

April 21, 2016

U.S. AUTO SALES EASING UP ON THE ACCELERATOR

Highlights

- U.S. auto sales have been on a tear over the last six years, reaching a record high of 17.4 million units in 2015. As a result, the industry has absorbed much of the pent up demand that had built up.
- Going forward, several factors will remain supportive for auto sales, including a solid economic backdrop and attractive financing conditions. However, there are also factors that are expected to take some steam out of the market. Recent trends suggest that consumers are holding onto their vehicles for longer, extending the trade-in or buying cycle. Moreover, new trends have emerged in recent years that could weigh on ownership rates.
- All told, we expect auto sales to reach a peak of 17.6 million units this year, before edging down to 17.3 million units in 2017. While still a healthy level, automakers cannot become complacent in the rapidly changing environment, as disruptors will continue to be a key element of the market, intensifying competition.

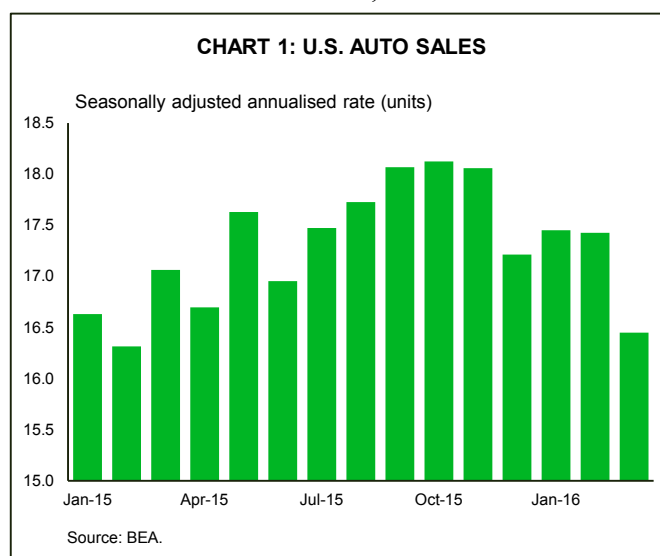
Last year, U.S. auto sales recorded their best year yet. Not only did sales hit a record 17.4 million units, but 2015 marked the sixth consecutive year of increases – a feat not seen since the data began in 1967. What's more, sales topped the 18 million unit mark in three of the last four months of the year. While the seasonally adjusted annualized rate for the first quarter of 2016 slipped to 17.1 million units, it still marked a 2.5% increase over year-ago sales. As such, American auto sales are on track to hit another record high this year.

This is certainly great news for the industry, but it has many wondering just how long this winning streak can last. In fact, there have been early signs that sales could be losing some momentum suggesting that automakers have had to work harder to keep sales propped up.

While several factors will remain quite supportive for auto sales over the next couple of years, sales will not rise forever, as the industry is cyclical by nature and prone to ebbs and flows. In our view, sales have a bit more upside this year, but will likely begin to retreat in 2017 as interest rates tick higher and pent up demand fizzles out.

Strong domestic economy to support sales

Economic and financial conditions have provided a strong backdrop for auto sales and will continue to do so in the coming years. The U.S. economy is on solid footing, with healthy growth of at least 2% expected for this year and next. Moreover, the domestic economy has been the key driver of overall growth – a trend that is likely to continue going forward. Indeed, ongoing job creation is projected to bring the unemployment rate down to 4.6% by the end of next year, while nominal employment income growth is likely to remain above 4%. Combined with rising wealth stemming from a recovery in the housing market, and stronger household balance sheets, consumers will be well-positioned to



loosen their purse strings. This certainly bodes well for big ticket items such as autos.

The financial crisis had a significant impact on the behavior of both lenders and borrowers, but access to credit, and demand for credit, has since risen dramatically, helping to prop up auto sales. Loans to subprime borrowers have picked up, which has triggered some worry about a subprime bubble in the auto space. While riskier loans have increased – with the average credit score for new vehicles falling back to 2007 levels in the final quarter of 2015 – regulations that have been put in place since the financial crisis have likely resulted in more prudent lending practices. Moreover, even with the uptick in subprime lending that has occurred in recent years, subprime loans account for a smaller share than they did prior to the recession (Chart 2), and delinquency rates remain quite subdued – particularly those 90+ days past due. At this point, we don't see too much cause for concern, especially since past experience shows that financially constrained consumers tend to keep up with their car payments, even when struggling to meet other financial obligations.

