in Houston this fall was sourced online.





2018 OUTLOOK IS ROSY FOR USED CAR SALES

The demand for personal transportation was strong in 2017 with more than 56 million new and used vehicles sold, and 2018 is expected to be a very similar year.

Buying conditions in the economy remain robust, and not much change for automobile consumers is expected over the next 12 months. Strong labor markets, coupled with low interest rates and solid credit availability, are providing a sound foundation for vehicle demand by supporting both the need and ability to buy for potential car buyers.

However, headwinds are growing within the industry, slowing the sales pace, and the mild divergence in 2017 between the direction of new and used sales will continue over the next year.

Used vehicle sales finished near 39.3 million units in 2017, up 1.8 percent from the previous year. However, new vehicle sales fell nearly 2 percent. Given that the new vehicle market is in the late stages of the recovery, the modest weakening in demand for new vehicles is not surprising after reaching record peaks in 2015 and 2016. Cox Automotive's expectation is that this divergence trend will continue into 2018, with the used market reaching 39.5 million sales while new sales decline further to 16.7 million. Although buying conditions are strong for all vehicle

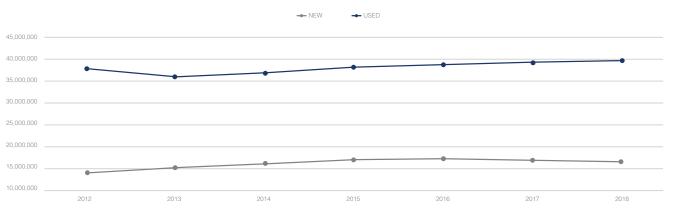
markets, growth in used supply from off-lease vehicles, coupled with record high prices for new products and a modest pull-back in fleet activity, is steering new and used products in different directions.

OFF-LEASE VEHICLES A HEADWIND FOR NEW CAR SALES

One of the growing headwinds for new vehicle sales comes directly from the used market in the form of off-lease vehicles. Leasing's share of total sales has grown rapidly since the Great Recession, rising from 17 percent of the total market in 2010 to nearly 25 percent in 2016 and 2017. A result of this sales strategy by OEMs is that a large number of off-lease vehicles have been coming back to dealers in recent years and providing a steady supply of high-quality, high-content products. Cox Automotive estimates that there will be nearly 3.9 million off-lease vehicles over the next year. They will provide growing competition for the new vehicle market.

The threat to new sales comes not only from the sheer volume of off-lease vehicles coming back to dealers, but

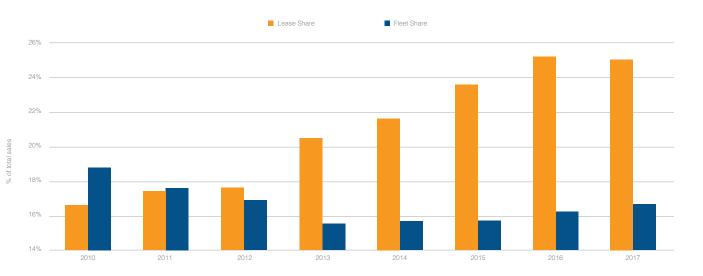
NEW AND USED LIGHT VEHICLE MARKET



Source: Cox Automotive analysis of IHS Registrations

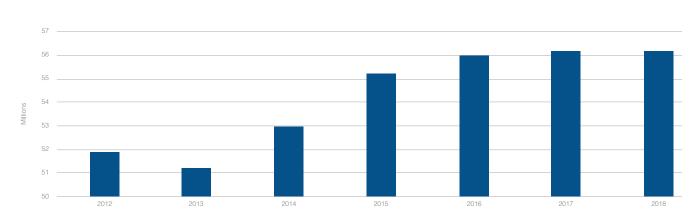


LEASE AND FLEET SHARE OF NEW VEHICLE MARKET



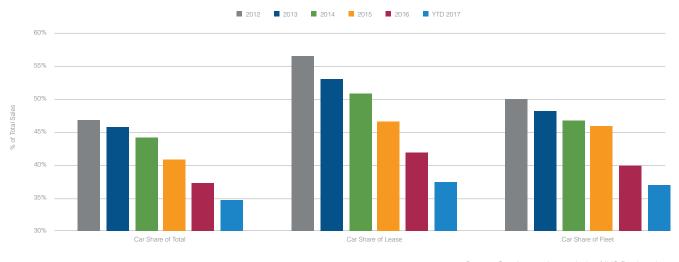
Source: Cox Automotive analysis of IHS Registrations

TOTAL LIGHT VEHICLE MARKET



Source: Cox Automotive analysis of IHS Registrations

PASSENGER CAR SHARE OF NEW LIGHT VEHICLE SALES



Source: Cox Automotive analysis of IHS Registrations

also the types of products that will be available. During the early years of the market recovery, the car segment share of the entire market was 47 percent. However, within leasing, the car share was much higher at 56 percent. In fact, car share of both leasing and fleet has been much higher than the overall market during the recovery period as OEM leasing and fleet strategies were slow to respond to changing consumer preferences. Thus, the off-lease vehicles coming back to dealers in recent years consisted of many car products that consumers today are less interested in.

The product mix returning to dealers over the next couple of years will be different. The off-lease product mix coming back to dealers in 2018 and 2019 will have many more SUVs, CUVs and pickups – the products consumers are most interested in. And, the content of these vehicles will be strong. These are not stripped-down, baseline versions of higher-end nameplates as most, if not all, will have touch screens, Bluetooth connectivity and other key features consumers crave.

This will be a significant threat to some new vehicle segments as used products will provide a viable alternative for some car shoppers. Many consumers will buy only new, but a portion will opt for used vehicles. Some buyers can afford only lower-end new segments; but still, they want a CUV. The flood of off-lease vehicles may change the ownership calculation for some buyers: Priced similarly,

do consumers buy a new small car or a "gently used" 3-year-old CUV?

Cox Automotive expects that a couple hundred thousand new vehicle buyers, primarily from the small to mid-sized car segments, will be "lost" to the used market. This shift from new to used for some buyers may drive car share of new vehicle sales even lower as these segments will likely suffer most.

VEHICLES OF A CERTAIN AGE IN SHORT SUPPLY

Besides the emphasis on leasing during the recovery period, the Great Recession is having other lasting effects on the used vehicle market. New vehicle sales fell well below trend from 2008 through 2012, creating a significant supply constraint for some used sales today. Vehicles ages 6 to 10 years old are in limited supply, having implications for both used car buyers and sellers.

Sales in the used market vary greatly by the age of the vehicle. Cox Automotive tracks the market in model year age groups: 0-4 years old, 5-8, 9-12, 13-16 and 17+. Franchised dealers dominate the sales of "gently used" vehicles (0-4 model years old), while older, less expensive vehicles are sold primarily by independent dealers.

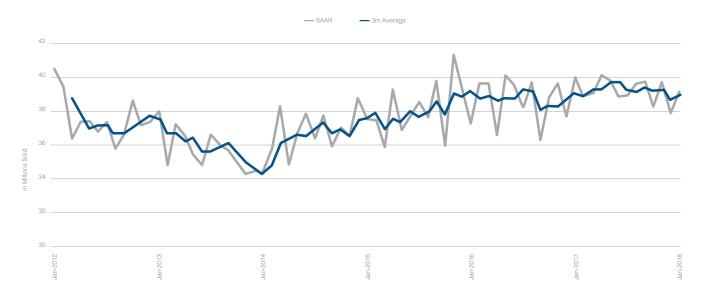
However, because of supply constraints, many independent dealers are being forced to buy newer, more expensive

USED VEHICLE GROWTH RATES BY MODEL YEAR AGE GROUPS



Source: Cox Automotive analysis of IHS registrations

USED VEHICLE MONTHLY SALES SAAR



Source: Cox Automotive analysis of IHS Registrations

The market growth rates of these vehicle age groups reveal the supply issue facing the used market. Gently used vehicles are now past their growth peaks, but are still growing as record new sales and aggressive leasing continue to provide supply to this segment. However, middle-aged vehicles reveal the supply constraint in the market as 5- to 8-year-old, 9- to 12-year-old and even 13- to 16-year-old vehicles sales all declined in 2017. The oldest vehicles, those ages 17 years and above, are seeing strong sales growth as better quality, more affordable products continually support this segment. In 2018, these trends are expected to continue.

USED VEHICLE SALES SAAR

Cox Automotive's Used Vehicle SAAR estimates the seasonally adjusted monthly sales pace and has found the total market to be quite volatile. Measuring activity in the used market is challenging, particularly since more than

50 percent are private-party transactions. The Used SAAR three-month moving average removes some of the volatility and reveals the history and momentum over the last four years.

The sales pace began falling in early 2013 due to recession-created supply constraints but has been rising steadily since. With the new market reaching sales peaks in 2015 and 2016, and leasing's large share, there is strong support for the used market to continuing growing over the near term from this supply.

Cox Automotive expects the used vehicle market to grow above 39.5 million in 2018. Buying conditions for the used light vehicle market are expected to remain robust throughout the year, and implementation of tax reform policies will contribute.



Q&A WITH MARK O'NEIL,COX AUTOMOTIVE COO



Q WHAT'S THE KEY TO ADDRESSING DISRUPTION IN THE AUTO INDUSTRY?

A Innovation. It starts at the top with leaders who embrace risk-taking, fail quickly and learn from failure. Leaders then must encourage team members to take risks by challenging the status quo, recommending new ways of doing things, and developing new products and services.

Q HOW IS COX AUTOMOTIVE ADDRESSING THE INDUSTRY CHANGES?

A Cox Automotive is in the same boat as our clients, so we're facing change and disruption together. We're disrupting our own businesses to keep up with the fast-changing industry. For instance, we're positioning the assets and expertise from our wholesale auctions business to manage large fleets of vehicles – including autonomous ones – owned by companies such as Uber or Lyft. We're using our connections to consumers on third-party websites to enable more of the car-buying process to take place online. And we're building software to support this increasingly digital experience for dealerships.

Q WHERE DO DEALERS FIT INTO THE FUTURE OF DRIVERLESS VEHICLES AND SHARED MOBILITY SERVICES?

A Dealers will be relevant for decades to come. More than 250 million vehicles are on U.S. roads today. Those vehicles will need to be serviced and eventually traded or sold – and they won't go away fast. Dealers can still play an important role over the life cycles of these vehicles, but they will need to adapt to a new future in which more cars are owned by fleet managers versus individuals.

Q HOW WILL DEALERS COMPETE WITH NEW COMPANIES' SIDESTEPPING THE TRADITIONAL MODEL AND APPEALING DIRECTLY TO CONSUMERS?

A Dealerships must embrace transparency. Consumers expect transparency in every aspect of their lives, and auto is no different. Cox Automotive is focused on improving the relationships between consumers, dealers, automakers, lenders and other industry partners, starting with enabling transparency. Digital retailing – where consumers can buy a car online via the dealership – will be a big step in terms of transparency and will help dealers stay competitive.

Q HOW CAN DEALERS ADDRESS GENERATIONAL DIFFERENCES IN BUYING HABITS AND ATTITUDES TOWARD CAR OWNERSHIP?

A Baby boomers and Gen Xers are still buying the most cars, and we've actually found that millennials' attitudes toward car buying aren't so different from those of the older generations. But that doesn't mean dealers shouldn't adapt to different buying habits and preferences. Offering consumers the option to complete more of the deal online is a good start. The frustration with the in-store experience spans all generations, and younger shoppers want a sales process that is "self-directed" versus set by a salesperson. But there will almost certainly be a shift toward fewer cars per household, which means that dealers will have to get in the shared mobility game as well. Cox Automotive's funding of initiatives like the Clutch and Flexdrive subscription services are helping us develop an early perspective on how we and our partners can best participate in a future defined by transportation as a service (TaaS) versus 2.5 cars in every garage.



CREDIT SHIFTS FROM TAILWIND TO HEADWIND

The majority of vehicles purchased every year are financed. Therefore, the availability and cost of credit play major roles in determining who buys what.

Automotive lending has been robust throughout this growth cycle. Auto loan originations in dollar volume in 2017 increased slightly to \$569 billion, breaking the previous record of \$565 billion set in 2016, according to the Federal Reserve Bank of New York. Growth in used sales more than offset the decline in new, and higher prices for both new and used vehicles drove up loan amounts.

Judging from the new loan origination volumes, credit remains readily available, which is helping to keep demand robust.

SUBPRIME LENDING AT HEALTHY LEVELS

A key measure of health and stability of auto lending is the number of loans being made to subprime borrowers. In the fourth quarter of 2017, the share of auto loan origination volume to subprime borrowers was 18.9 percent, down from 19.2 percent the prior year and down from its recent peak of 25.4 percent in the second guarter of 2015.

Just over 20 percent of consumers with active credit have a score that defines them as subprime, according to Equifax.

The share of subprime lending today appears to be healthy and sustainable as it is normal for subprime borrowers to be represented in auto loans according to their proportion of the population.

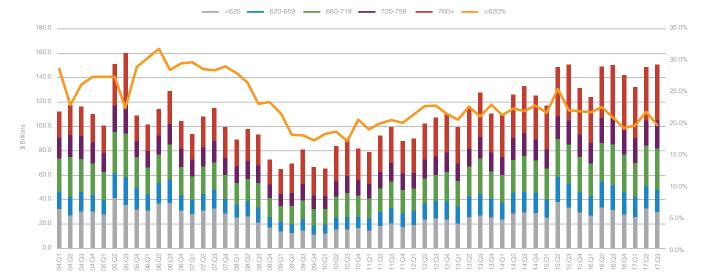
Auto lending is diverse, resilient and reactive to market trends. Auto lenders can tolerate more risk compared to other types of lending markets because the risk is worth the reward. Ease of valuation and recovery help limit losses even in the event of default.

A first auto loan, especially for a young, lower-income borrower, is often the beginning of the move up the social ladder and a crucial part of building credit. Data from Equifax show that age and credit scores are correlated. An adult under 35 is more than 50 percent more likely to have a credit score under 620 compared to the broader population.

CREDIT TIGHTENS; DEFAULTS STAY LOW

Keeping a vehicle for transportation is so important for borrowers that, even at the worst stage of the Great Recession, the default rates on auto loans remained

AUTO LOAN ORIGINATION \$ BY CREDIT SCORE



Source: New York Federal Reserve Consumer Credit Panel/Equifax

CONSUMER CREDIT DEFAULTS

Auto loan default rate dropped slightly to 1.10% in December; still a fraction of the 2.7% in 2009



Source. Sar Experian Credit Default Indices, Bloomberg

under 3 percent, yet defaults rose to nearly 6 percent for mortgages and over 9 percent for credit cards. Today the default rates on auto loans remains close to 1 percent, according S&P Experian Credit Default Indices.

The more aggressive lending in 2015 led to loan performance deterioration. Lenders continue to report more issues from 2015 and early 2016 vintage loans made to subprime and deep subprime borrowers. Loans made since mid-2016 have been increasingly more conservative.

The Fed's quarterly survey of senior loan officers at domestic banks reveals a clear trend in credit standard tightening on auto loans for seven straight quarters through the last reported data in January 2018. That tightening has included eight consecutive quarters of increasing spreads of rates, five quarters of higher minimum down payments, eight quarters of minimum required credit scores increasing, and nine quarters of tightening policies for auto loan customers who do not meet credit score thresholds.

The result of this tightening is that a borrower, especially a subprime borrower, who may have qualified for a loan size that enabled the purchase of a new vehicle in 2015 – with no money down and with extended terms to make the payment work and at a low rate that enabled the low payment – is no longer able to get that loan. Instead, credit-challenged borrowers are likely having to reduce the loan amount by choosing a less expensive vehicle or by putting more money down.

PAYMENT WALK BEHIND USED GROWTH

This "payment walk" – walking from the payment they cannot afford or qualify for on a new vehicle to a used vehicle with a price that works – is a key factor behind the growth in used vehicle sales we are witnessing as new vehicle sales decline.

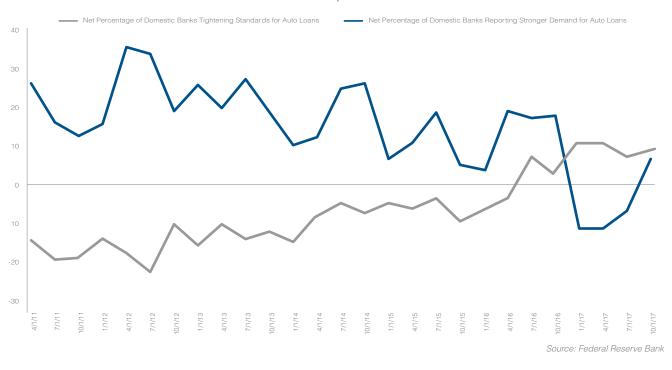
More conservative underwriting is not the only factor causing payments to move higher. Interest rates moved higher in 2017 as well. As discussed in the Chapter 1 economic review and outlook, the reason for the movement higher in rates is a healthier economy growing stronger and no longer needing the abnormal accommodation that was previously necessary. However, the combination of higher rates and credit tightening is already having an impact on payments and affordability, especially for consumers with lower credit.

