



MORNING BRIEFING

January 18, 2018

Autonomous Auto World

See the [collection](#) of the individual charts linked below.

(1) Showing off auto technologies. (2) Hurricanes can be good for auto sales. (3) New cars competing with lots of cheaper used ones. (4) Driverless cars will arrive soon. (5) Wirelessly networked cities. (6) The big debate: will driverless cars decrease or increase traffic congestion? (7) We are all Ubers now. (9) Amazon on wheels.

Technology: Driving Change. Last week, the Consumer Electronics Show (CES) produced lots of news about technology, some of which centered on automobiles. This week, Detroit is hosting the North American International Auto Show, where there's tons of news about the latest automobiles, some of which centers on technology. The auto industry finds itself balancing the need to show new cars and trucks that will grace showrooms this year with its focus on electric and autonomous vehicles that may drive the industry's future. I asked Jackie to have a closer look. Here's what's in store for the industry both today and tomorrow:

(1) *Spiking sales.* The auto industry wrapped up 2017 in much better shape than expected. Sales in the fall spiked as consumers replaced cars ruined by the rough hurricane season. December motor vehicle sales totaled 17.9 million units (saar), following November's 17.5mu pace ([Fig. 1](#)). The spike reversed the industry's sales slump that started in January 2017 and lasted through August, when sales fell to a low of 16.1mu (saar).

Before hurricanes destroyed cars this fall, the sales slump was expected to continue as new auto sales were to face tough competition from cars for sale after coming off three-year leases. The average price gap between new cars and three-year-old leased cars widened to \$14,200 last year, up from \$10,500 in 2010, the 1/8 *WSJ* [reported](#). The gap is expected to widen further as 12% more vehicles come off lease in 2018 than did in 2017.

Now the question is whether auto sales will hold onto their post-hurricane gains or whether they will return to their sluggish summer ways. On Tuesday, GM sounded a positive note. The company [expects](#) 2017 earnings per share at the high end of its \$6.00-\$6.50 forecast. That's up from company guidance in October that EPS would come in in the middle of the range, implying GM had a stronger Q4 than expected. The auto company also forecasted results this year would be "largely in line with expected 2017 results." The forecast is far more optimistic than analysts' estimates for 2017 earnings of \$6.29 a share and 2018 EPS of \$5.19.

Ford's forecast for this year isn't as optimistic. The company expects operating earnings to fall to \$1.45-\$1.70 a share this year, down from the \$1.78 it estimates it earned in 2017. Ford blamed the decline on higher commodity costs and adverse exchange rates, and plans to reduce the number of passenger cars it sells while increasing the number of more-profitable SUVs and trucks it offers. The low end of Ford's 2018 forecast, delivered Tuesday night, is below the \$1.59 a share analysts were targeting.

The S&P 500 Automobile Manufacturers stock index (GM and F) fell in the first half of 2017 and rallied in the back half, reflecting the industry's Q4 sales spike. For the year, the index rose 10.6%, almost half

the S&P 500's 19.4% gain ([Fig. 2](#)). Expectations are quite low for the manufacturers, with revenue expected to fall 0.8% y/y over the next 12 months and earnings forecasted to drop 7.4% over the same period ([Fig. 3](#)). At 7.6, the industry's forward P/E multiple is in the middle of the 5.0-10.0 range it has kept within since 2010 ([Fig. 4](#)).

(2) *Looking ahead*. Despite uncertainty about sales over the next 12 months, there are many exciting developments in the auto industry, including the advent of electric and autonomous vehicles. GM, Alphabet's unit Waymo, and Aptiv (formerly "Delphi Automotive") appear to be in the lead when it comes to developing driverless cars.

Waymo has had autonomous cars in Phoenix driving volunteers who sit behind the wheel but don't steer. In October, its autonomous minivans started driving around with employees in the back seat and no one behind the wheel. Up soon: putting volunteers in the back seat of the autonomous minivans, with no one behind the wheel.

"Part of what we've been trying to do with our technology is make it completely autonomous and not reliant on any new or incremental infrastructure or infrastructure change," [explained](#) Waymo's CEO John Krafcik at the LA Auto show in November.