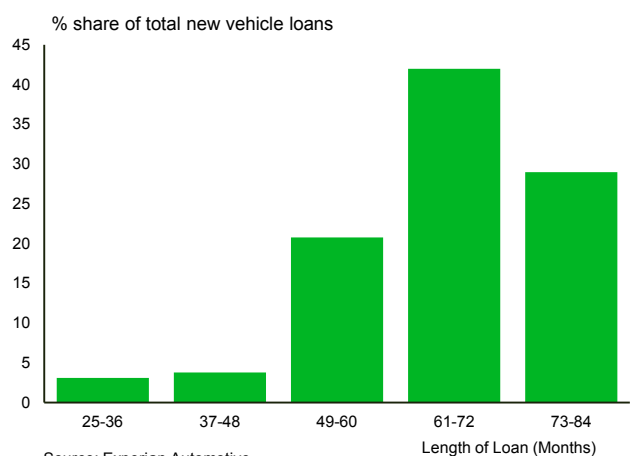
In addition to credit availability, the low cost of credit and longer loan terms has greatly improved the affordability of new vehicles. Interest rates on 48-month new car loans have been hovering around record lows of about 4%. Meanwhile, the average length of a loan has been on the rise, and now sits at 67 months. In fact, over 40% of all new vehicle loans were in the 61-72 month range in the final quarter of 2015, while almost a third were in the fastest growing 73-84 month segment (Chart 3). Together, longer loan terms and lower interest rates have lowered monthly payments, making the purchase of a vehicle less of a financial burden

CHART 2: SUBPRIME SHARE OF TOTAL AUTO LOANS ORIGINATED



Source: Federal Reserve Board.

CHART 3: LOAN TERMS LENGTHENING



Source: Experian Automotive.

for consumers. As well, after completely collapsing during the financial crisis, leasing has made a comeback, with lease penetration reaching about 30% of all new vehicle financing in the fourth quarter of 2015. Leasing can knock down the monthly payment further – by an average of \$84 per month according to Experian Automotive – providing an even more affordable option for consumers.

These financing options have also allowed consumers to purchase more expensive vehicles. Average transaction prices have been rising – up 2.2% in 2015. However, that is not entirely due to higher price tags. The shift in demand toward light trucks – with crossover SUV's and pick-up trucks recording the largest increase last year – as well as increased demand for luxury vehicles, means that consumers have been purchasing more expensive vehicles, which will ultimately raise the average price paid. Without the extension in loan terms, leasing and low interest rates, consumers may instead have opted for smaller, more affordable vehicles.

Leasing and extended loan terms are likely to continue to support auto sales going forward. However, the cost of credit is expected to rise as the Federal Reserve works to gradually normalize interest rates. After beginning the tightening cycle last December, we expect the Fed to follow through with two 25 basis point hikes this year, followed by another two 25 basis point increases in 2017. Notwithstanding, at 1.50% at the end of next year, the level of interest rates will remain quite low by historical standards. What's more, as automakers work to keep sales elevated in a competitive market, they may not fully pass on the higher interest costs to consumers. And, with longer loan terms and leasing options providing some offset to rising interest costs, monthly payments should remain quite affordable for consumers.