Cox Automotive's 2018 Car Buyer Journey study revealed that the majority of vehicle buyers are focused on the payment. Eighteen percent focus solely on the monthly payment, and another 35 percent pay equal attention to the vehicle price and the payment. This makes sense as the monthly payment is critical to affordability and qualifying for a loan. It isn't surprising then to see that the monthly payment was more important to younger buyers, lower-income buyers and buyers who were driven by need rather than want.

FINANCING SOURCES VARY BY NEW, USED

Consumers obtain financing for their vehicle purchases through three primary sources: banks, credit unions and dealerships. Dealerships, in turn, are able to tap multiple

CREDIT ACCESS CONTINUES TO TIGHTEN, ALTERING DEMOGRAPHICS OF BUYERS



lender types through technology platforms like Dealertrack, which connect 22,000 dealers with more than 1,600 lenders including banks, captive finance companies and independent finance companies.

In the 2018 Car Buyer Journey study, consumers report that dealerships are their largest source of financing for new vehicles. Banks and credit unions are the source for the majority of used vehicle purchases.

Across these sources, lenders are providing financing to a wide range of consumers on a wide range of vehicles. The credit application level data from Dealertrack provide great insights into differences in loan amounts, rates and payment by vehicle type and consumer segment.

Used vehicle loans are smaller than new vehicle loans. In 2017, the average difference was over \$10,500, essentially mirroring the difference in the average price of the vehicles financed. Used vehicle loans also have higher interest rates, as used vehicles represent greater risk to lenders due to variability in valuation and greater risk of default. The difference between the average annual percentage rate (APR) on new vehicle loans and used vehicle loans is typically about 4 percent.

Within used vehicle loans, average APR varies dramatically by the borrower's credit score. The average difference in 2017 on the average APR between used vehicle loans to borrowers with credit scores above 760 compared to borrowers with credit scores under 620 was almost 15 percentage points.

The term length of new vehicle loans is also longer on average compared to used vehicle loans, as lenders are less willing to take on the higher risk of default for longer terms on an already riskier loan. New vehicle loans averaged 69 months in 2017, while used vehicle loans averaged 66 months.

The payment on a vehicle loan is a function of the loan amount, the term length and the APR.

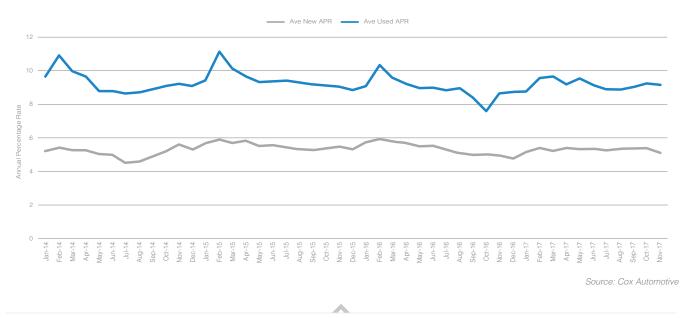
CREDIT SHIFTS FROM TAILWIND TO HEADWIND

The inflation trends in vehicle prices combined with increasing interest rates due to monetary policy moving from accommodation to tightening create a payment headwind impacting consumer demand for vehicles. With tighter credit standards, extending the terms of loans is also no longer a viable way to keep payments low for consumers who have less than perfect credit.

We are now officially in a much tougher financial environment for consumers to get as much vehicle as they have been able to buy previously in this recovery. Consumers are now

AVERAGE APR, NEW VS. USED

The average APR on used vehicles averaged almost 4% more than the average APR on new vehicle loans in 2017



contending with a more difficult environment to find payments they can afford, and it will only get worse in the years ahead.

The Federal Reserve raised short-term rate policy three times in 2017. On the surface, it doesn't appear that rates on long-term loans like mortgages and auto loans moved as much as the Fed's policy. Indeed, the average interest rate on new vehicle loans increased by only 24 basis points, resulting in an only \$12 increase to the average monthly payment.

The increase in rates was more substantial for lower credit borrowers, rising by a half percentage point over the last year.

HIGHER RATES, TIGHTER CREDIT PUSH BUYERS TO USED

The effect of higher rates and tighter credit has pushed more buyers into the used vehicle market. The increase in the average interest rate on a used vehicle loan has been higher – over 47 basis points. To contend with the rate increase, the average amount financed on a used vehicle purchase has remained flat. The monthly payment matters. When rates rise, many consumers do not have an option to pay more. They instead lower the loan amount borrowed.

Higher rates have already led the automotive market to see a fundamental shift away from new and into used. In 2017, it has meant sales of nearly new pre-owned vehicles increased dramatically at the expense of new vehicles because borrowers who would have qualified for a new loan or lease a few years ago are now more likely to buy used.

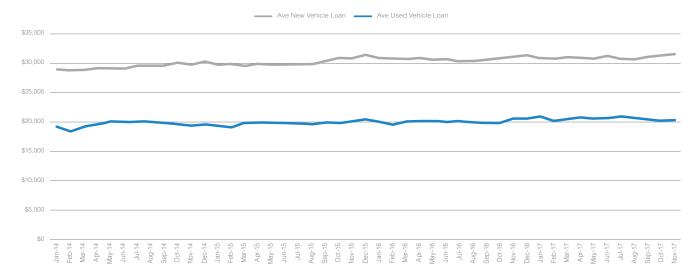
The average new vehicle lease payment in the first half of 2014 was \$400. This year the average lease has been approaching \$500. Yet, the average finance payment on a used vehicle purchased in December was \$407. The used vehicle market has ample supply of high-quality vehicles with payments more consumers can afford ironically because of the volume of leases made in 2014, which had much lower payments then.

Even within the used market, the trend in higher rates is leading to growing headwinds. According to Cox Automotive's Dealer Sentiment Index in the fourth quarter of 2017, 39 percent of independent dealers who sell only used vehicles and often to a more credit-challenged consumer cite credit availability for consumers as a key factor holding back their business. Eventually, this path of higher rates will result in fewer total vehicles sold as affordability and the negative impact of rising financing costs impact household budgets beyond car buying. The key question will be how fast rates will rise.

Higher rates are the result of a better economy and more economic growth expected ahead, but higher rates eventually mean more challenges to the automotive market. Thankfully, the tax reform enacted at the end of 2017 will mitigate some of this pressure at least for the short term, as most consumers will see more take-home pay that in most cases will more than offset the higher payments caused by higher rates.

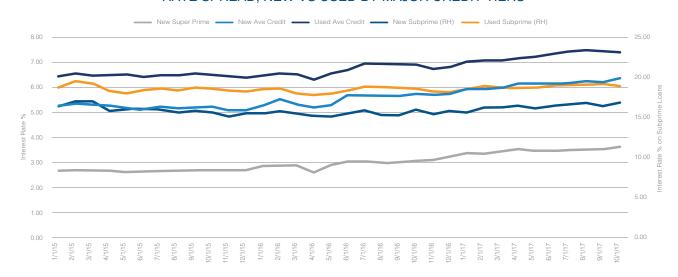
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AVERAGE AUTO LOAN SIZES



Source: Cox Automotive

RATE SPREAD. NEW VS USED BY MAJOR CREDIT TIERS



Source: Dealertrack: Cox Automotive

DEMOGRAPHICS AND GEOGRAPHY DETERMINE WHO BUYS WHAT VEHICLES

America has a longtime love affair with cars. Just as the mix of vehicles in operation is a rich tapestry of antiques and brand-new electric vehicles loaded with technology, the story of who owns vehicles and how they buy them is equally diverse.

In 2017, the U.S. was home to more than 123 million households. More than 112 million households owned at least one vehicle, which means that the U.S. vehicle ownership rate was 91 percent. Three Western states – Idaho, Utah and Wyoming – had the highest vehicle ownership rate for the country at 96 percent. The lowest vehicle ownership rate of 64 percent was in the District of Columbia.

The average U.S. household owns 1.8 vehicles. Wyoming is home to the highest average vehicles per household with 2.2, while D.C. has only 0.9 vehicles per household.

A little less than half of vehicle-owning households will purchase a vehicle in a given year, with most purchasing a used vehicle. Only about one of eight vehicle-owning households is likely to purchase a new vehicle in 2018, but at least one of three will purchase a used vehicle.

People buy vehicles for a variety of reasons, but a key difference between new vehicle buyers and used vehicle buyers is that used vehicle buyers are much more likely to be driven by need rather than want. According to the 2018 Car Buyer Journey from Cox Automotive, 64 percent of used vehicle purchasers said they were driven by need, while only 54 percent of new vehicle shoppers were driven by need.

MOST BUYERS CONSIDER NEW AND USED

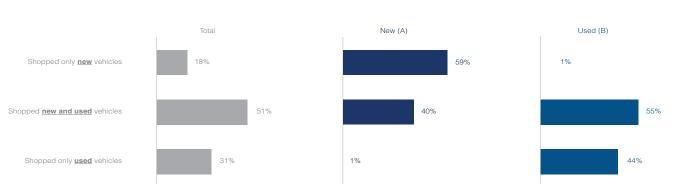
The majority of buyers consider both new and used alternatives. Looking at 2017 buyers, 51 percent indicated they shopped both new and used vehicles, while only 31 percent shopped only used and 18 percent shopped only new.

The majority of people who bought a used vehicle in 2017 shopped both new and used. The opposite is true of new vehicle buyers. While 18 percent shopped only new, they represented 59 percent of the new purchases.

INCOME PLAYS A DEFINING ROLE IN VEHICLE OWNERSHIP

Income plays a defining role in determining vehicle ownership and likelihood to purchase new or used. The median household income in 2017 was \$57,462, according to Claritas. Households with incomes under \$40,000 are the

CROSS CONSIDERATION



Source: 2018 Car Buyer Journey provided by KS&R

18 USED CAR MARKET REPORT & OUTLO

least likely to own a vehicle, especially in an urban setting. Low-income households are likely to own only one vehicle when they do own. If owned, the vehicle is most likely to have been purchased used. They are not likely to lease.

Above \$40,000 in income, households are increasingly more likely to own a vehicle. At \$50,000, vehicle ownership grows, as does the likelihood of owning more than one vehicle. Also at \$50,000, households are more likely to buy new, but leasing is still very limited.

At \$75,000 in income, households are more likely to buy new, and leasing becomes more likely. The likelihood to purchase used begins to diminish at \$75,000 incomes and up.

As we climb further up the household income ladder, so does the likelihood to purchase new and lease.

AGE PLAYS ROLE IN CAR BUYING

Age also plays a role in what Americans own and buy, in part because age is also correlated with income. The median age of the U.S. population in 2017 was 38.2 years old, according to Claritas.

In 2017, nearly 70 percent of new vehicles purchased at retail were bought by people over 45. Less than 11 percent of new vehicles were purchased by people under 35 of age. Comparing the age distribution of new vehicle buyers to the U.S. population, people over 55 but under 75 are the most likely to buy new.

That contrasts significantly with the distribution by age of who buys used vehicles. Just over 65 percent of used vehicles bought in 2017 were purchased by people under 55 years of age. Comparing the age distribution of used vehicle buyers to the U.S. population, people over 35 but under 55 are the most likely to buy used.

Their representation in the new and used markets reveals the tendency to buy a vehicle and whether a specific age is likely to buy new or used. People under 35 are not likely to buy a vehicle when compared to adults overall. However, young adults are more likely to purchase used when they do purchase a vehicle.

Likewise, people over 75 are not likely to buy a vehicle; but when they do, they are more likely to buy new.

People between ages 35 and 64 are the most likely to buy a vehicle, but what type of vehicle they are most likely to buy varies. People between 35 and 54 are the most likely to buy used. Those over 55 but under 64 are the most likely to buy new.

SEGMENTING VEHICLE OWNERS BY BUYING BEHAVIORS

Most vehicle-owning households own vehicles today that are a mix of having been purchased new as well as purchased used. Looking across statistics about households and what, if any, vehicle they own, six clear segments emerge that we can use to describe all households in the U.S. and delineate differences between them. Collectively, the five vehicle-owning segments represent 83 percent of all households, and they own 89 percent of the vehicles in the U.S. These car-buying segments are also responsible for 90 percent of new vehicle purchases and 87 percent of used vehicle purchases.

Demographics clearly play a role in what defines a vehicle owner from a non-owner. Non-owners are predominantly lower-income households as 69 percent of them are in the bottom two income quintiles. Non-owners are also younger, more likely to rent and most likely to live in urban locations. A bus is the dominant mode of commuting to work for the non-owner segment.

Demographics also vary greatly within the vehicle-owning segments. The highest-income households are far more likely to buy new and lease. They buy frequently and, as a result, are most represented in the new vehicle market in a given year.

The next segment that emerges from analyzing buying and owning patterns buys frequently but doesn't tend to lease. These frequent new buyer households don't have quite the incomes of the frequent leasers. They also tend to live in smaller towns or rural areas. This segment buys more new pickups than the frequent leasers.

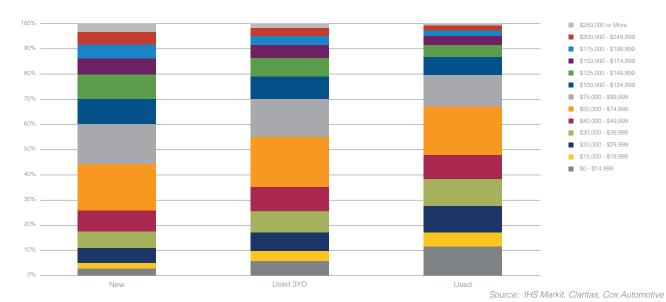
The third segment, buyers and holders, is nearly evenly split on buying new and used; but they slightly favor new. Their

KNEW EXACT VEHICLE WANTED TO PURCHASE

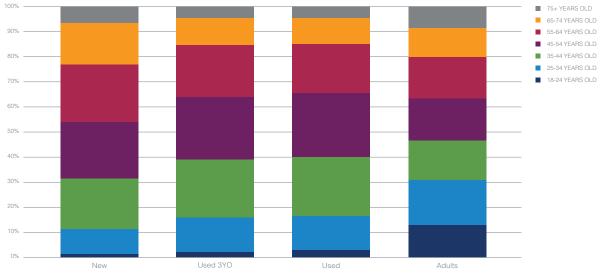


Source: 2018 Car Buyer Journey provided by KS&R

INCOME DISTRIBUTION BY BUYER TYPE, NEW VS. USED, 3-YEAR-OLD AND USED



AGE DISTRIBUTION OF BUYERS, NEW VS. USED, 3-YEAR-OLD, USED, AND ADULTS IN U.S.



Source: IHS Markit, Claritas, Cox Automotive

defining characteristic is that they don't trade frequently. Instead of buying every three to five years like the first two segments, they are more likely to have a vehicle for more than 10 years.

The fourth segment, used frequent buyers, has a slightly higher income distribution than the new buyers and holders; but they are more likely to purchase used. They also are more likely to buy more frequently. They like to buy more expensive used vehicles that feature luxury options, which

helps explain why they have higher incomes but are more likely to buy used.

The largest segment of vehicle owners is more likely to buy used and to hold onto their vehicle until they need to replace it. These used forever households have the lowest incomes of the vehicle-owning group and often have lower incomes than non-owners. They live in non-urban areas where having a vehicle is a necessity. They want the cheapest and easiest-to-maintain vehicle.



HIGHER VOLUMES AND STABLE PRICES **BODE WELL FOR 2018**

Wholesale volumes and, to the surprise of many, wholesale prices rose in 2017 due to a couple of hurricanes that generated strong incremental demand and resulting high prices. Barring something unforeseen, 2018 should be a normal year, with robust volumes and stable prices, but expanded off-site digital volumes.

WHOLESALE VOLUMES RISE

The National Auto Auction Association estimates that member auction sales rose to nearly 10 million vehicles in 2017. Strong retail activity kept dealer consignment volumes high, as preceding years of growth in leasing, record levels of auto loans outstanding, and prior increases in business fleet purchases all came together to create higher commercial consignment.