GM, which has been testing autonomous vehicles in San Francisco, has applied to the National Highway Traffic Safety Administration for permission to deploy a car without a steering wheel or pedals by next year. The company argues that its driverless cars have encountered more challenges than others' driverless cars because GM is testing the cars in San Francisco's tougher driving environment, reported a 1/12 [article](#) in The Verge.

At the CES, Lyft was offering rides to attendees in cars that use Aptiv's autonomous driving system. There was still someone in the front seat monitoring the car's progress. But Aptiv's CEO Kevin Clark said autonomous cars would be available this year, according to a 12/4 Bloomberg [article](#).

Clark predicted the expense of self-driving software and equipment would mean the first autonomous vehicles would be used by delivery vehicles and robot taxis, looking to eliminate the cost of drivers. Clark didn't see a market for individual users of autonomous cars developing until 2025, when he predicts the cost will have declined to \$5,000 from today's \$80,000 to \$150,000 price tag.

(3) *Smarter cities*. Ford's [autonomous](#) offering will be available for commercial operation in 2021. Ford CEO Jim Hackett's [presentation](#) at CES focused on autonomous cars in smart cities. Hackett and his team explained how sensors in cars, buses, trains, signs, bikes, traffic signals, etc. all would communicate to improve life in cities.

In such an environment, traffic signals can be changed to keep traffic flowing and reduce congestion and pollution. Traffic can be routed around sporting events or the way can be cleared so emergency vehicles can arrive at their destination faster. Drivers can see where there are parking spots, eliminating the need to endlessly circle until a spot frees up.

Ford believes smart cities will have fewer parked cars and more trees and benches. It envisions a world where an unmanned vehicle could pick up packages from two different small businesses and deliver those items to two different places, doing so at lower cost and more efficiently than can be done today. In smart cities, ridesharing becomes easier and commuters can switch easily between different forms of transportation and arrive at work more quickly.

(4) *A contrarian view*. The great thing about this developing world is that no one quite knows how it will

all play out. Eran Shir is the founder of Nexar, a company that makes car dashcams that film rides and collect information. His [blog posts](#) turn many of the assumptions about the autonomous vehicle's impact on the city on their head. Most assume cities will continue the recent trend of getting more congested. Shir questions whether cities might empty out as autonomous vehicles make longer commutes more productive and enjoyable, allowing people to live further from city centers.

The number of grocery stores and post offices in cities might decline if companies like Amazon develop what are essentially vending machines on wheels, storing and delivering frequently requested items, Shir speculates. If commuters take their autonomous car into the city, might they opt not to park it but rather let it drive the city streets, earning money by picking up passengers while owners are at work? If many people "rent" out their cars during the work day, will there still be a need for Uber, Lyft, or taxis? If everyone's cars are circling town, Shir wonders, might city streets get more congested rather than less so, perhaps leading to road usage charges?

Will truck-stop towns and rest stops dwindle in number if autonomous long-haul trucks come into existence? Will people stop taking short commuter flights between cities, Shir questions, opting instead to hop in an autonomous car? Along those lines: If RVs and cars pulling Airstream trailers become autonomous, might communities of roving retirees riding around in their homes replace Florida retirement communities as the norm?

If all this talk of the future makes you a little queasy, have no fear: You'll have a few more years before these issues come to the fore. None of the hot-shot new autonomous vehicles won the car of the year at the Detroit Auto Show. The winner: Honda's Accord.

CALENDARS

US. Thurs: Housing Starts & Building Permits 1.280mu/1.300mu, Jobless Claims 250k, Philadelphia Fed Manufacturing Index 25.0, Weekly Consumer Comfort Index, EIA Natural Gas Report, EIA Petroleum Status Report. **Fri:** Consumer Sentiment Index 97.0, Baker-Hughes Rig Count, Quarles. (*Wall Street Journal* estimates)

Global. Thurs: China GDP 1.7%q/q/6.7%y/y, China Retail Sales 10.2% y/y, China Industrial Production 6.1% y/y, Australia Employment Change & Unemployment Rate 15k/5.4%. **Fri:** UK Retail Sales Ex Fuel 2.6% y/y. (DailyFX estimates)