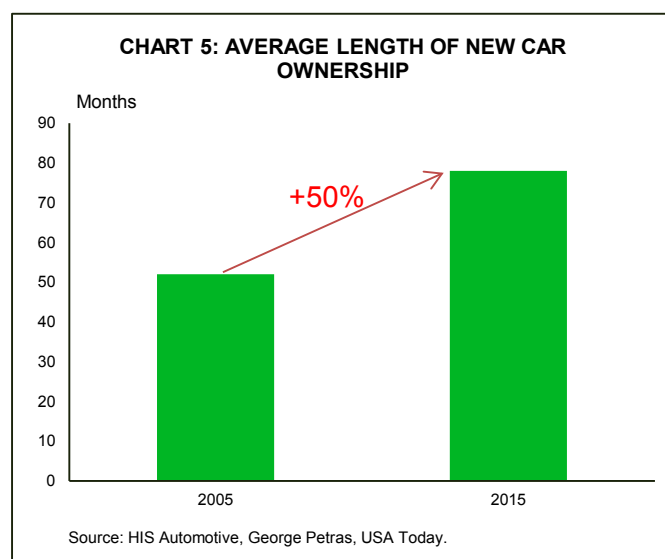
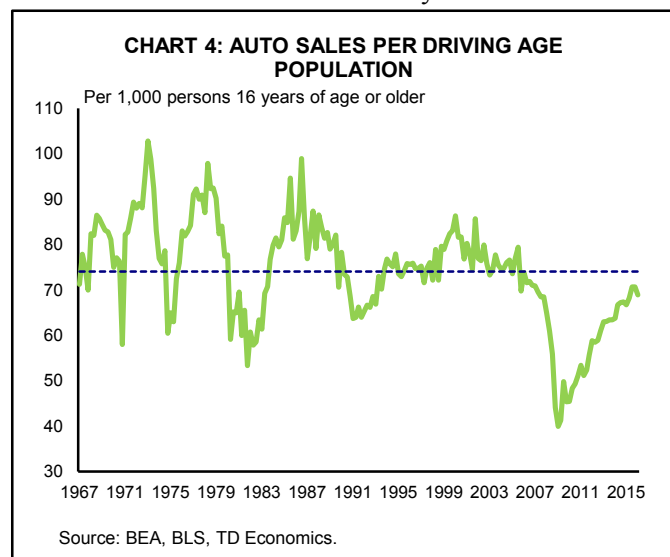
Buying cycle to stretch out

While the economic and financial backdrop will be supportive for the auto market, the six-year run in sales gains has absorbed much of the pent-up demand that accumulated during and in the aftermath of the Great Recession. Last year's gain brought the ratio of sales per driving age population to within 4.5% of the long-term average (Chart 4). Going forward, an argument can be made that the ratio may never make it back to that average – at least not on a sustained basis – as drivers are holding onto their vehicles for longer, thereby extending the length of time between new vehicle purchases. Indeed, the average length of new vehicle ownership has risen from 52 months in 2005 to 78 months last year – a 50% increase (Chart 5). There are several reasons to expect this trend to persist.

The average age of vehicles on U.S. roads is 11.4 years – up from 10.1 years during the recession. Some of the increase can be attributed to the fact that quality has improved, thereby extending the vehicle lifecycle. As such, automakers are offering longer warranties, which make consumers feel more comfortable holding onto a vehicle for longer.

Moreover, the trend toward lengthier loan terms means that consumers are tied to their vehicle for longer now than in the past – and in a negative equity position for a longer period of time as well. Some consumers may opt to exchange their vehicle for a new one before the term is up, rolling the remaining balance into a new car payment – essentially paying for a vehicle they no longer own. However, more conservative buyers will hold onto their vehicle for at least the duration of the loan, if not longer.

Another reason consumers may drive a vehicle for



longer now than in the past is the fact that the credit crisis caught many consumers off guard, and the “buy now, pay later” mentality may not be as prominent. In fact, after undergoing a massive deleveraging cycle, many consumers are likely to be more cautious in their spending and less likely to overindulge – as evidenced by the stability in the personal savings rate over the last three years.

Lastly, rising prices may drive consumers to hold onto their vehicles longer. After falling for 11 years, inflation-adjusted prices have been rising since 2009. But, vehicles also tend to be better equipped than in the past, with several options now becoming standard. This trend will only intensify, evidenced by the fact that over 20 automakers have agreed to make automatic braking standard in all vehicles by 2022 in a push to increase safety standards. As vehicles become equipped with more technology – connectivity equipment, park assist, automatic braking, etc. – the price tag is likely to increase given the cost of this technology, including sensors, cameras, and computer chips. Similarly, government mandates to improve fuel efficiency will also drive prices up, as higher efficiency comes with a cost.

New trends to weigh on ownership rates

In addition to the sating of pent up demand and the likelihood of consumers holding onto their vehicles for longer, there are some other trends underway in the U.S. that could weigh on ownership rates. There has been a notable shift toward urban center living versus the suburbs in recent years, with population growth in central cities rising at a faster pace than that of their surrounding suburbs – a stark contrast to growth trends seen in the past. This reduces the need for owning a vehicle given the proximity to amenities.

Moreover, the number of young adults living with their parents well into adulthood has been on the rise over the last decade, increasing the ability of households to share vehicles rather than each family member having to own one. This latter trend is likely to level off or even fall somewhat as the job market improves and young adults gain a stronger footing their careers. Accordingly, household formation is likely to pick up in the coming years, which would be supportive for auto sales. However, the increased desire to live in cities rather than the suburbs is expected to have more staying power, providing some offset.