If 2017 was the year of traditional auctions, 2018 will be the year of an increase in non-traditional channels. Total wholesale transactions in a given year are more than twice the NAAA-member volume. Other channels include direct sales between dealers – sometimes with a wholesaler as an intermediary - commercial accounts selling directly to dealers or retail customers, and sales at non-NAAAmember auctions.

Wholesale volumes through traditional auctions will continue at near-record levels of 10 million units in 2018, but this year is poised to see increases in off-site digital volumes. The growth in used vehicle volumes returning from off-lease will be driven into the overall wholesale market by multiple channels, not just the traditional auction lane. Still, despite the large volume in the other channels, it is the real-time, competitive-bid price discovery in the auction channel that serves as the benchmark for pricing in the other venues.

WHOLESALE PRICES RISE - SURPRISE

Analysts and Wall Street expected drastic drops in pricing in 2017. To their surprise, it did not happen. Wholesale values were strong in the spring and summer because of growing retail demand. Replacement demand following hurricanes Harvey and Irma buoyed prices after August. Following the traditional track of previous storms and recovery, used vehicle prices began returning to prestorm levels in November and December. Underlying vehicle depreciation rates have been accelerating to

catch up to where prices would have been without the abnormal demand and scarce supply in September and October.

For 2018, prices should be on firmer footing by April, much like spring of 2017, as retail demand kicks into gear.

The Manheim Index is mix-adjusted. It does not account for overall inflation in new vehicle pricing nor the shift to higher trim levels. As such, the Index shows an upward movement over time, and it is not inconsistent for the Index to be "up" even as commercial consignors report less-thansatisfying, end-of-term lease residuals or lower repossession recovery rates.

For perspective, it is best to look at the Index relative to its trend or in relation to a host of current and past new vehicle price measures. However, due to the strong prices in 2017, even on those scales, wholesale pricing is above trend.

PICKUP PRICES KEEP RISING; SMALL CAR PRICES FALL

Though overall wholesale prices were strong in 2017, the differences among vehicle categories were pronounced.

At the extremes, adjusted wholesale prices for pickups rose nearly 9.8 percent in 2017, while compact car values rose only 3 percent as overall market prices rose roughly 6 percent.

The price differences are the result of consumer preference. Consumers have been shifting away from small sedans towards crossovers, utility vehicles and trucks in droves. Manufacturers have accommodated by offering more utility models and, thanks to flexible production capacity, adjusting manufacturing levels. As a result, the share of new vehicle sales accounted for by light trucks, which includes utilities as well as pickup trucks, reached a record high 63 percent in 2017, up from only 48 percent in 2009.

MANHEIM USED VEHICLE VALUE INDEX



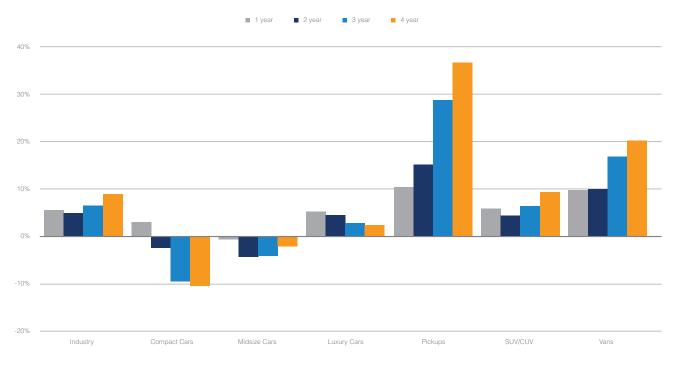
Source: Manheim: Cox Automotive

MANHEIM INDEX VS. QUALITY ADJUSTED NEW VEHICLE PRICE WITH 3.5-YEAR LAG



Source: Manheim: Cox Automotive

PERCENT CHANGE IN WHOLESALE PRICES FOR MAJOR MARKET SEGMENTS



Source: Dealertrack; Cox Automotive (December 2017)

"We've worked with Manheim Retail Advantage for over a year and love the added capacity. Before, we reconditioned in-house at our Lawrenceville, Ga., campus. Sales volumes grew, pushing 1,200 sales a month across our locations in four states. Keeping up with the sales pace was a challenge and often a logistics nightmare. We worked together with Manheim's Retail Advantage program to make sure the outsourced reconditioning process matched our own in Georgia. We now send about 50 cars a week through reconditioning at Manheim locations and then they are shipped directly to our stores. Manheim customizes the reconditioning work to our needs, then serves as the interface with our transportation provider to get the cars to our 21 store locations. It is a really sweet solution for us."

- **NEILL WATERS,** chief marketing officer, US Auto Sales, a 21-store used car operation operating in four states and headquartered in Duluth, Ga..

The mix of used vehicles lags. The supply of used compact cars has been higher than consumer demand, and thus, residuals suffered.

NORMAL VS. ABNORMAL PRICING, RETENTION

Wholesale prices generally behave in an orderly fashion. A newer vehicle is worth more than an older vehicle. Looking at average December prices by model years 2007 to 2017, there is order to wholesale prices. A new car depreciates almost the day it drives off the dealership lot, and continues to depreciate throughout its first year. Depreciation by vehicle segment varies, but most vehicles beyond a year old depreciate between 1 percent and 2 percent per month.

Last year, however, was anything but normal when it came to pricing and retention trends. They did not follow traditional seasonal trends.

As of year-end 2017, retention values for 1-to 3-year-old vehicles, calculated by Kelley Blue Book data, were flat with 2016 at 52 percent. The lack of normal depreciation in used vehicle values in the summer of 2017, due to hurricanes Harvey and Irma, meant that the typical curve that peaks in the spring and then declines throughout the rest of the year saw only a moderate decline.

The year started off looking horrible from a retention value perspective – down 2 full percentage points in March relative to last year, and a whopping 5.3 points down from 2015.

The first quarter retention – and underlying used vehicle value weakness – was a result of growing off-lease supply combined with weak used retail demand caused by delayed tax refunds. The delay in tax refunds meant that March saw fewer sales than it typically does while April saw far more sales than it typically does. The market then enjoyed a consistently strong summer culminating in the hurricanes in August and September, which caused used vehicle values to spike as the market was dealing with

a loss of approximately 700,000 vehicles and the need to immediately replace most of them. By November, the replacement frenzy was over and prices began correcting to the prior trend, which led to the end of the higher year-over-year residuals that existed in the summer and early fall.

RETENTION BY SEGMENTS FOLLOW SUPPLY, DEMAND

One of the least surprising used vehicle value trends was how specific segments performed in 2017 based on supply and demand.

- Full-size pickups experienced very strong price performance versus the year before due to high wholesale demand against limited supply.
- Midsize cars were at the opposite end of the spectrum. Yet, in the midst of the hurricane replacement frenzy, midsized cars momentarily enjoyed increasing values before again returning to their downward trend.
- Luxury car values generally followed the overall industry trend. However, segments within luxury were a mixed bag. Luxury cars, including entry-level luxury cars, and luxury sport-utility vehicles experienced more depreciation during the summer but then saw slower year-end depreciation. In contrast, high-end luxury cars followed their normal depreciation decline throughout the year. Indeed, high-end luxury vehicles did not see a change in trend from the hurricanes.
- Electric vehicles depreciated at a very rapid pace in the beginning of the year, but wound up following a pattern similar to the overall market as the year progressed.

For the most part, major vehicle segments saw depreciation increase in the fourth quarter as pricing began the process of correcting back to normal.

million auction sales in 2017



2018 USED CAR MARKET REPORT & OUTLOOK



Consignors often price upstream/online channels at a premium to protect against the downside of under valuing vehicles. As a result, buyers cherry-pick the "better" vehicles – cars worth the premium – from upstream/online channels. That leaves only the "worse" vehicles for downstream physical auctions.

Reducing cherry-picking drives several benefits for consignors. For example, it leads to more upstream/online sales, which enables vehicles to sell faster, minimizes depreciation and reduces carrying costs. It also evens out the mix across channels, bringing new buyers into each channel. These benefits, along with increased price retention, can significantly improve a consignor's financial performance.

To address cherry-picking, RMS Automotive (a Cox Automotive company) developed a statistically driven, VIN-specific, wholesale valuation model – based on the Manheim Market Report (MMR) and on vehicle odometer, damage, content and exterior color.

To test this model, RMS set scientific floor prices for half of a consignor's upstream/online portfolio, while the consignor set floor prices for the other half. Over the course of several weeks, they tracked the performance of over 1,000 unique VINs – both upstream/online sales and also no-sales that then sold at a Manheim physical auction within a few weeks. To capture the cost of depreciation, price retention was measured as the sale price compared to MMR on the first date the vehicle was offered upstream/online.

Compared to the consignor's own floors, the RMS scientific floors reduced cherry-picking, drove a more even mix of vehicles sales across the channels and improved

price retention. Overall, this study demonstrates that using scientific floor prices improves consignor financial performance.

BENEFITS OF REDUCED CHERRY-PICKING

- Leads to more upstream/online sales
- Enables vehicles to sell faster
- Minimizes depreciation
- Reduces carrying costs
- > Improves price retention
- Brings new buyers into each channel

Q&A WITH WARREN CLAUSS,

NAAA PRESIDENT



Q HOW WOULD YOU SUM UP THE STATE OF THE AUCTION INDUSTRY IN 2017?

A The current state of the auto auction industry is vibrant, with close to 10 million transactions in 2017 at NAAA-member auctions, a pace expected to continue and even rise by 4 percent, according to AuctionNet data.

Q WHAT ARE YOUR PROJECTIONS FOR AUCTION VOLUMES AND PRICING IN 2018?

- A Commercial consignment led growth in 2017, and that trend should continue into 2018. Overall, used-vehicle volume is predicted to rise by 2 percent to 4 percent year-over-year, due primarily to more off-lease vehicles.
- Q WITH GROWING DIGITAL USAGE BY DEALERS AND CONSIGNORS, HOW DO YOU ENVISION AUCTIONS' CHANGING AND ADAPTING?
- A Auctions will need to adapt and embrace these changes. The technology and applications available and used by dealers and consignors are changing rapidly. The auctions will need to be in tune with their customers' needs and provide them with viable solutions to buy and sell their inventory.
- Q AS WHOLESALE VOLUMES TRANSACTED
 OUTSIDE OF TRADITIONAL AUCTIONS CONTINUE
 TO GROW, HOW WILL THE AUTO AUCTION'S
 ROLE AS A DETERMINANT OF PRICING IN THE
 CAR MARKET EVOLVE?
- A Auctions are poised to operate efficiently and effectively with larger quantities of inventory. Although there may be a niche market of transactions outside of the traditional auction, the traditional auction industry can process large volumes in a short period. Throughput, turn-time and market values will all be

areas of focus as the used-car supply increases. I am confident that our member auctions will provide our customers with the superior quality service they have come to expect.

Q WHAT DO YOU HOPE TO ACCOMPLISH IN 2018 AS THE HEAD OF NAAA?

- A I intend to continue to enhance some of our safety initiatives of the past few years. I would like to collaborate with industry leaders on best practices and standards for hiring and recruiting of employees. NAAA just finished a survey with the industry's service technicians that may add some insight into this initiative.
- Q WHAT TOP ISSUES SHOULD AUCTION OPERATORS AND MEMBERS PREPARE FOR IN 2018?
- A With the recent change of leadership at the Consumer Financial Protection Bureau, we need to see if there will be any industry-related changes. Safety and other recall notices can impact our consignors as well. NAAA has a strong legislative committee, PAC, and relationships with NIADA and NADA. We have always kept our eye on any issues that will impact our industry members.

Warren Clauss served as a director for NAAA from 2006–2008 and 2013–2014. He currently is on NAAA's Legislative, Membership and Convention committees. He was Eastern Auto Auction Association (now Eastern Chapter) president in 2004–2005. The general manager for ADESA Buffalo, Clauss has the longest tenure as general manager at any of ADESA's 66 auctions.



Q&A WITH GRACE HUANG,PRESIDENT, COX AUTOMOTIVE INVENTORY SOLUTIONS

Q WHICH MANHEIM SERVICES DO CLIENTS SAY THEY MOST VALUE?

A In general, clients report they value Manheim services that help them source and turn vehicles faster, freeing their time to better serve retail customers. Also, we've noticed an uptick in positive comments about our data-driven guidance that maximizes profits earned during the remarketing process.

Dealers and commercial consignors count on our data analytics and decision support to answer questions ranging from what is a vehicle's true wholesale value to where is the best place to transport it to and how to leverage reconditioning to increase a unit's ROI. Clients also rely on Manheim to learn how to effectively sell through digital channels, increase and diversify their buyer base, as well as identify and minimize portfolio risk.

- Q WHAT DOES MANHEIM RECOMMEND CLIENTS DO TO CAPITALIZE ON STRONG USED CAR PRICES DESPITE A RECORD NUMBER OF OFF-LEASE VEHICLES IN THE WHOLESALE MARKET?
- A Research suggests selling vehicles faster to improve efficiency and profitability is the best bet. Given that spring season price "bounces" have been smaller in recent years while depreciation has increased, dealers may benefit from selling sooner than later. In response to rising vehicle supplies, buyers delaying their auction purchases may experience fewer retail sales and less profit in the long run.

In addition, we recommend creating a plan to quickly prepare their inventory for retail sale. This means exploring the diverse channels available to buy and sell vehicles, as well as remarketing services – such as inspections, imaging and retail reconditioning – that can speed their assets through the process and enhance vehicle value.

Q WHAT ARE MANHEIM'S PLANS TO FURTHER INNOVATE IN 2018?

A We will continue to reinvent the auction experience to help our clients earn more money, save time, grow their businesses and prepare for an emerging digital future. In addition to completing a multimillion-dollar transformation this spring, including upgraded auction and mobile technology, increased dealer access to data, and simplified transaction processes and tools, Manheim is focused on delivering the industry's first omni-channel experience to clients.

The Manheim Marketplace brings together all channels into one integrated destination, offering comprehensive end-to-end solutions and services. Wholesale vehicle buyers and sellers will effortlessly connect and transact business how and when they want. The strengths of Manheim and other Cox Automotive brands deliver unrivaled value to dealers that want to do business on their own terms. Even before being fully realized, Manheim's Marketplace is the largest and most active in the world, supporting 58 million unique visits and 10 million unique vehicle listings annually.

Q HOW IS MANHEIM HELPING CLIENTS PREPARE FOR AN EMERGING DIGITAL FUTURE?

- A Our goal is to deliver an anytime/anywhere auction experience regardless of channel, whether in-lane, online or off-site. We're delivering to clients:
 - More ways to efficiently buy and sell vehicles
 - More access to and education about digital and mobile channels
 - More solutions that provide greater flexibility and control
 - More data and insights to drive smarter decisions

In response, Manheim expects to manage 1 million digital transactions in 2020. Collectively, our off-site solutions, including Dealer Direct Event Sales and Mobile Auctions, have grown 50 percent in volume year-over-year. That significant growth reflects rising demand for – and usage of – these tools by dealers.

In 2018, we estimate these offerings will drive more than 100,000 transactions, with over 20,000 participating dealers.

Q HOW IS MANHEIM PREPARING FOR THE EVOLVING SHARED-VEHICLE MOBILITY MARKET?

A We believe evolving transportation options will lead to the widespread development of consumer-accessed fleets, and Manheim is uniquely positioned to support the end-to-end management of those vehicles.

Manheim has the facilities, scale, expertise and existing relationships to do the job. We've got 70-plus years of industry leadership and 70,000 clients for whom we handle 8 million used vehicles per year on our 6,500-plus acres of land. We have 18,000 team members in over 130 sites in key cities who are delivering the types of experiences valued by clients. In addition, we've invested more than \$500 million to become an end-to-end solutions provider offering inventory management, reconditioning, floor planning, logistics and assurance, plus access to our Marketplace's diverse brands and services.

Our approach today will enable us to support the shared vehicle fleets of tomorrow. It's easy to imagine Manheim's delivering sourcing and acquisition, reconditioning, in-fleeting and distribution, active fleet management, and disposition services. In fact, we've already begun to work in the consumer mobility space, breaking new ground with exciting ventures like Flexdrive and making plans with others.

Q HOW CAN THE REMARKETING INDUSTRY BETTER SERVE DEALERS AND COMMERCIAL CLIENTS?

A Remarketing industry leaders should set the standard by providing wholesale vehicle buyers and sellers more opportunities to effortlessly connect and transact business how and when they want. We can deliver integrated solutions and value-added experiences, while reducing pain points and risk. Our efforts should help clients become hyper-efficient, be more profitable and be ready for dynamic changes that will impact the automotive sector.