STRATEGY INDICATORS

S&P 500 Earnings, Revenues & Valuation ([link](#)): Last week saw S&P 500 consensus forward revenues and earnings rise to new record highs. The forward profit margin forecast rose 0.1ppt for a third straight week to a record high of 11.4%. Prior to the passage of the Tax Cut & Jobs Act (TCJA), the profit margin had been steady at 11.1% since October, which was the highest since September 2015 and up from a 24-month low of 10.4% in March 2016. Forward revenue growth for the S&P 500 rose 0.2ppt to 5.6%, and remains a tad below the 10-month high of 5.7% at the end of November. Those readings compare to 5.8% in January 2017, which was the highest since May 2012, and a cyclical low of 2.7% in February 2016. Forward earnings growth jumped to 1.5ppts to 13.8%, and is the highest since September 2011. That compares to 11.1% prior to the passage of the TCJA, and a cyclical low of 4.8% in February 2016. Financials was a big contributor to the w/w improvement in forward earnings growth; the sector surged 4.3ppts to 23.8%. Energy's contribution to forward growth peaked at the start of 2017. Looking at last week's results, the S&P 500 ex-Energy's forward growth was 5.2% for revenues and 12.7% for earnings. The S&P 500 ex-Energy forward profit margin rose to a record high of 12.0%, which is up from 11.7% before the TCJA. The forward P/E was unchanged at

18.4, but remains near late December's 16-year high of 18.5 a week ago and compares to the 15-month low of 14.9 in January 2016. The S&P 500 price-to-sales ratio rose 0.2ppt to a record high of 2.10, and was at a record high of 2.17 on an ex-Energy basis. The ex-Energy forward P/E was unchanged w/w at 18.1, but remains close to late December's 14-year high of 18.2.

S&P 500 Sectors Earnings, Revenues & Valuation ([link](#)): Consensus forward earnings forecasts rose last week for all 11 sectors, and forward revenues rose for all but four: Consumer Staples, Real Estate, Telecom, and Utilities. Forward revenues and earnings are at or around record highs for 5/11 sectors: Consumer Discretionary, Consumer Staples, Health Care, Industrials, and Tech. Energy's forward revenues and earnings are ticking higher now, but remain near their lowest levels since the spring of 2017. Forward P/E ratios remain near cyclical highs for all sectors except Energy, Health Care, and Telecom. Energy's forward revenues and earnings are improving from cyclical lows in early 2016, but its valuations remain elevated; its P/S ratio of 1.39 compares to a record high of 1.56 in May 2016, and its P/E of 24.9 is down from a record high of 57.5 then. Higher y/y margins are expected in 2018 for all but Real Estate and Telecom, but Real Estate earnings includes gains from property sales and typically improve as the year progresses. Financials' forecasted forward profit margin surged 0.6ppt for a second straight week, rose 0.2ppt for Industrials and Telecom, and edged up 0.1ppt for five other sectors: Consumer Discretionary, Consumer Staples, Energy, Tech, and Utilities. Here's how the sectors rank based on their current forward profit margin forecasts: Information Technology (21.4%), Financials (17.8), Real Estate (17.0), Telecom (11.6), Utilities (11.5), S&P 500 (11.4), Materials (10.8), Health Care (10.7), Industrials (9.5), Consumer Discretionary (7.7), Consumer Staples (6.9), and Energy (5.6).

US ECONOMIC INDICATORS

Industrial Production ([link](#)): Headline output in December surprised on the upside as a weather-related surge in utilities output pushed it up to a new record high—surpassing the previous record high, posted in November 2014, by nearly a full percentage point. Production rebounded 0.9% (more than double the expected 0.4% gain) last month, following a downwardly revised -0.1% loss in November—first reported as a 0.2% gain, while October's advance was revised up for the second time to 1.8%, double its initial estimate of 0.9%. Cold weather boosted utilities output by 5.6% after a 3.1% decline in November, while mining output rose for the fourth month, by 1.6% m/m and 5.1% over the period. Manufacturing output finished 2014 with a four-month gain of 2.0% to a new cyclical high, more than reversing the 0.9% decline over the prior four-month period. It accelerated 6.8% (saar) during Q4, after a 2.0% decline during Q3, posting its best quarterly performance since Q2-2010. Both capital (9.7%, saar) and consumer (4.6) goods output posted robust gains last quarter, with the former boosted by a double-digit gain in output of industrial equipment (14.4), followed by gains of 5.4% and 3.4% in production of transit and information equipment, respectively. The quarterly gain in consumer goods production was led by durable goods (8.2), which was more than double the growth in nondurable goods (3.7) production.

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