While baby boomers moving back to the city after their nests have been emptied have certainly contributed to this shift in preferences, millennials have also played a large role, as they have chosen to delay some of the significant milestones of adulthood. The age at which people are deciding to get married and start a family – which typically spurs the move to the suburbs – is on the rise. The average age for marriage is now in the late-20's, up from the early-to-mid-20's in the 1980's. Moreover, the average age of a woman having her first child has been trending up over the last three decades, and reached a record 26.3 years in 2014, up from 22.7 years in 1980. In addition, there has been a rise in the number of people who don't have children at all, with fertility rates sitting at their lowest in thirty years. Many people – particularly those living in or close to urban centers – find that they don't need a vehicle until they have kids, suggesting that as people decide to have children later in life (or not at all), the demand for vehicles will follow suit.

Car sharing is also gaining traction, with some companies offering members the opportunity to use a shared vehicle akin to a short-term rental, while others operate more like a taxi service. While far from dominating the industry, these sharing services provide consumers with an alternative to owning a vehicle without hindering their mobility. These services are likely to become more popular as they become more established, and could take a chunk out of demand for new autos from people who would otherwise own a vehicle. That said, despite the rising uptake of such programs, we suspect that car sharing won't dominate the industry, with the majority of automobile owners continuing to own a vehicle. Moreover, car sharing companies will need to own a fleet of vehicles, which will offset at least some of the lost demand.

Used car market to provide some competition

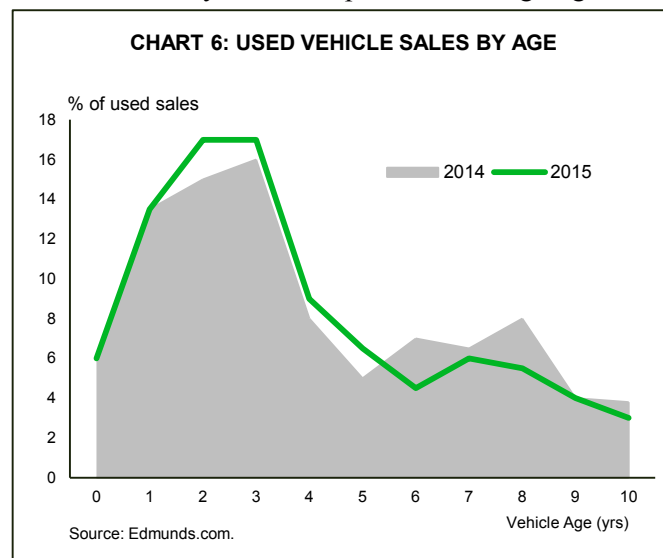
As economic conditions improved following the Great Recession, demand for used vehicles lagged behind that of new vehicles. Part of this dynamic can be explained by the

improvement in household balance sheets, financing conditions and confidence, but lack of supply for used vehicles coming out of the recession also played a key role. This limited supply also led to higher prices for used vehicles, which in turn, shifted some demand toward new vehicles as well.

With leasing having resumed a few years ago, the return of off-lease vehicles to the market has helped increase the supply of young, pre-owned vehicles dramatically. And, with a lot of the newer technologies that have attracted consumers to new car showrooms in recent years now available in used vehicles, demand for these pre-owned vehicles have picked up. Indeed, the influx of lease returns reduced the average age of used vehicles sold to 4.4 years in 2015, with vehicles three-years old or younger accounting for over half of total sales. The trend is set to continue this year, as lease returns are expected to rise by about 25% over 2015 levels. While increased supply has begun to depress the value of 3-year old vehicles, the average price paid for a used vehicle has risen due to the shift toward younger, higher valued autos.

Going forward, as off-lease vehicles continue to boost supply of younger used autos, prices are likely to slide, drawing in more demand. Moreover, some automakers are starting to offer leasing on used vehicles (that are Certified Pre-Owned – typically meaning they are inspected, certified by seller, 5-years or younger and have an extended warranty), making them even more cost effective. Hence, the used car market will provide some competition for new vehicle sales over the next few years.

Overall, the lack of pent-up demand, falling ownership rates, rising interest rates and competition from the used car market will likely limit the upside for sales going forward.