SALES TO DAILY RENTAL COMPANIES DROP

New vehicles sold into daily rental car fleets dropped in 2017 from 2016 and are not expected to rebound in 2018 even though the industry is being redefined to include vehicles for ride-sharing and car-sharing.

For 2018, sales to rental fleets are expected to be flat or even down from 2017. However, while this year will look like last year in terms of volume, the mix of vehicles will be different, favoring more utility vehicles to reflect consumer preference, and the fleet will continue to be more diversified by brands.

RECORD REVENUE ON A SMALLER FLEET

Total rental car industry revenue climbed to a record \$28.63 billion in 2017, according to Auto Rental News. Total rental revenue per unit in the smaller fleet rose slightly, the first year-over-year unit growth in four years.

Despite three companies' owning more than 95 percent of the rental fleet, the industry has always been characterized by intense price competition. In fact, pricing power, as measured by revenue per day, has greatly lagged the sorts of increases that hotels and airlines have been able to achieve in revenue per room and revenue per seat mile. For the operator of large fleets, the money factor is important to rental companies whether they are funding through the ABS market, self-funding or leasing a portion of their fleets.

Although history suggests a positive correlation between fleet costs and rental rates, the traditional rental revenue stream has been affected by new entrants. In the past, the lack of pricing power was simply explained away as commodity-like pricing in a competitive industry dominated by the most cost-efficient producer; but today the industry is slowly being redefined beyond daily rental to include ridesharing and car-sharing.

RENTAL SALES DROP FROM 2016 RECORD

In 2017, the number of vehicles purchased by rental companies decreased 12 percent to 1.59 million vehicles

U.S. CAR RENTAL MARKET REVENUE



NEW SALES INTO RENTAL AND SHARE OF TOTAL SALES



Source: Bobit

from 2016, a year that saw the highest purchase volume since 2007 but still significantly below the 2.1 million of 2005 and 2006.

New vehicles sold into rental fleets in 2017 were heavily front-loaded into the first half of the year, with sales through June accounting for 59 percent of full-year purchases. This meant that the remarketing of off-rental units was also stronger in the first half of the year than in the second half.

Rental share of the new-vehicle market in 2017 was close to 9 percent. Most manufacturers avoided pushing vehicles into rental fleets as a means of off-loading excess production capacity. Some automakers have made it a focus to communicate their specific limits on sales to rental car companies and, instead, focus on their sales to retail customers to boost profits and residual values.

Manufacturer actions combined with a shift from program to risk units and longer average service lives for risk vehicles mean rental company purchases of new vehicles are not expected to reach the level seen in 2016 anytime soon.

RENTAL FLEETS MORE CLOSELY REFLECT RETAIL MARKET

The share of new vehicles sold into rental accounted for by domestic manufacturers fell for the seventh consecutive year in 2017. At 53 percent, it marked their lowest share

ever – even lower than 2009 when the General Motors and Chrysler bankruptcies forced rental companies to shift their purchasing patterns.

Relative to total new vehicle sales, GM made the biggest shift away from rental in recent years. In 2016, GM's share of new vehicle sales into rental fleets fell below the industry average for the first time ever, and 2017 saw GM's sales volume into rental decline further. The share of new vehicle sales accounted for by rental increased for most Asian manufacturers in 2017, with the biggest increases accounted for by Nissan, Hyundai and Mazda.

Over the past decade, the mix of manufacturers and models that make up the rental fleet – as well as the option contenting of the vehicles – has become more representative of overall retail new vehicle sales.

For individual rental car companies, the shift toward a more diverse fleet has been even more striking compared with the days when they had major supply agreements with only one or two manufacturers.

The greater mix of models in the off-rental supply has had several implications for remarketing – most of them positive. Most important, it has helped protect residual values since a rental company is no longer forced to sell large numbers of any one model at any one point in time. It also means that

the rental car company is not as susceptible to the negative consequences of an individual model's having weak residual performance or being subject to a recall.

The wider mix of off-rental units requires that rental companies and their auction partners work harder to ensure specific vehicles get exposed to the dealers who are most interested in those vehicles.

For dealers, the wider mix of rental units – and higher contenting – has meant they are better able to find off-rental vehicles that their customers want. Manheim data indicate that, in the fourth quarter of last year, rental car companies remarketed vehicles with 3,104 different year, make, model, body configurations. In the fourth quarter of 2017, it took 110 unique year, make, model, body configurations. In the fourth quarter of 2017, it took 110 unique year, make, model, body configurations to account for 50 percent of all rental risk sales at auction. As recently as third quarter of 2011, it took only 31 such unique configurations.

Recent rental company purchases also reflect the market shift from sedans to crossovers. The total number of new vehicle sales into rental decreased 12 percent in 2017; but car purchases were down 16 percent while light truck purchases, including utility vehicles, slipped half that rate and were down 9 percent. Most of those light trucks were crossovers, but rental car companies have also found it worthwhile to put more pickups into their fleets. For the

rental company, the acquisition cost will be higher; but the depreciation rate may be lower.

RENTAL RISK PRICING AT AUCTION STICKS TO NARROW RANGE

In 2017, prices for rental risk units sold at auction were at the lower end of the five-year range. The Manheim Index of mix- and mileage-adjusted prices for rental risk units underperformed in the first quarter of 2017, but that was reflective of the overall wholesale market.

By the middle of last year, wholesale pricing trends for rental risk units were very much in tune with trends from earlier years but at a lower price level. Auction pricing for rental risk units jumped to multi-year highs in the third quarter due to robust wholesale pricing across the board due to vehicle replacement demand caused by the hurricanes and limited supplies at auction.

Off-rental auction prices have been stable throughout the recovery when examining the mix- and mileage-adjusted price series for rental risk units produced by Manheim. The data show rental units have minimal impact on overall used-vehicle value trends. When rental unit share is below average, a slight improvement registers in the Manheim Index. When rental unit share is above average, the negative impact is typically less than -0.5 percent. Currently, rental risk units are below average in share of volume, and rental risk units are also seeing strong price performance,

so the impact to the overall Manheim Index is minimal but slightly positive.

Concern was justified that the influx of off-lease units in 2017 could dampen pricing for off-rental units, but off-rental pricing in wholesale proved quickly that the concern was overrated. The biggest influence on off-rental pricing will, as always, be manufacturer practices with respect to incentives and inventory levels. On that front, manufacturers have been disciplined at balancing production with demand. The real test will come in 2018 and 2019 when new vehicle sales decline.

RENTAL CAR COMPANIES GROW DIGITAL REMARKETING

Rental car companies have quickly adopted innovative technologies and strategies to remarket end-of-service units. The reason is simple: Fleet depreciation is a major determinant of company profitability.

When it comes to upstream remarketing, the rental companies have advantages and disadvantages. On the plus side, rental companies are long-established sellers in the wholesale market, which builds buyer trust. Their end-of-service fleets are large, concentrated in a relatively narrow mileage and price range, and often needing only modest reconditioning.

The disadvantage rental companies face in selling upstream is that their time pressures are acute, and they certainly don't want to marshal unproductive units. As such, the companies

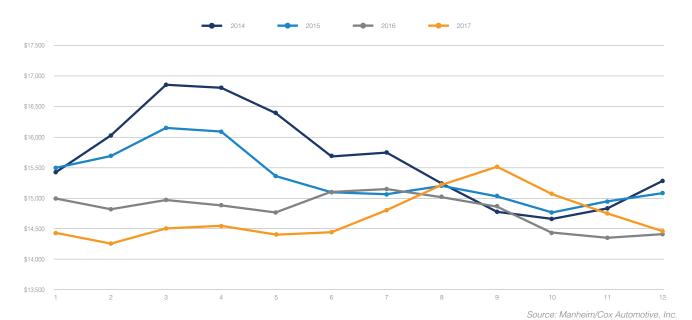
have developed strategies to pre-offer units while they are still in service as rental units.

Digital remarketing of off-rental units is also important given that fleets are often concentrated in a particular geography, potentially swamping local demand. Digital remarketing allows the seller to efficiently bring the buyer to the car rather than guess where to move the car. Another remarketing technique that some rental car companies have used successfully is offering specific makes in conjunction with the factory sale of that brand on auction day. To be successful, rental car companies need to ensure that their offerings blend better with the other units in the lane. In other words, they need to do more reconditioning and strive for a consistently higher conversion rate.

REMARKETING VOLUMES CONTINUE TO GROW

In 2017, approximately 1.7 million off-rental vehicles entered the wholesale market. Of these, more than 800,000 units were sold at NAAA-member auctions. The rest were sold directly to retail customers and directly to dealers outside the traditional auction process. In 2018, off-rental volumes are expected to come down slightly, consistent with the number of new units sold into rental.

AVERAGE AUCTION PRICE - RENTAL RISK UNITS



"As the operator of the largest fleet of passenger vehicles in the world, we want our fleet to reflect what the public drives. We added more crossovers and SUVs in 2017, and this year, SUVs and trucks will grow to become an even bigger percentage of our fleet. Also following consumer-buying habits, we continue to purchase higher trim levels and vehicles with new technologies. When we offer these innovations to used-car buyers through dealers and our car sales operations, they will be sought after by the dealer and, ultimately, the consumer. In fact, our studies show many drivers, especially millennials, experience new automotive technologies for the first time in cars they rent. The rental industry is well-positioned to be an early adopter and will help introduce autonomous driving technology to millions of consumers."

– NATE LATTIMER, Vice President, Remarketing Sales and Operations – North America, at Enterprise Holdings, St. Louis, Mo.



LEASING STAYS HIGH THOUGH RECEDES FROM RECORDS

New lease originations grew steadily throughout the Great Recession, setting a record in 2016, but retreating some in 2017. For 2018, leasing will be high but, again, off peaks.

High lease originations result in high lease returns. So far, the wholesale and used markets have absorbed the elevated levels of off-lease returns, while at the same time new-car vehicle sales have been at or near record levels.

However, in 2018, the vehicles reaching their lease maturity will pose a greater challenge to new-vehicle sales because they will represent a richer mix of popular utility vehicles, more in demand by consumers than traditional sedans, which have made up the bulk of lease returns of late.

In 2017, new lease originations dipped 3 percent from 2016 to 28.7 percent of all vehicles sold. This decline followed 6 percent growth from 2015 to 2016 to 4.4 million units, when leasing represented 28.5 percent of all new vehicles sold with some months in 2016 being above 30 percent.

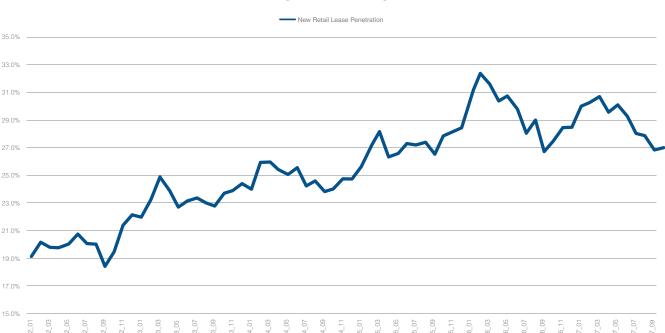
The 2017 decline in lease originations and the penetration rate reflected a disciplined business approach by lessors as they balked at pursuing volume at any cost and risking residual exposure.

In 2017, lease penetration for non-luxury domestic and Japanese brands declined from historic heights in 2015 and 2016. Leasing favored luxury brands, which is normal; but even luxury brands show disciplined lease penetration growth. In 2018, leasing should remain off 2016 records, likely in the range of 25 percent of sales.

AN IMPROVED LEASING MODEL

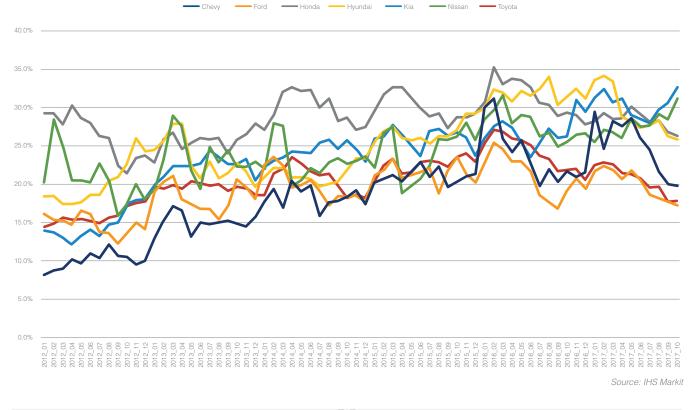
The previous peak in leasing in 1999 was "leasing done wrong." In this earlier era of leasing, the pursuit of moving metal often ended up with poor decisions that threatened

LEASE PENETRATION

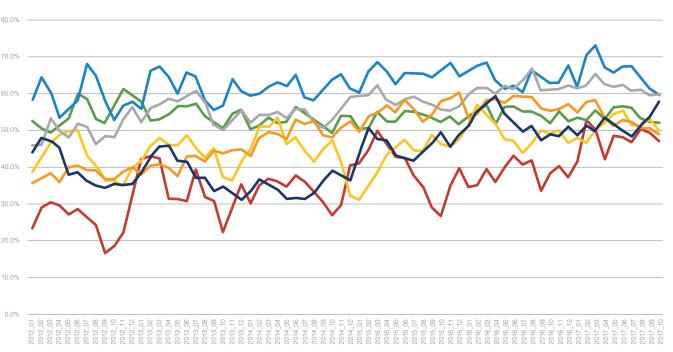


Source: IHS Markit

LEASE PENETRATION - SELECT BRANDS (NON-LUXURY)



LEASE PENETRATION – SELECT BRANDS (LUXURY)



Source: IHS Markit

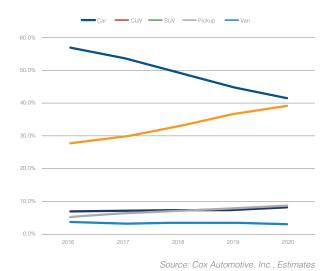
For the most part, leasing is now being done right. Leases are being offered on the right vehicles, ones that the lessor actually want returned; leasing is being offered to the right customers, ones who want to trade on a regular cycle and avoid the residual risk of a long-term finance contract; leasing is more appropriately underwritten with the right residual values as analysts have improved their ability to forecasting values when residuals are subvented and lessors often hold reserves; and leasing companies now focus on a much improved remarketing process that uses a holistic, planned approach from origination.

LEASING AND THE NEW VEHICLE SALES CYCLE

An inherent risk in leasing from the lessors' standpoint is that originations will generally peak at the top of the economic cycle. This would result in peak off-lease volumes' returning in a less favorable retail environment, maybe during a recession. Hence, not aggressively subventing leases at the top of the cycle and building reserves throughout the cycle are important practices for surviving cycles.

But the fact that maximum lease returns may occur in a weak retail environment could be viewed as a positive if it helps moderate the new vehicle sales cycle. New vehicle sales have always been subject to large peak-to-trough swings, typically 25 percent to 33 percent, though the Great Recession saw a 42 percent decline.

OFF-LEASE VOLUMES - TYPE: SEGMENT SHARE



OFF-LEASE VOLUMES – TYPE: POINT CHANGE IN SEGMENT SHARE



Source: Cox Automotive, Inc., Estimates

28, 7% all vehicles sold in 2017 were new lease originations



A high volume of off-lease returns could reduce the magnitude of those swings. End-of-term customers are forced back into the market regardless of economic conditions. If they are satisfied customers, whose financial conditions have not materially changed (and, for many, they won't have changed since lessees are skewed to high-income households), they will lease another new vehicle. Had they been in a retail finance contract, they would have been more likely to remain on the sidelines until the overall economic environment improved. Securing these additional new vehicle sales, as well as supporting the dealer network with potential certified pre-owned (CPO) sales, should be a partial offset to some of the pain of end-of-term residual losses experienced by lessors.

RETURNING LESSEES SUPPORT NEW AND USED SALES

Pent-up demand was the principal driver of new vehicle sales increases in the initial stages of the recovery after the Great Recession. The boost, though strong, is unsustainable for the long run. The market of both new and used is transitioning to be supported by returning lessees.

The current bifurcation in the retail finance market – high lease-penetration rates versus lengthening retail contracts – could be a good thing if dealers and salespeople correctly put the right customer into the right finance option. The higher lease-penetration rate will help offset some of the lengthening in the trade cycle that naturally occurs with longer-term loans.

Given the growth in new lease originations, a steady rise in off-lease volumes is guaranteed for the next several years. But since the increases in lease penetration rates were not consistent across manufacturers, neither will be the changes in off-lease volumes.

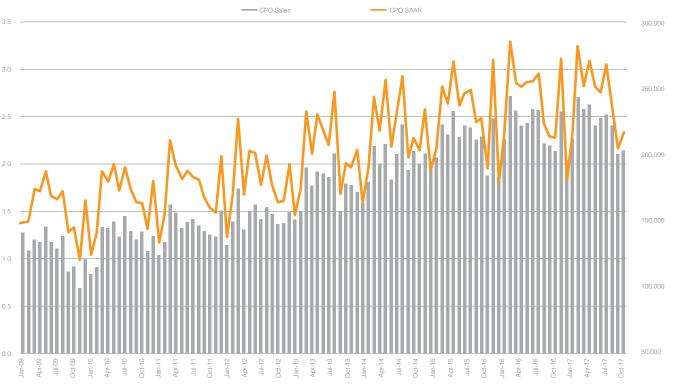
Though Cox Automotive expects the wholesale and used vehicle markets to absorb the volumes of off-lease units returning to market, the mix of off-lease vehicles poses the biggest challenge to new-vehicle sales for dealers and automakers. Used retail demand is strong. Plus, nearly new vehicles with similar technologies will pose an attractive value proposition for consumers on the fence between a new or a used vehicle.

In addition, the bulk of off-lease units in 2017 were traditional cars at a time when consumers clearly preferred crossovers and sport utilities. The next couple of years will bring the higher volumes of nearly new utility vehicles back to the market as off-leases vehicles, and these vehicle types are in high demand by consumers.

In 2018, Cox Automotive estimates some of the largest growth in off-lease volume will be of vehicles like the Chevrolet Silverado pickup truck and the Nissan Rogue and Toyota RAV4 crossovers. These undoubtedly will be in high demand.

Certain car models, notably the Honda Civic, Toyota Corolla and Ford Fusion, will be returning off-lease in large volumes





Source: Motor Intelligence/ Autodata

as well. Used Honda Civics and Toyota Corollas have long been in high demand at premium prices, but the question is whether that will continue to be true when nearly new crossovers are more available. It may be that the new versions of these sedans will be challenged by the nearly new crossover models as well.

Lessors also need to be mindful of the level of subvention entailed in the original lease. When not overly subvented at origination, a lease return is viewed by the lessor and grounding dealer as an opportunity to sell a satisfied customer another car. However, if overly subvented, the lease return can trigger a downward spiral in both residual values and customer satisfaction.

OFF-LEASE VOLUMES AND CPO SALES ARE BENEFICIALLY LINKED

End-of-term vehicles are generally a perfect fit to be sold as CPO units. In turn, CPO sales help support wholesale values and mitigate the lessor's residual risk. The lessor has opportunities to further moderate the residual risk by providing additional marketing muscle or incentives, such as reduced rate financing through CPO programs.

In 2002, during the last peak in off-lease volumes, CPO sales were only 38 percent of all off-lease vehicles. In 2015, CPO sales and off-lease volumes were basically identical. In 2017, off-lease volumes were 36 percent higher than the level of CPO sales due to the increase in off-lease volumes and smaller-than-expected increase in CPO sales.

However, manufacturers' attitudes toward CPO have changed and diverged. Some automakers have ramped up CPO programs, while others have backed away from pushing them, as some have shifting incentive and marketing investments.

Until now, used-vehicle leasing has been a niche market; but with higher off-lease volumes and some more robust CPO programs, that may change. CPO leasing offers captive finance companies another lever to pull to protect residual values. Compared with traditional used-car leasing, CPO leasing offers lessors a better assessment of the collateral value of the unit being placed in the lease. In addition, lessors may find a vehicle that was a poor new vehicle lease – one with a high end-of-term residual loss – will prove to be a good used vehicle lease.

END-OF-TERM GAINS DISAPPEAR

Lease remarketers are well-accustomed to cyclical swings in their portfolio performance. They went from large losses on end-of-term units in 2008 to record gains on units sold in 2011. Strong equity positions enabled lessors and dealers to strategically use pull-ahead lease programs to stimulate new sales, retain customer loyalty and enhance customer satisfaction.

Unfortunately, such equity positions in lease contracts are now rare. New lease originations generally peak at the top of the economic cycle when residual value projections are too high and based largely on past performance. That means that the peak in off-lease volumes will often come back during an economic down cycle when used vehicle valuations are lower.

Swings between gains and losses are also amplified by the fact that lease return rates rise when equity positions are more negative. The lease return rate, which is the share of off-lease units not bought by either the lessee or grounding dealer, is inversely correlated to used-vehicle values. When

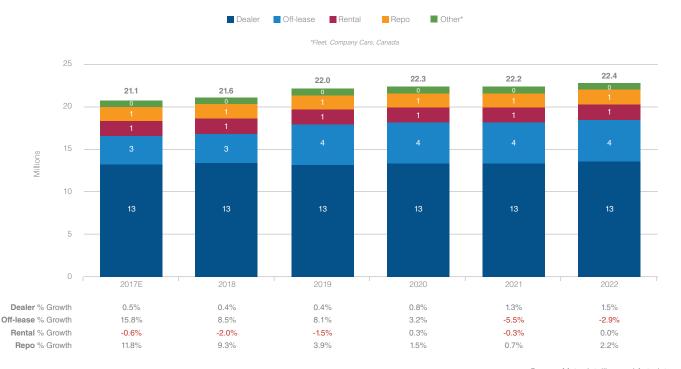
wholesale prices were at their lowest in 2008, lease return rates were often well above 80 percent. As wholesale values reached new highs in 2011 and 2012, returns rates fell well below 50 percent.

OFF-LEASE REMARKETING PRIORITIZES THE GROUNDING DEALER

All captive finance companies as well as major independents utilize at least one internet upstream platform that offers end-of-term vehicles to an ever-widening audience of dealers prior to sale at physical auction. Those technologies, platforms and processes have improved significantly in recent years.

Most of the captives are using these technologies to keep a large share of the returning lease volume within their dealer network and, most notably, the grounding dealer. As off-lease volumes grow in coming years, it is likely that the share of off-lease units bought by the grounding dealer will decline, but probably not by much since the captive lessor will still put priority on that first possible sale and offer an attractive price to achieve it.

WHOLESALE FLOW



Source: Motor Intelligence/ Autodata



NEW VEHICLE FLEET PURCHASES DECREASE, ENDING SEVEN-YEAR GROWTH STREAK

The fleet market declined in size in response to market pressures in 2017. The year ahead will likely bring relative stability compared to last year in both fleet size and residual value performance as a result of an improving economy.

New vehicle purchases by commercial and government fleets decreased by 0.9 percent in 2017 to 945,000 units. The decrease ended a seven-year growth streak.

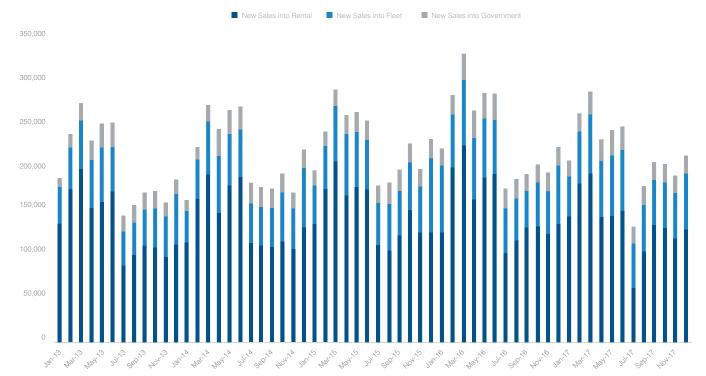
New vehicle purchases by commercial fleets totaled 683,000 units, up 1.4 percent from 2016. Government agencies purchased 262,000 new vehicles, down 6.4 percent from the year earlier.

In 2016, non-rental fleet purchases of cars fell by 7 percent, while truck purchases rose 11 percent. Similarly, in 2017, non-rental fleet purchases of cars fell by 13.2 percent; truck purchases rose 1.5 percent.

Any significant increase to either commercial or government fleets will be difficult to achieve given that earlier sales were boosted by both pent-up demand and the desire to "short-cycle" some of the fleet to take advantage of exceptionally high wholesale prices.

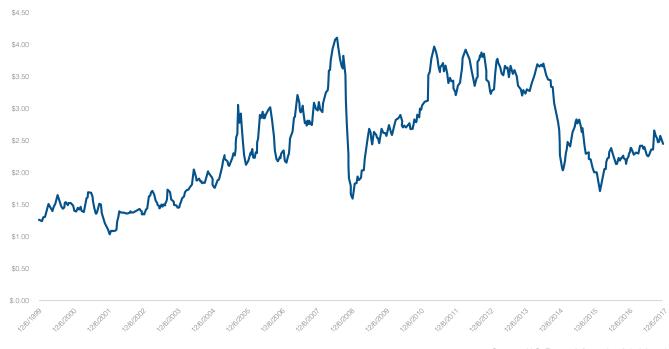
Over the longer term, new vehicle sales into fleets will be constrained by employment shifts between industries, changed occupational distributions within industries, continued tight reins on both private and public fleet budgets, concerted efforts to improve the utilization of the existing fleet, and the shift to employee reimbursement as opposed to company-provided cars. As such, future fleet

NEW VEHICLE SALES TO FLEETS



Source: Bobit

U.S. REGULAR GAS PRICE IN ALL FORMULATIONS



Source: U.S. Energy Information Administration

sales will be driven more by the replacement cycle than by a growth in fleet size.

FLEET OPERATING COSTS REMAIN LOW IN 2017

In 2017, fleet managers once again enjoyed stable operating costs, primarily because of the consistency in low energy prices, as fuel accounts for approximately 60 percent of the average fleet's budget. Operating costs were also helped by stable maintenance and repair expenses and depreciation costs. These savings were partially offset by recalls that increased rental outlays for supplemental units. Keeping operating expenses in check is important for the future health and growth of the fleet industry since budget outlays to the fleet department remain constrained. Lower operating expenses better enable fleet managers to grow units in operation and provide higher service levels to fleet drivers.

Today's higher-quality vehicles and, in some cases, extended powertrain warranties have kept fleet expenses in check by reducing maintenance and repair costs on a per-mile basis. When repair incidents do occur, however, they are significantly more expensive than in the past as the diagnosis is often more complex and the parts and labor costs higher. Similarly, the prevalence of synthetics has

made oil changes more expensive; but it has lengthened service intervals. Additionally, fleet operators, like retail consumers, have benefited from manufacturer programs that cover early oil changes and tire rotations. But it remains important that fleet managers and fleet management companies ensure all required fluid changes and scheduled services are actually performed and documented. Otherwise, warranty claims will be denied.

One area of fleet operating expense that is bound to rise in coming years is funding costs. The benchmark 10-year Treasury yield started 2017 at 2.44 percent and declined throughout the spring and summer, reaching a low of 2.04 percent in September, before rebounding to 2.4 percent by the end of the year. Markets are expecting at least three rate increases by the Fed in 2018, and longer-term rates could rise even more rapidly.

FLEET FUEL EFFICIENCY CONTINUES TO IMPROVE

Fleet managers have worked hard for many years to rightsize the vehicles in their fleets to precisely meet needed requirements. After achieving the proper market class mix, they then strived to purchase the most fuel-efficient models and equip them with the proper options. This practice not "We've seen our order volume increase in 2017 relative to prior years due to a mix of new clients as well as increases in purchases by some existing clients. Recent economic news indicates that businesses are more optimistic and may increase investment, which could be a factor in the increased order volume. Our client base is largely vocational, so most of our fleets tend to be more work truck- and van-oriented. We haven't noticed any significant change in the mix of vehicles, in terms of types or brands; but there has been a greater adoption of commercial vans versus pickup trucks over the last few years, driven most likely by fuel efficiency and total cost of ownership, security, and other factors."

- PARTHA GHOSH

Director of Vehicle Supply Chain and Remarketing, ARI Fleet Management Corp.

only lowered annual fuel costs but, in many instances, also protected resale values, as consumer interest in fuel economy was also high in the used vehicle market. Consumers have been on a different path for the last two years. Significantly lower gas prices shifted consumer preferences to favor light trucks. Mostly notably, sedans lost favor to crossovers. In addition, strong price competition on the new vehicle side within the compact and midsize car segments further hurt residual values for these types of vehicles. 2018 began with SUVs' outselling cars in the new vehicle market, yet gas prices have been slowly on the rise again.

Alternative fuel vehicles have often been placed in fleet service due to corporate sustainability dictates, not because of expected savings. In some instances, however, the higher number of miles driven by fleet vehicles enables them to show a positive payback that would not be possible for a typical retail user. For example, vehicles powered by natural gas already often have a favorable total cost of ownership in some fleet situations.

But, in 2017, most alternative fuel vehicles, such as electric vehicles, suffered from a faster depreciation rate. In addition, alternative fuel vehicles open the fleet manager to greater residual risk since the end-of-service value is less predictable and subject to large short-term swings.

FLEET RESALE PRICES: CARS DOWN, TRUCKS UP

The important midsize car segment of the commercial fleet market had pricing weakness in the wholesale market in

2017, despite having fewer miles at time of sale. End-of-service pickups and vans, however, commanded strong pricing throughout the year.

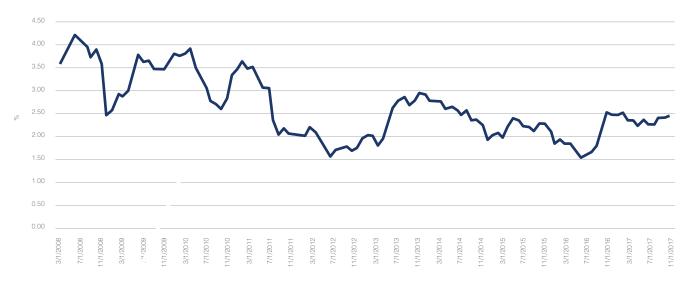
Earlier in this recovery, fleet managers availed themselves to opportunities to cycle out of fleets early to take advantage of higher wholesale prices. Interestingly, at the same time, some fleets were extending the service lives of their vehicles. As a result, the mileage on fleet units being remarketed became more dispersed. Recently, mileage dispersions have narrowed.

FLEET MANAGEMENT COMPANIES DRIVE REMARKETING IMPROVEMENTS

Fleet management companies (FMCs) have been pioneers in using analytics to protect residual values. For example, studying the impact that various vehicle options have on resale value or determining the optimal service lives for particular types of vehicles. FMCs have also been innovators as well as catalysts in moving the whole remarketing industry forward, such as upstream selling and multi-platform listing.

All of this belies the common myth that fleet management companies are less interested in resale value since, generally, they do not carry the residual risk. The fleet manager–client relationship, like most others in the remarketing world, is built on a true partnership working toward mutually beneficial goals.

10-YEAR TREASURY CONSTANT MATURITY RATE



Source: Board of Governors of the Federal Reserve System (U.S.)





DISCIPLINE PAYS OFF IN KEEPING REPOS IN CHECK

Auto loans outstanding have pushed to new heights, yet auto delinquencies and default rates remain at relatively low levels, defying dire predictions of a subprime bubble.

Early in 2017, caution flares were being sent up regarding rising subprime lending and potentially higher repossessions. The warnings proved to be overblown as stable to improving economic fundamentals coupled with management discipline and prudent tightening kept subprime lending and repossessions in check.

That discipline bodes well for 2018 against a backdrop of higher interest rates.

LOANS OUTSTANDING SET RECORDS

The strong recovery in new and used vehicle sales since the recession has pushed the volume of auto loans outstanding up by 35 percent in the past seven years. More and newer loans combined with higher financed amounts due to everhigher vehicle prices led to the total of outstanding auto credit's soaring by 66 percent in the past seven years, and now stands at a record \$1.22 trillion.

The growth in auto loan originations and auto loans outstanding has been aided by a robust asset-backed securitization (ABS) market that should remain viable. Auto ABS issuance has averaged more than \$91 billion a year over the past seven years. The market is viable because the terms of the deals remain favorable to issuers and ABS investors still find the risk-adjusted yields attractive.

ARE BORROWERS OVEREXTENDED?

Household incomes have risen much more slowly than auto loans outstanding, begging the question of whether borrowers will continue to be able to pay their debt. So far at least, it appears they can. Mortgage obligations, the biggest component of household debt, remains at 68 percent, below the peak reached in the first quarter of 2008 due to lower home ownership rates and the majority of mortgages now financed at very low rates. The foreclosure crisis itself erased substantial levels of real estate debt. The lower mortgage obligations coupled with very low interest rates brought the Financial Obligation Ratio – the sum of mortgage, rent, auto lease and loan, and property tax payments as a percent of disposable personal income – to its lowest levels in 30 years.