However, economic and financial conditions should still propel sales to a record high of 17.6 million units this year, before these dampening factors take some steam out of the market thereafter.

Disruptors disrupting

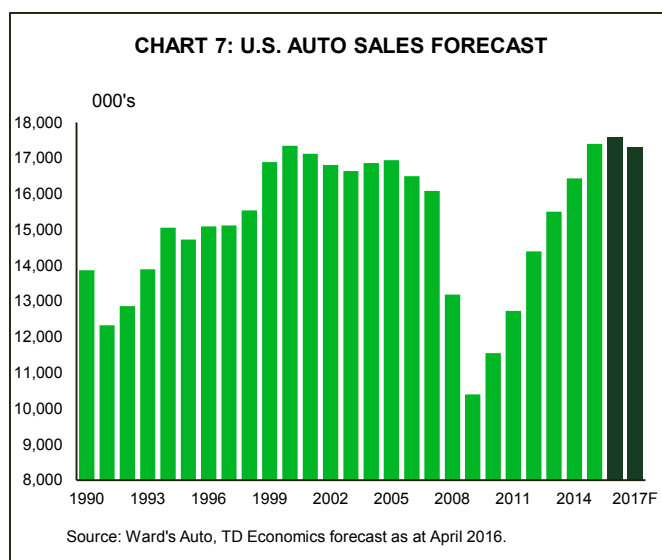
While automakers are certainly enjoying the run up in sales, they cannot become complacent. Disruptors are prevalent in the auto industry, and they are only going to intensify as technology advances. There has been much chatter about self-driving vehicles, which is arguably one of the largest disruptive technologies the industry has seen in decades, as it could change the entire landscape of the market. While prototypes exist and are being tested on public roads, driverless cars are far from becoming mainstream. There are still imperfections that need to be ironed out with the technology, and regulations need to be put in place. However, many of the features embedded in these autonomous vehicles are already making their way into the vehicles being sold today. Hence, vehicles are becoming automated, but not yet autonomous. Automakers have to continually work to integrate these technologies into their vehicles in order to remain competitive and succeed in the market.

Fuel efficiency will also be a challenge for automakers as they work to meet government mandates. The uptake of alternatively powered vehicles remains slow, with the higher cost and limited range key barriers for some consumers. Lower gasoline prices seen over the last 18 months also don't help. However, advances in the energy efficiency of new internal combustion engines should lead to increased demand for new vehicles – particularly if gas prices rise again – as consumers trade-in older, less fuel efficient models.

Similarly, disruptive technologies that enable automobiles to become 'connected' – despite posing some challenges due to cybersecurity issues – should support auto sales in the future. Indeed, being connected at all times has become a lifestyle for most, particularly the millennial generation. And having the ability to stay connected while on the go is becoming a necessity for many. With vehicles becoming more personalized, consumers will be less likely to want to share their car with anyone else, supporting demand for new vehicles. Hence, this is one factor that will limit demand for car sharing services mentioned earlier.

Bottom line

U.S. auto sales have staged an impressive comeback over the last six years. But, after such a strong run, there likely



isn't much more gas in the tank. Sales will continue to be supported by a healthy economy, attractive financing options and a host of new technologies that will entice consumers to hit showrooms. However, rising interest rates – albeit gradual and to below pre-recession norms – lack of pent-up demand, declining ownership rates and competition from the used vehicle market will limit the upside.

We suspect that auto sales will extend the winning streak this year, reaching a peak of 17.6 million units, before edging down to 17.3 million units in 2017. At over 17 million units, most automakers would agree that this is a great performance. However, anytime sales begin to plateau or decline, automakers tend to do what they can to eke out extra sales at the expense of their competitors – typically in the form of higher incentives and lower margins.

Given that they are coming out of the biggest downturn on record, automakers have learned a thing or two about surviving in a world of falling sales. Chief among them is inventory management, with manufacturers having become much better at matching production to sales. This is something that will likely take place as sales slow, helping to prevent the need for large incentives simply to move vehicles off lots.

Overall, automakers are likely to enjoy sales around the 17 million unit mark for a few years still, which would be the best sales streak since the turn of the century. But, a longer-term norm for sales is likely closer to the mid-16 million unit range, as the recent trek above 17 million is still satisfying pent-up demand that was built up during the recession. It is up to automakers to manage this move to a more sustainable level in a way that doesn't lead to a sharp correction in sales.



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