AUTO DELINQUENCIES, DEFAULT RATES REMAIN RELATIVELY LOW

The lighter debt load relative to income partially explains why borrowers have been able to keep current on their auto loans. The most significant difference, however, has been the shift in labor market conditions. Unemployment fell to a 17-year low of 4.1 percent, with job growth robust in 2017. While weaker than desired, wages have begun to edge upward. Low unemployment and increasing wages led to consumer confidence and spending.

\$ 1 2 trillion in outstanding auto loans



AUTO LOAN ORIGINATIONS BY CREDIT SCORE



Source: New York Federal Reserve Consumer Credit Panel/Equifax

Cheap gas prices have also helped keep loan delinquencies in check, as they put less strain on the household budget, especially in the more sensitive subprime tiers. As a result, the S&P Auto Credit Default Index stands at near-historic lows and well below the default rates experienced during the Great Recession.

GIVING CREDIT WHERE CREDIT IS DUE

Automotive lending is widely available from a highly competitive and vast landscape with numerous players. They range from large money center banks to small independent finance companies. Some lenders provide loans across all credit tiers. Others focus on niches. Some lenders make direct loans to consumers, but many more make indirect loans through dealers. Some lenders are national. Many more are local. The result is an industry that efficiently and cost-effectively funds new and used vehicle buyers of all credit types, in other words, "giving credit where credit is due."

A byproduct of the environment results in low levels of lender concentration. On the new vehicle side, captives control 53 percent of the market while banks control about 30 percent of the market. On the used vehicle side, banks control about 36 percent of the market while credit unions control 28 percent of the market. The result is most banks, finance companies and credit unions have relatively small auto loan

portfolios and, thus, few repossessions. This has created an opportunity for third-party providers to handle the collateral collection and remarketing needs of these lenders.

THE LOOMING ISSUE OF LONG-TERM LOANS

In just four years, the share of used vehicle loans with a term of 61 months or more grew from 51 percent to 59 percent. Currently, 18 percent of all used-vehicle loans are for a term of 73 to 84 months, up from just 12 percent in 2013.

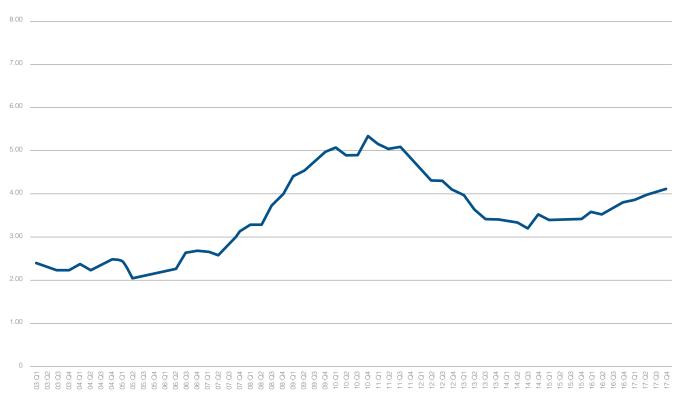
Lenders report that longer loans, in and of themselves, do not materially impact repossession rates. However, longer loans increase the severity of loss on credit defaults. Since the equity point is reached further out in long-term contracts, it is reasonable to expect that a greater number of repossessions will take place further out in the contract.

This could prove especially problematic in the lower credit tiers. These loans are for households that, by definition, are living on the edge. Unforeseen events such as illness, divorce or job loss can quickly push them into default, and with the longer loan, the odds of a bad event's occurring at some point during the term increases.

Even for the higher credit tiers and the clear majority of loans that never go delinquent, longer-term contracts can pose a problem – customer dissatisfaction. Owners may

2018 LISED CAB MARKET BEPOBT & OLITI OOK

PERCENT OF AUTO LOAN BALANCES 90-PLUS DAYS DELIQUENT



Source: Federal Reserve Bank of New York

find it expensive or difficult to trade out of their current vehicle at the time they would like. Feeling stuck leads to customer unhappiness.

Lenders and dealers can mitigate some of the issues of longer-term loans by securing more upfront money. Indeed, one effect of credit tightening in the last year has been stabilization in loan-to-value ratios.

SUBPRIME NORMALIZES SHARE OF AUTO LENDING

The share of auto loan originations accounted for by people with a risk score considered subprime at a credit rating below 620 shrunk from 20.5 percent in the fourth quarter of 2010 to 18.9 percent in the fourth quarter of 2017, according to data from the Federal Reserve Bank of New York.

There has been some concern due to the higher levels of subprime lending. However, subprime loans are down from the last lending cycle, when they represented 30 percent of all auto lending. Subprime and deep subprime loan portfolios for auto loans originated in 2015 and 2016 have not performed as well as earlier vintages. At the beginning of the recovery, many of the subprime borrowers were simply folks who had been caught up in the recession. They had good debt-to-income and payment-to-income ratios, but their credit scores had been dinged by foreclosures and short sales that allowed them to reduce their debt burden. As credit loosened up until early 2016, the profile of the subprime borrower and the terms they could get reached a point that was too loose and led to higher delinquency rates. This decline in performance led to the credit tightening that has taken place since mid-2016.

REPOSSESSION VOLUMES GROW MODESTLY

Despite good portfolio performance, repossessions – and potential repossessions – are edging up as a result of the larger number of loans outstanding. Although the seriously delinquent rate for auto loans (90-plus days) has been flat in recent years, the actual number of seriously delinquent

accounts has been rising. Based on data from the Federal Reserve Bank of New York, the percent of auto loan balances seriously delinquent (90-plus days) rose from 3.14 percent in third quarter of 2014 to 3.97 percent in third quarter of 2017.

Given the number and credit-tier distribution of auto loans outstanding, the number of repossessions will grow in coming years even if the economic environment remains stable. If one assumes a recession scenario, repossession volumes could quickly approach 2 million annually.

REPOSSESSION REMARKETING: QUICK CONVERSIONS FOR HIGH RETURNS

Lenders are naturally focused on converting repossessed units into cash as quickly as possible. Various laws and regulations dealing with the processes of collateral collection and liquidation often present a stumbling block to that quick conversion. But lenders and their auction partners have been successful in streamlining the processes they do control.

Given the lenders' strong focus on time-to-sale, they generally strive for and achieve high conversion rates. Most repossession units receive little or no reconditioning, and as a result wholesalers are often the buyers of repo units. Often wholesalers can achieve a profit with some light cosmetic work before re-wholesaling the unit. That arbitrage is an example of how the wholesale market efficiently gets vehicles to the ultimate end dealer in the condition desired.





DEALERS EMBRACE CHANGE AND FLOURISH

Borrowing from Mark Twain, the death of car dealerships has been greatly exaggerated.

Indeed, speculation of late has been around a future that involves less personal vehicle ownership but more sharing and autonomous vehicles, possibly eliminating the need for dealers. The talk gains impetus against today's backdrop of shrinking dealership margins.

But, as they have since nearly the dawn of the automobile, dealers have adjusted, endured and thrived. Only seven years ago, they triumphed, coming through the Great Recession and growing ever since.

Undoubtedly, auto retailing will continue to undergo massive change. New mobility services and nontraditional ways for consumers to acquire transportation offer challenges to dealers but also opportunities to those who embrace and capitalize on the changes.

While the U.S. auto market is off its recent records, sales remain strong, with 2018 expected to see historically strong new vehicle sales and still rising used vehicle sales, and dealers will be beneficiaries.

NEW VEHICLE SALES REMAIN NEAR RECORD HIGHS

In 2017, new vehicle sales slipped from the 2016 record of 17.5 million to end the year at 17.1 million. New vehicle

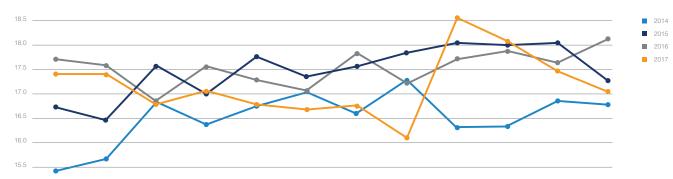
sales since the Great Recession clearly outperformed the overall economy. Many factors drove this overachievement, including pent-up demand, low interest rates and widely available credit, and an ever-improving employment picture.

In addition, manufacturers are offering high-quality, compelling vehicles with the design, technology and features that consumers desire. Automakers have been steadily increasing their offerings of crossovers and sport-utility vehicles, vehicles customers prefer. Consumers, with the help of attractive finance options, have been willing to pay higher transaction prices for the more substantial utilities laden with features and technology. The average transaction price at the end of 2017, according to Cox Automotive's Kelley Blue Book, reached a record \$36,803. Transaction prices have outpaced manufacturer spending on incentives; but the gap is narrowing as vehicle sales enter a post-record era, forcing automakers to boost spiffs.

USED VEHICLE SALES, PROFITS RISE

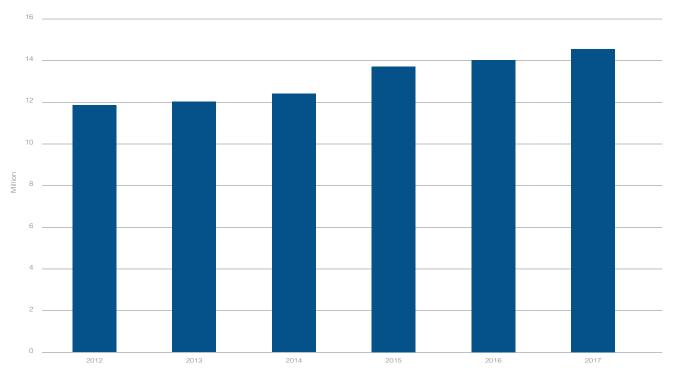
Used vehicle sales increased 1 percent in 2017, the fourth straight year of gains, according to Cox Automotive analysis of vehicle registrations. In 2017, the automotive cycle hit the turning point where new vehicle sales declined but the gains in used vehicle sales exceeded the declines in new vehicles. This year is likely to see a repeat of that trend.

NEW VEHICLE SALES



Source: Bureau of Economics Analysis

USED REGISTRATIONS



Source: IHS Markit, Cox Automotive

Despite narrowing gross margins, used vehicle operations at franchised dealerships produced record profits due to quicker inventory turns, reduced selling expenses, and strong F&I income. In 2018, franchised dealers will benefit from the growing off-lease volumes that include more popular trucks, crossovers and sport-utility vehicles than in recent years. Quality used vehicle inventory that is the vehicle type consumers desire will literally be driven to the dealership door, while another new – or possibly used – vehicle will be sold as a result since the majority of returning lessees buy or lease another vehicle from the same dealer.

MARGINS SHRINK BUT STABILIZE

Financial reports from the seven publicly traded dealership groups provide a good reflection of trends within the franchised dealer body. Indeed, the largest of the publicly traded dealers, CarMax, is an independent; but its product offerings and price points with respect to used vehicles are similar to a mainstream franchise dealer.

With respect to gross margins, the shrinking trend is not pretty. The good news is margins have started to stabilize. With higher throughput, quicker inventory turns, higher transaction prices, reduced selling expenses, and good F&I income, the reduced margins did not prevent record

profits. Narrowing margins, however, will continue to challenge dealers.

Increased price transparency in the used vehicle market, in addition to narrowing margins, also reduced the range of grosses on individual transactions. Lacking "homerun" highgross deals, dealers can now ill afford the outsized losses associated with buying the wrong car at the wrong price. The need for dealers to take a more data-driven approach to inventory acquisition is a must. For commercial consignors, who often benefited from that one dealer's paying too much in a speculative bid, the need to put their portfolio in front of the right buyer – the first time – takes on added importance.

ANOTHER YEAR, ANOTHER RECORD FOR CPO SALES

In 2017, sales of manufacturer-backed certified pre-owned (CPO) units totaled a record 2.644 million units, up from 2.641 million in 2016. Last year marked the seventh consecutive year with higher CPO sales, and 2018 promises to be the eighth, fueled by growing off-lease volumes of a more desirable mix. CPO sales enable dealers to protect gross margins, improve turn rates, and boost F&I and service income. When CPO programs are properly structured and effectively marketed by manufacturers

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2018 USED CAR MARKET REPORT & OUTLOOK

and dealers, the programs can provide all three of those benefits simultaneously.

But, is there a natural limit for future CPO sales? After all, the ratio of CPO sales to the number of new vehicles sold in the prior four years rose from little more than 2 percent a decade ago to more than 6 percent today. The ratio of CPO units to noncertified franchised dealer used vehicle sales was at 67 percent for 2017, based on registration data from IHS Markit and sales data from Autodata With more off-lease units expected back in 2018 and 2019, there is plenty of opportunity for dealers to grow used sales by certifying units.

With the elevated levels of leasing across brands – both luxury and non-luxury, the CPO market has at least the potential to continue its growth. Whether it grows will depend on a few factors. How much marketing muscle and special incentives the manufacturers put behind CPO programs plays a big role. Dealers' ability to earn good profits on CPO sales will influence their decision to CPO a unit. Consumers' willingness and ability to pay the premium associated with CPOs will likely become more challenging,

especially for non-luxury vehicles, as the drive for value and affordability intensifies with higher financing costs.

These three factors came together in 2017 to restrain the growth of CPO sales to well below its potential. Lease returns, off-rental volumes and late-model trade-ins were skewed more toward compact and midsize cars, which are vehicle categories consumers increasingly are rejecting in favor of crossovers and sport utilities. As a result, the potential gross profit on the subsequent retail sale of those units was thin, as a principal reason consumers bought those cars was chasing value. Dealers decided the lift from certifying units wouldn't be worth the associated costs. Instead, they retailed more nonluxury units without certification.

Relatedly, manufacturers continued to offer attractive lease deals on new small sedans, which often made the monthly retail payment on a similar CPO unit uncompetitive. Manufacturers consciously shifted incentives away from CPO programs on some models, especially non-luxury models, to prop up new vehicle sales. A dealer with no added economic benefit to CPO and armed with high new

vehicle incentives won't find it worthwhile to use time and resources to certify.

Some of the pressure related to vehicle mix should ease in 2018 as production volumes of cars decline rapidly in favor of crossovers and the mix of off-lease vehicles becomes richer with more pickups and SUVs. As a result, Cox Automotive expects CPO sales will continue to grow.

GREATER INVENTORY AVAILABILITY HELPS INDEPENDENT DEALERS

Dealers are experiencing a significant lack of 4- to 8-yearold vehicles. Vehicles of that vintage would have been sold during the Great Recession and early recovery years, but the volumes were small.

Less than 4-year-old vehicles outnumber 4- to 8-year-old vehicles by 20 million units. Even 9- to 12-year-old vehicles outnumber 4- to 8-year-old ones by 10 million.

That gap has an impact on what sells. Historically, that age segment was the bread-and-butter for independent dealers. But that is not the case today. The growth in retail used car sales has come primarily from an increase in 1- to 4-year-old vehicles.

As wholesale supplies grew in 2017, independent dealers were better able to secure a richer inventory of younger, light-truck mix. This year, independent dealers should see a continually improving mix of vehicles. They should have a good year in 2018, if all-important credit conditions remain favorable.

BHPH DEALERS ADAPT TO CHANGING CONDITIONS

One of the biggest challenges for Buy-Here, Pay-Here (BHPH) dealers in this cycle has been deep subprime lenders' buying down into the traditional BHPH customer base. The customers left behind were the ones least likely to pay. To handle this and other challenges, individual BHPH operators have developed a multitude of different business models to the point that there no longer is a traditional model.

Some operators significantly increased the price point of the vehicles they offer. Others kept their price point and built in more goodwill policy work as a reserve. Some moved to the Lease-Here, Pay-Here model. Still others adjusted interest rates to coincide with subprime lenders. And some worked diligently to capture more upfront money in the deal.

In recent years, many BHPH dealers have used downpayment deferral programs to get a jump-start on the tax selling season. These became more important in 2016 as the PATH Act required that the IRS hold tax refunds claiming the Earned Income Tax Credit (EITC) until Feb. 15. In recent years, more than \$100 billion in tax refunds had already been disbursed by mid-February, with much of that being EITC monies, which have the highest correlation with lowerend retail used vehicle sales.

WHAT \$5,000 WILL BUY?

Rising wholesale prices and the dearth of 4- to 8-year-old vehicles have caused headaches for BHPH dealers as they need to find vehicles their customers can afford, but that will also be capable of running the term of the note with minimal repairs.

To give a sense of just how much wholesale prices have gone up over time in the lower price tiers, Cox Automotive analyzed the average mileage on auction vehicles that sold between \$4,000 and \$6,000 over the past 16 years. If, on average, \$5,000 was spent for a vehicle at auction in the year 2000, on average, the vehicle had 84,541 miles on it. Average mileage slipped over the following three years as wholesale supplies grew and the overall pricing environment weakened.

But between 2003 and 2014, the average mileage for the typical \$5,000 auction purchase rose every year, except for the recession years of 2008 and 2009. In 2016 and 2017, BHPH dealers got a little reprieve and the average mileage on a \$5,000 auction purchase fell below 120,000 miles for the first time since 2012.

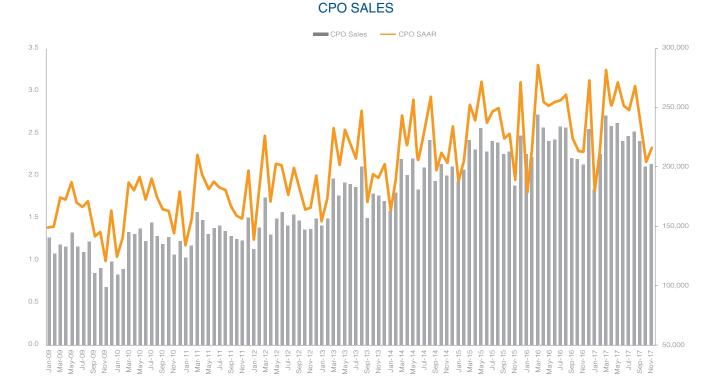
DEALER CONSIGNMENT REMAINS CORE TO AUCTIONS

After reaching a high of nearly 59 percent of all NAAA-member auction sales in 2013, the dealer consignment share slipped to an estimated 52 percent in 2017. That's still high by historical standards, and even as commercial consignments grow more rapidly in the years ahead, it is likely that dealer sales will remain a high and key component of auction volumes.

In past cycles, commercial volumes sometimes pushed out dealer consignments due to limited physical capacity, as well as prime lane and time slots. Online sales, multiblock selling, simulcast and mobile auctions have put all sellers on equal footing and broadened the definition as to what is a "prime" slot.

AUCTIONS GO MOBILE, ONLINE

Likewise, several years ago, it was argued that traditional auctions would be dis-intermediated as new and improved online options enabled dealers to more easily bypass the traditional auction process. After all, dealer wholesale transactions outside the traditional auction have always been considerably larger than the number going through auction. And technology was promising to make those informal



Source: Motor Intelligence/Autodata

networks more efficient. What evolved, however, was a stronger partnership between dealers and auctions and the establishment of dealership trade networks to play a major facilitating role.

Going forward, it is likely that mobile auctions – run by the auction houses – will become an increasingly important method for dealers to sell and source inventory. Mobile auctions enable companies like Manheim to bring the excitement and success of a live auction – coupled with simulcast bidding – anywhere and everywhere.

Many of these auctions are held in rural areas that are some distance from a major physical auction. Usually the sale is located at the site of the primary selling dealer – and, although the majority of attendees come from nearby areas, a robust remote bidding via simulcast ensues.

Manheim has found that conversion rates at these sales are higher than for a typical physical auction sale because the sellers are very committed. The high conversion rate feeds on itself by attracting more local dealers. Improvements in technology enable Manheim to perform all of the important back-office functions and ancillary services just as efficiently as if the sales were held at a major auction house.

DEALER-CONSIGNED WHOLESALE PRICES RISE

Pricing for dealer-consigned units was up 1 percent in the first nine months of 2017, but increased 7.4 percent on a year-over-year basis in the fourth quarter due to the incredible price strength after the hurricanes. 2017 ended with prices more in line with the general trend prior to the hurricanes.

After many years of moving upward, the average mileage on dealer-consigned units declined in 2015 and the first part of 2016, but then began to rise later in the year.

DEALER SENTIMENT AND CHALLENGES

In 2017, Cox Automotive launched the Dealer Sentiment Index (CADSI), which is based upon a quarterly survey of dealers around the country. The CADSI and underlying survey are designed to measure dealer perceptions of current retail auto sales and sales expectations for the next three months as well as the key underlying factors that drive their perceptions. Dealers are classified by type, size and region to determine differences in perceptions.

The 2017 index results revealed mixed opinions on the strength of the current market, with franchises more positive than independents. Both dealer types viewed used vehicle sales as strong, and the majority of dealers closed the year optimistic about the market in early 2018.

Dealers are also asked each quarter about the factors that are holding back their businesses. The top challenges vary in ranking and intensity when comparing franchises to independents. All dealers are contending with challenging market conditions, competition and rising expenses. Independents struggle with credit access for their buyers and acquiring inventory. Franchises struggle more with staff turnover.

FRANCHISE TOP CHALLENGES Market Conditions 40%

Market Conditions	40%
Competition	32%
Staff Turnover	21%
Expenses	20%
Consumer Confidence	19%
OEM Mandates/Restrictions	19%

INDEPENDENT TOP CHALLENGES

Market Conditions	45%
Credit Availability for Consumers	39%
Competition	37%
Expenses	33%
Limited Inventory	31%



Last year was a tough year for automotive retailing in terms of the amount of change and uncertainty we faced. This year appears full of opportunity, but clearly the future belongs to the flexible. In the world of Cox Automotive's Retail Solutions Group, building business dexterity means aligning software and technology to a unique selling strategy and current market conditions

Two undisputable trends will continue to challenge us and have direct implications for auto retail:

DECLINING SALES

Volume means greater focus on ROI and profitability and a commitment to efficiency and optimization.

> INCREASED DEMAND FOR DIGITAL

Requires more seamless workflow and open track platforms to support the transition.

The good news is there are a few simple guiding operational imperatives that can open the full range of motion needed for auto retail success:

CUSTOMERS FIRST

Consumer expectations are sky-high, so customized content delivery, automated to a consumer's specific persona and lifestyle, is the new ante into engagement. Creating meaningful interactions between a consumer's shopping behavior and dealer inventory is a necessity. Once consumers engage, listen to their questions,understand their concerns, and treat every interaction as an opportunity. This is where dealers establish their value and solidify their relationship. Front-end digital sales integration makes all this possible programmatically. But remember, software and tools should enable, not be a substitute for time devoted to knowing and satisfying our customers.

BE FIERCELY COMPETITIVE

Consolidation and other threats to the auto retail model are real, but so are the value and importance consumers place

on a good sales experience and dealership relationships. Make a bold move to define your niche, and be dedicated to winning share and leading your market. Half measures aren't going to cut it. You must bet big on your core winning capabilities.

LOOK FOR TRUSTED PARTNERS, NOT VENDORS

Software and technology should enable your people and fit your unique strategy. They should never back you into a corner, restrict your operation or limit your choices. Choose partners who are consultative, not product pushers. True partners focus on finding solutions to your unique operational and business problems. Look for open source technology that creates opportunities for your business. It should be crystal-clear how a solution fits your specific needs. Shun meaningless reports and metrics, and find a partner who'll commit to looking at all the variables that affect your desired outcomes.

Despite the media frenzy over "click to buy" and disruptive retail models, physical location still matters, and people matter even more. Consumers want real connections with real people. It's true: We do live in a 24/7, "always on" world. Buyers aren't always buying, but they are always learning. That's where software and technology can come in to ensure you are always there for customers, wherever and however they engage with you – to solve their problems and to meet their needs better than anyone else can.

Co. Vin

BY KEITH JEZEK

President of Cox Automotive Retail Solutions

Group, including Dealertrack, HomeNet, vAuto,

VinSolutions and Xtime.

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USED-TO-NEW RATIO

Good 1:1 Great 1.25:1

Used retail unit volume equaling or surpassing new retail volume is a foundational correlation of highly successful used-vehicle departments, assuming the dealership is meeting new vehicle volume goals. Success in used-to-new ratio requires a combination of acquisition, reconditioning and retailing skills. In today's market, a key driving force is the resulting increase in profitability, which releases some pressure on the new-vehicle department for overall dealership profitability.

PRICE TO MARKET / MARKET DAYS SUPPLY

Top performers embrace the balance between a vehicle's desirability and its price. They use data to dictate when it is appropriate to "go for the gross" and when the window for profit is short, so they need to price aggressively from the start. The data is also a foundational element in inventory acquisition and appraisal processes.

INVENTORY TURN RATE

Good 12 Great 16

The inventory turn rate is the amount of in-stock inventory compared to monthly sales. The highest performers turn inventory every 20 days. Fast turn rates require a commitment by all dealership departments and a focus on efficiencies, including age intolerance. The reward is worth it. Fast inventory turns maximize high-gross opportunities associated with fresh inventory and drives profits in other dealership departments.

MECHANICAL AND COSMETIC RECONDITIONING TIME

3 davs

Top performers solve reconditioning delays. It may require dedicated techs, staying open late and sublet. Speed is paramount.

PACKS

Indicators (KPIs) and best-in-class benchmarks against

which dealers can measure their own performance.

Good: Max 1% of vehicle value Great: \$0

High performers understand the drag that packs place on their used operations. They slow down acquisition, including reducing new car appraisals. Packs made sense prior to the internet age, but those days are long gone.

REDUCED RECONDITIONING MARKUP FOR OLDER VEHICLES

Retail reconditioning hinders vehicle acquisition, especially on older vehicles that tend to be some of the most desirable but also have the highest reconditioning costs. Top performers recognize the strain and reduce the rates for older vehicles, typically five years or older.

IMMEDIATE WHOLESALE VOLUME

Under 33%

Top used-car departments separate the measurements of immediate wholesale, that is, a vehicle never offered for retail from aged wholesale. They look for ways to keep trades. They typically have discounted recon rates for older vehicles and few to no packs.

IMMEDIATE WHOLESALE PROFIT/LOSS PER VEHICLE

+/-\$150

The goal is a small profit/loss per vehicle, an indication that appraisers are accurately assessing valuations and assumes no inventory adjustments or pack adjustments. It is closely tied to appraisal-to-trade ratio.

AGED WHOLESALE LOSS PER VEHICLE

Up to 5% of vehicle cost

Aged wholesale losses are from vehicles that were wholesaled after an attempted retail. Top performers recognize vehicles that were reconditioned and offered

for retail but did not sell are likely to lose money. They separate these vehicles from the ones that were immediately wholesaled and set a KPI for the average wholesale loss on these specific units. A benchmark of 5 percent wholesale loss allowance is common. High-performing dealers do not consider a pack adjustment to offset these losses. They want the ability to identify the losers and look for any process adjustments that might prevent future losses.

APPRAISAL-TO-TRADE RATIO

50%⊣

The appraisal-to-trade ratio is the ratio of all vehicles appraised to how many were traded. Ideally, the metric is tracked by individual appraiser and salesperson. It is a key indicator of the support the used-car department provides to the new-car department. Packs, excessive recon charges and aged used inventory contribute to lower ratios. Another key factor is the point at which the appraisal occurs in the sales process. Dealerships that appraise vehicles early on tend to have lower ratios as they are appraising many more trades.

GROI

Good 120%+ Great 160%+

GROI, or Gross Return on Investment, is the product of the gross as percentage of the sale multiplied by turn rate. For example, a \$10,000 vehicle generates a \$1,000 profit for a 10 percent gross as a percent of sale. Is that a good job? It depends how long it took to sell. If it took a year, the turn

rate would be one for a GROI of 10. If it sold in one month (a 12-turn equivalent), the GROI would be 120. For a vehicle to make financial sense, the goal is a minimum GROI of 120. This concept can also be applied to an entire inventory.

COST TO MARKET

The highest achievers monitor Cost to Market, which compares the retail value of a vehicle to the total investment in a vehicle, including acquisition cost, reconditioning, transportation, pack, etc. Efficient dealers minimize costs to enable aggressive acquisition of inventory and deliver maximum ROI.

BY LES ABRAMS

Cox Automotive Director, Training and Dealer Services

The opportunities at Fox Motors are in the pre-owned departments and service. We invested in a lot of new technology in 2017 and expect this to help us gain share in these areas. Our customers are interested in working deals online and using the digital retailing tools to make their negotiation process smoother. They want a more efficient process that results in less time in the store. We see the future customer being even more focused on the ability to buy a car online. At Fox Motors, we value the customers' time and will adjust to their needs and car buying preferences. If this means investing in more technology to do so, we are on board with that. We now offer a mobile delivery service for customers who would rather have their vehicle delivered to home or work. This has been popular, but we believe it will become even more popular as time goes on. Time is valuable, and we need to respect it.

- DIANE MAHER

President and COO, Fox Motors, Grand Rapids, Mich.

Q&A WITH DALE POLLAK,COX AUTOMOTIVE EVP

Q HOW CAN DEALERS MAXIMIZE THEIR OPPORTUNITIES?

A Dealers should re-assess their inventory strategies. They should examine whether the price segments and vehicle types are correct for their markets. Dealer inventories often feature more expensive "near-new" vehicles that can create competition with heavily incentivized new vehicles and result in less-thanideal retail turn rates. Similarly, the preponderance of near-new inventory can cause dealers to overlook opportunities that older, higher-mileage units may bring in their markets. It is critical for dealers to become even more efficient and market-focused in how they acquire, manage and market their used vehicles given the ongoing margin compression.

Q WHAT IS HAPPENING WITH MARGINS?

A Despite a robust used vehicle market, dealers make less money on the used vehicles, though often are selling more expensive vehicles. This trend owes to increased competition and other factors that won't go away. It's not uncommon for vehicles to reach a 90 percent cost-to-market ratio in 30 to 45 days, and sometimes in even less time for vehicles with a high market days supply. In this environment, every used vehicle is like a block of ice that's sitting in a room with temperatures rising. If it sits too long, eventually there's nothing left. The same is true of front-end gross profits in used vehicles.

Q HOW CAN DEALERS BECOME MORE EFFICIENT AND QUICKER IN RETAILING USED VEHICLES?

A Dealers can be more efficient at each stage of a used vehicle's life cycle. Start with sourcing. Dealers have a lot of opportunity to improve the way they source auction vehicles. The best dealers increasingly rely on technology and tools, rather than the instincts of buyers, to expand the network of outlets to quickly find and purchase vehicles to fit their local markets, inventory strategies and profit objectives. These dealers also find it is far more efficient and productive

to acquire all auction vehicles online, rather than send buyers and managers to physical auctions. Auctionpurchased vehicles often account for 70 percent to 80 percent of overage inventory, so there's likely significant room for improvement.

Q ONCE THEY OWN THE VEHICLES, WHERE IS THE EFFICIENCY CHALLENGE?

A Dealers may have difficulty getting them listed for sale online quickly. Delays can be due to slower-thannecessary reconditioning, where vehicles may take a week or more to get photographed, and front-line and online-ready. Other times, the vehicles "aren't really for sale" because the dealer's pricing strategy puts a premium on a vehicle that, according to its Market Days Supply metric, doesn't deserve to be priced above the prevailing market. Speculation has been rampant that dealers would go the way of the horse and buggy; but since the dawn of the automobile, they have endured. Indeed, massive change in retailing is coming, and dealers who embrace the change will thrive.

Q WHERE IS THE DEALER'S GREATEST OPPORTUNITY IN 2018?

A The biggest blessing in the past year or so has been the resiliency of the market itself. We've had unprecedented levels of late-model supply that the market has been able to absorb due to strong and ongoing demand. Analysts expect demand to remain strong, and the incoming supply of vehicles will consist of more mid- and full-size SUVs and trucks, which offers dealers the opportunity to stock a more balanced mix of inventory that matches the types of vehicles buyers actually want to purchase. The most efficient and market-conscious used vehicle retailers will capitalize on the opportunities. These dealers will be better positioned to proactively respond to market changes and opportunities, and quickly capitalize on them in more profound and profitable ways than their lessefficient competitors.

Q&A WITH WES LUTZ,

NADA CHAIRMAN



Q WHAT DO YOU SEE AS THE BIGGEST CHALLENGES/OPPORTUNITIES FOR FRANCHISED DEALERS IN 2018?

A The return of a record number of off-lease vehicles will be one of the biggest challenges dealers will face, but it's also one of the biggest opportunities. Obviously, the number of lease returns will put a lot of pressure on new-car sales, and used-car sales will likely increase because of the influx of late-model, lower-priced tradeins returning to the market. But there's also a great opportunity because we are a little over capacity on the new side right now. The key for dealers will be properly managing their inventories.

Q WHAT ARE SOME BEST PRACTICES DEALERS ARE USING TO MAINTAIN RELATIONSHIPS THROUGH THE CUSTOMER CYCLE?

A The biggest thing we're doing is communicating with our customers through smartphones and other mobile devices. This has emerged as the most preferred way to communicate with a customer, and it's working to everyone's benefit. We text our service customers about where their vehicle is in the repair process and when it will be complete, and it seems customers really like us to text because they can respond. It's not intrusive during their day. We're even using cellphones for repairs and ordering parts. People send us a picture of what they need so we can have it in for the repair the next day or two days later when we get the part. So, just having that instant communication with our customers has changed the way we're doing business. It's enabled us to serve our customers better because we can respond so much more quickly.

Q WHAT HAVE YOUR DEALERS LEARNED ABOUT WORKING WITH THIS EMERGING AUDIENCE OF MILLENNIALS?

A They're very opinionated and specific about how they want to be contacted. That's one thing about millennials – they'll tell you if they want to be emailed. They'll tell you if they want to receive a text. There's a tendency

to do more texting and emailing than there is actually speaking on the phone or in person. That age group seems to be very comfortable with their phones and mobile devices, so we have learned to embrace that. And the result is that communication in general with customers is better and more effective today. There are so many ways to communicate with a customer rather than calling on a landline phone. It speeds up the whole process. It's good.

Q CONSIDERING MARKET TRENDS AND CHALLENGES FACING THE INDUSTRY, WHAT WILL DEALERSHIPS LOOK LIKE IN THE FUTURE?

A Five or 10 years from now, dealerships will be very similar to what they are now. I think some are a little over-exuberant on when they think ride-sharing and autonomous vehicles are going to be the dominant means of transportation. When I speak to consumers on a regular basis, I don't think that they are ready for 100 percent ride-sharing, and I don't think they are ready for 100 percent autonomous vehicles. They are not willing to give up their ability to drive, and they're even less willing to give up owning their own vehicle.

That doesn't mean dealers don't have to change. Smart dealers are constantly looking for ways to embrace change. As in the past, the dealer franchise system needs to keep adapting to consumer preferences. We are here to serve consumers, and if we're not willing to make the changes that our customers want, or we stop providing value to the customer, that's when we're in danger of becoming irrelevant.

Wes Lutz is president of Extreme Chrysler/Dodge/Jeep, RAM Inc. in Jackson, Mich., and has been a Chrysler dealer since 1976. Lutz is 2018 chairman of the National Automobile Dealers Association and represents Michigan's franchised new-car dealers on its board of directors. He previously served on the NADA board from 2001 to 2004.





CONNECTED RETAIL

Almost everyone in the automotive retail market – and even some Silicon Valley startups – are speculating on the future of how cars will be bought and sold. Much of the hype in recent months has been about the predicted end of the car dealer and the shift to completely online retailing.

These speculators have good reason to believe that dramatic change is coming quickly in the automotive retail buying experience. Why? Because for decades, buying a car has often been stereotyped by consumers as "the worst experience I've ever had." And the primary source of frustration is the length of the process. On average, consumers spend three hours in the dealership to purchase a vehicle, with more than half of that time spent negotiating and doing paperwork.

The incredible convenience of online buying from Amazon, the ease of services like Uber and even the simplicity that the real estate market offers consumers have transformed consumer expectations for how easy it should be to shop and buy just about anything online - including a car.

Considering today's digital-driven world, anything less than a delightful car-buying experience is a recipe for declining

sales, compressed margins and an ever-mounting weight on dealers to operate at a minimum sustainable profit level.

Dealers today face a choice similar to – but far bigger than - the one they faced in 1999 when classifieds first started moving online. There's no question that dealers must get more digital or risk becoming irrelevant. The challenge, though, is how to remain in control of profitability but still provide a delightful buying experience. The good news: Recent Cox Automotive research reveals a new north star for dealers to adopt a digital sales process that fits with how they already do business. The great news is "Connected Retail" solves both of these problems.

The Future of Digital Retail Study, Cox Automotive's latest research, debunks the myth that the dealership is going away. In fact, the study indicates just the opposite: The dealership remains central to car buying. The study confirms eight in 10 consumers would never purchase a car without a test drive, and seven in 10 would never purchase a car without physically seeing it first, even if a condition report is offered online. Plus, 89 percent of consumers still want to

sign final paperwork at the dealership.

Consumers are looking for a much faster, more convenient car-buying process. Our research shows 83 percent of car shoppers are ready to take at least one step toward their purchase online before entering the dealership. Enabling customers to start their buying process online and complete it in-store is a new vision for retail. This new model will mark a new era, the beginning of Connected Retail.

By Connected Retail, we mean online tools that help dealers and buyers structure deals with real monthly payments (including price, taxes, fees, trade-in value, etc.), understand and buy F&I products, schedule a test drive, and place a down-payment online to reserve the vehicle and take delivery. When customers start the deal structure online, the in-store experience becomes smooth and stress-free, and dealers profit when the payment conversation happens early in the process. Then the digital experience continues in the store with tools to complete the purchase.

Our study's convincing numbers point to a significant role for the dealership, while it's also clear that customers are looking for options to complete portions of the sales process online. The study reports that 85 percent of shoppers are more likely to buy from a dealership that offers at least one of the major purchase steps online.

Cox Automotive's Dealer.com, Dealertrack and MakeMyDea were early innovators in digital retailing, and through significant investments, Cox Automotive is delivering an industry-first Connected Retail solution - Accelerate that integrates the digital online buying experience with

the in-store digital buying experience, including F&I platform and tools.

of car shoppers are ready to take at least one step of their purchase online

Last November, we began partnering with a small number of innovative dealers to help deploy the Accelerate solution across their physical and online storefronts. Dustin McCue, sales manager for My Auto Advantage in Hendersonville, N.C., is already experiencing the advantages of Accelerate - increasing efficiency and profitability while improving customer satisfaction. He told us that, when customers aren't pushed on their budget and know their monthly payments before they come into the store, it's a win-win. The dealership "kills it in F&I, and the customer lands in the right car."

McCue says one of the best aspects of Cox Automotive's Accelerate is the efficiency and confidence his team gains from not being afraid to walk away from customers with unrealistic expectations. Another important point: Accelerate is saving him a lot of time – especially back-and-forth with customers – by smoothing over the historically negative negotiation phase. "Prosperity is growing as the negativity declines." McCue noted.

So, yes, the auto industry is heading through a period of major transformation. But rest assured, the dealership is not dead. The old way of car buying, however, certainly is.

BY MIKE BURGISS Cox Automotive Vice President, Digital Retailing More information on Cox Automotive's Future of





Q&A WITH GRETA CROWLEY,

VICE PRESIDENT, COX AUTOMOTIVE'S MEDIA SOLUTIONS GROUP

Q WHAT'S THE GOAL OF COX AUTOMOTIVE'S **MEDIA SOLUTIONS GROUP?**

A With the combination of Autotrader, Kelley Blue Book and Dealer.com - the most visited, trusted and influential brands in the industry – we're THE go-to for digital marketing solutions for dealers and automakers, as well as car buyers, owners and sellers. We provide them with a breadth of solutions classified listings, paid search, digital retailing, data and reporting – to help all accomplish their goals.

Q WE HEAR REFERENCE TO CONNECTED, DIGITAL MARKETING SOLUTIONS. WHAT DOES THAT

A Beyond Autotrader, Kelley Blue Book and Dealer.com, our secret sauce at Cox Automotive is the connected digital marketing solution we're offering to clients. Our connected shopper experience engages and intentionally leads the most qualified buyers at every stage in the shopping process. We create a tailored, trustworthy and connected Cox Automotive retail experience for consumers that drives more deals for our clients. Through digital retailing, we're providing new opportunities to move shoppers from searching to buying when they are ready, improving the current model for both consumers and dealers.

Q WHAT'S THE KEY TO ATTRACTING THIS LARGE, **NEW GENERATION OF CAR BUYERS WHO WANT** TO DO ALMOST EVERYTHING ONLINE?

A All of today's car shoppers, but especially millennials, expect to transact online. They want a trusted, personalized and transparent experience that's fast and enjoyable. To that end, Cox Automotive is making large and bold investments in Autotrader that will provide dealers with tools to help them deliver the ultimate online customer experience to their shoppers and, in the process, generate higher-quality leads and boost sales. Plus, we have more innovations in the pipeline across our brands.

Q WHAT IS YOUR GROUP DOING REGARDING **USED VEHICLES?**

A As the average transaction price of new vehicles climbs, the Kelley Blue Book Used Car and CPO Price Advisors helps millennials and others focused on affordability shop for used vehicles. Affordability is key, but so too are reliability and peace of mind. So, it's important to educate consumers on the benefits of purchasing Certified Pre-owned (CPO) vehicles as well as used. This year, Kelley Blue Book introduces two new Price Advisor tools for used cars and CPO vehicles. To alleviate price pressure and align both shopper and dealer expectations, the Kelley Blue Book Price Advisor provides guidance and confidence into how much prospective car buyers should pay for their next vehicle. The timing is right as record numbers of used and CPO units hit the market this year.

Q HOW DO YOU SUGGEST DEALERS VIEW **ANALYTICS AND ATTRIBUTION?**

A Attribution is about creating connections between online activity and meaningful offline activity. Meaningful offline activity certainly entails car sales, but it also includes things like service repair orders and lot visits. Three key takeaways for our clients when speaking to analytics and attribution are: Find the quality in the quantity of your traffic, look for where your dealership is on attribution journey, and invest where there's success. This year, we will roll out a first-of-its-kind attribution platform. This single, easily accessible view across Autotrader, Kelley Blue Book and Dealer.com will help dealers set their media strategy, configure their digital storefront, and view analytics and sales impacts. This will result in dealers' more easily understanding the value they are receiving from our products and services.

Q&A WITH DAVID ANDREWS.

2017–2018 NIADA PRESIDENT



Q HOW WOULD YOU DESCRIBE THE CONDITIONS **FOR INDEPENDENT DEALERS IN 2017?**

A Times are definitely changing, and that's great. These are times rife with opportunities, times for making the seemingly impossible possible. Of course, there are challenges and concerns – regulations, changes in the market, the way customers shop, a new generation of car buyers with very different needs and expectations. But there are millions of low-mileage, late-model cars hitting the used car market, and the availability of credit has never been better. Now is the best time ever to be a used car dealer.

Q WHAT DO YOU SEE AS THE BIGGEST **CHALLENGES FOR INDEPENDENT DEALERS** IN 2018?

A Regulation of our industry is a huge concern, and addressing regulation is a priority for NIADA. We've taken the lead on engaging with Congress and federal regulators to educate them on how the automobile industry works. We've worked to make sure they understand the extent of the regulations currently in place as well as their impact on independent dealers and our customers. We've shown them the cost of compliance and went to Washington to demonstrate how it affects the buying process. NIADA has worked to reduce the regulatory burden. For example, we were at the forefront of the push to repeal the Consumer Financial Protection Bureau's Arbitration Rule, which was struck down by Congress in October.

Q HOW ARE DEALERSHIPS CHANGING TO BETTER SERVE THE GROWING NUMBER OF MILLENNIAL **CAR SHOPPERS?**

A Millennials require flexibility. They want to be able to shop and buy on their terms, whether online or in the store. They demand transparency, because they know more about the vehicles they want and what those vehicles are selling for than any shoppers before. They want the process to be faster. Dealers must meet those needs. And I believe the changes we make to please millennial customers will please all other customers. NIADA is helping dealers adapt to millennial buying preferences with a wide range of educational opportunities focused on dealing with the changing landscape, including the NIADA Convention and Expo, dealer training schools, and workshops throughout the year. NIADA Dealer 20 Groups help keep dealers up-to-date on our changing industry.

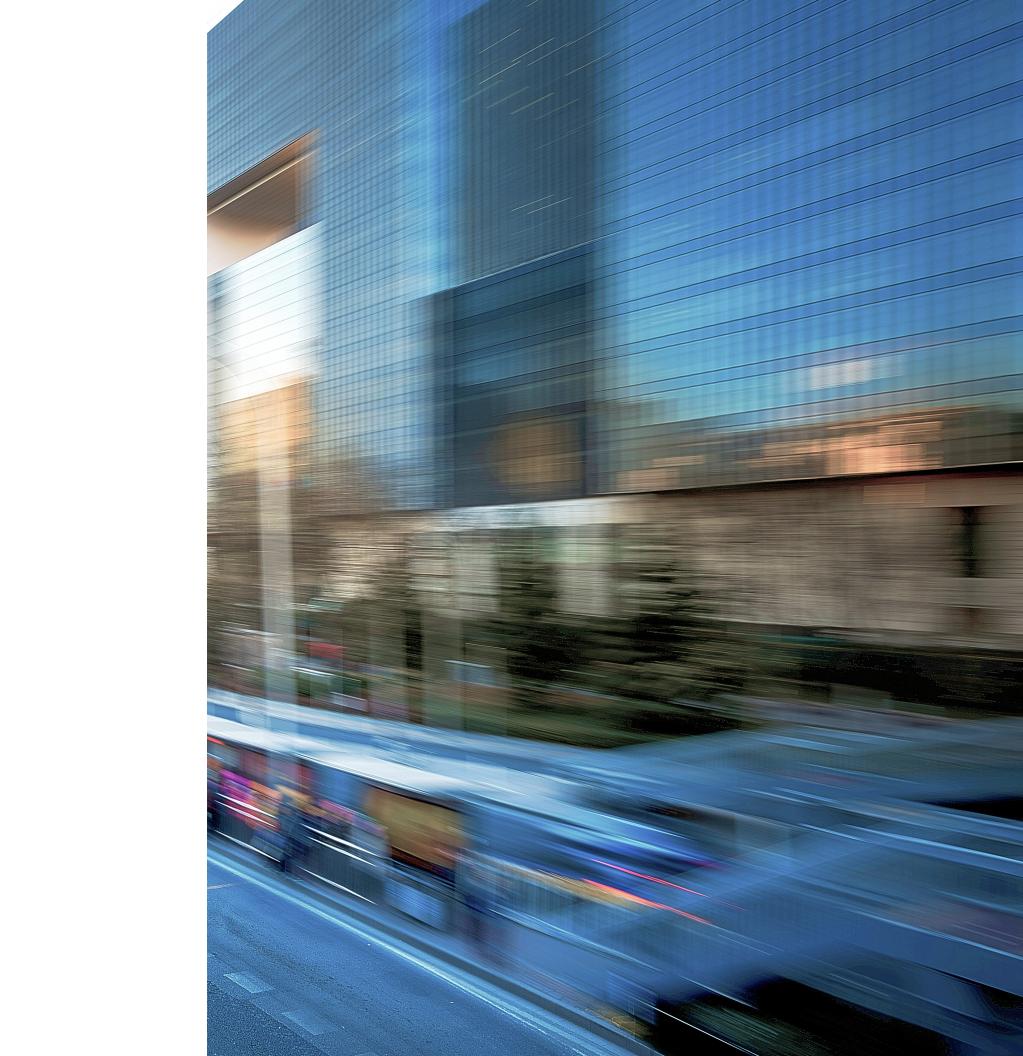
Q WHAT RECOMMENDATIONS DO YOU HAVE FOR **DEALERS REGARDING TECHNOLOGY?**

A The business model for independent used vehicle dealers continues to change. Staying up-to-date with the latest technology is imperative for all dealers. You have to know what you and your competitors are doing from an internet perspective.

Q CONSIDERING THE MARKET TRENDS AND CHALLENGES FACING THE INDUSTRY. WHAT WILL DEALERSHIPS LOOK LIKE IN THE FUTURE?

A stechnology continues to develop and progress, our business model will continue to change. The dealers who survive and win in the future will be the ones who make buying a car as easy as going to Starbucks. Making car buying simple becomes more important every day. Transparency in pricing and products will become a key factor in selling cars and building trust with customers.

David Andrews is the owner of City Auto in Memphis. Tenn., and other automotive enterprises. He previously served on the NIADA executive committee as a regional vice president, senior vice president and president-elect. He is a past president of the Tennessee Independent Auto Dealers Association (TIADA).



ABOUT COX AUTOMOTIVE

Cox Automotive Inc. makes buying, selling and owning cars easier for everyone. The global company's 34,000-plus team members and family of brands, including Autotrader®, Dealer.com®, Dealertrack®, Kelley Blue Book®, Manheim®, NextGear Capital®, VinSolutions®, vAuto® and Xtime®, are passionate about helping millions of car shoppers, 40,000 auto dealer clients across 100+ countries and many others throughout the automotive industry thrive for generations to come. Cox Automotive is a subsidiary of Cox Enterprises Inc., a privately-owned, Atlanta-based company with revenues exceeding \$20 billion.



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