

INDUSTRY INSIGHTS:

Automotive

Winter 2018 Review



Highlights

The auto industry showed signs of a peak in sales in 2017, while earnings and stock prices continued to increase. The industry is in the midst of a race to develop revolutionary new technology that could change the industry dramatically over the next decade.

Global light vehicle sales increased 2.3% in 2017. However, in the United States, light vehicle sales slipped slightly in 2017, down to 17.2 million from 17.8 million in 2016, snapping a 7-year stretch of increasing light vehicle sales. In December 2017, U.S. light vehicle sales reached an approximately 17.8 million-unit seasonally adjusted annual rate (SAAR)¹, offering hope that vehicle sales will likely remain steady into 2018.

Interest rates on consumer installment loans for new automobiles reached 4.81% in November 2017, up from 4.45% in November 2016, providing a headwind for the industry².

In 2017, auto production and sales in China were up 2.89% and 3.04%, respectively, over 2016³.

Europe is a bright spot, as new passenger registrations in Europe increased 3.4% year-over-year (y-o-y) in 2017⁴.

M&A activity in the automotive sector dropped nearly 42% in 2017, from 139 deals in 2016 to 80 in 2017⁵.

Public company equity performance in the Automotive Supplier and Automotive OEM sectors trended upward in 2017, rising 32.0% and 19.4%, respectively⁵.

New technologies, including autonomous vehicles, ride-hailing/sharing and electrification, dominated headlines and have the potential to revolutionize the industry.

2017 BY THE NUMBERS



2.3% increase in global light vehicle sales in 2017⁶



In 2017, U.S. light vehicle sales slipped slightly to 17.2 million¹



3.4% y-o-y increase in new passenger registrations in Europe in 2017⁴



In 2017, China's auto production and sales were up 3.04% and 2.89%, respectively, y-o-y³

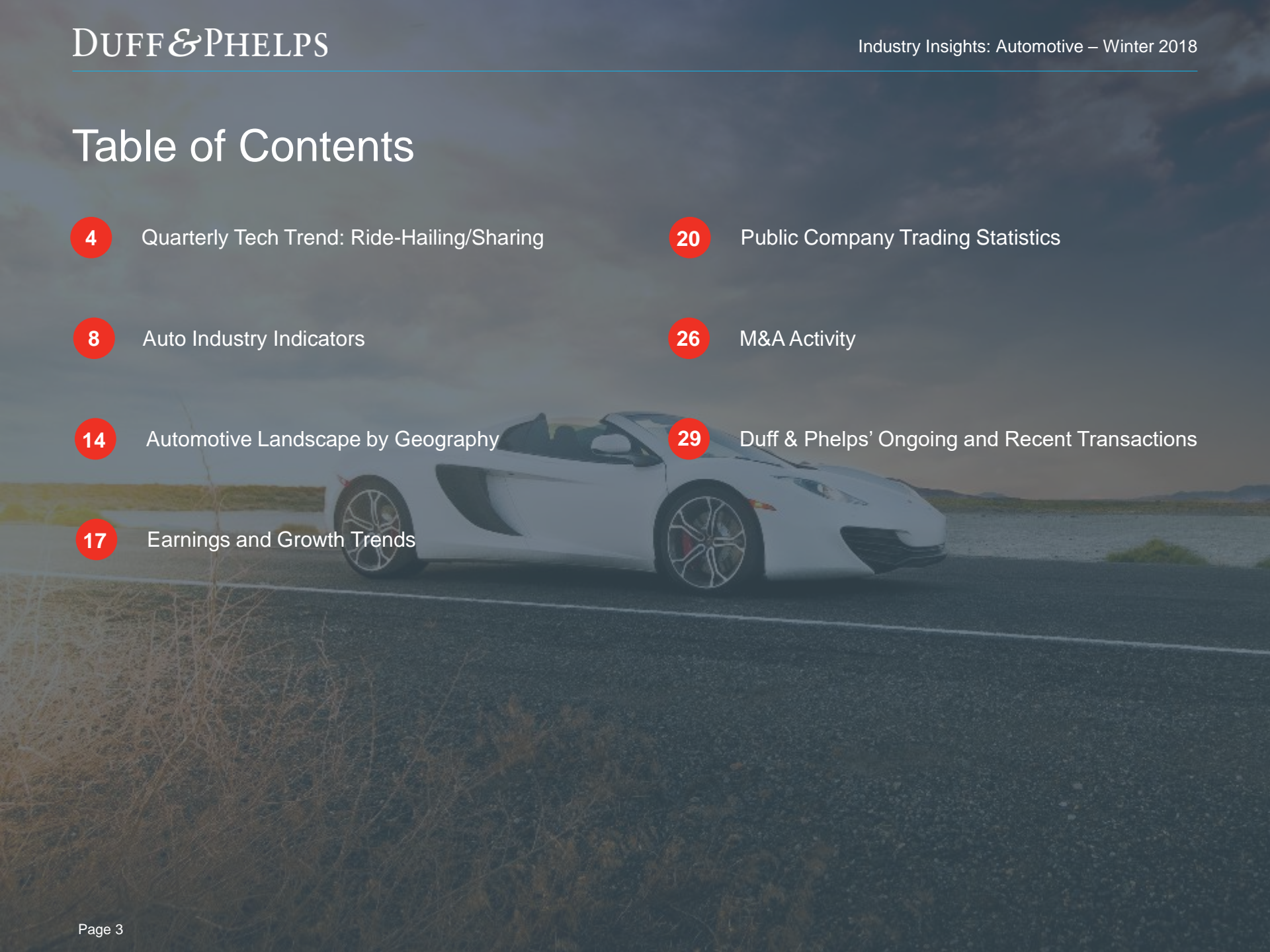


19.4% increase in Duff & Phelps' market-weighted index of automobile original equipment manufacturers (OEMs) over the past 12 months⁵



2+ million Uber and Lyft drivers
40+ million Uber and Lyft passengers⁷

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A white sports car, possibly a McLaren, is parked on a paved road that curves along a body of water. The background shows a hazy, overcast sky and distant hills. The car is the central focus of the image, with its sleek design and open-top configuration clearly visible.

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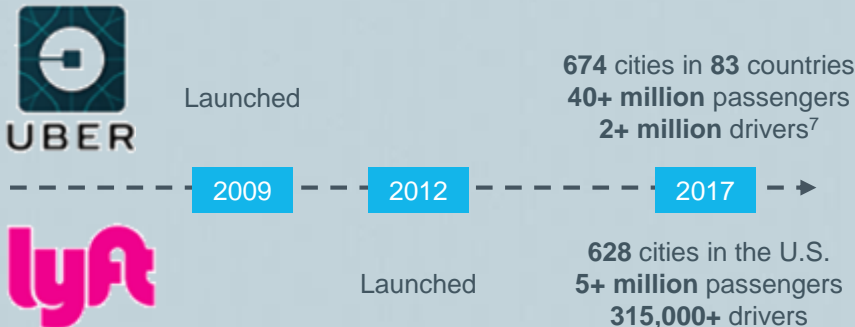
Quarterly Tech Trend: Ride-Hailing/ Sharing ●●●●

Ride-hailing/sharing offers transportation services combined with technology, using mobile apps to allow passengers easy access to transportation. Ride-hailing/sharing companies compete with the traditional cab model via convenience, reduced prices and lower overhead costs. With mobile apps, companies allow their customers to choose their ride, pickup location and whether they want to share the vehicle and fee with another passenger. Direct access to drivers through GPS-based apps eliminates the drivers' hunt for passengers and maximizes efficiency with regard to time and mileage⁸.

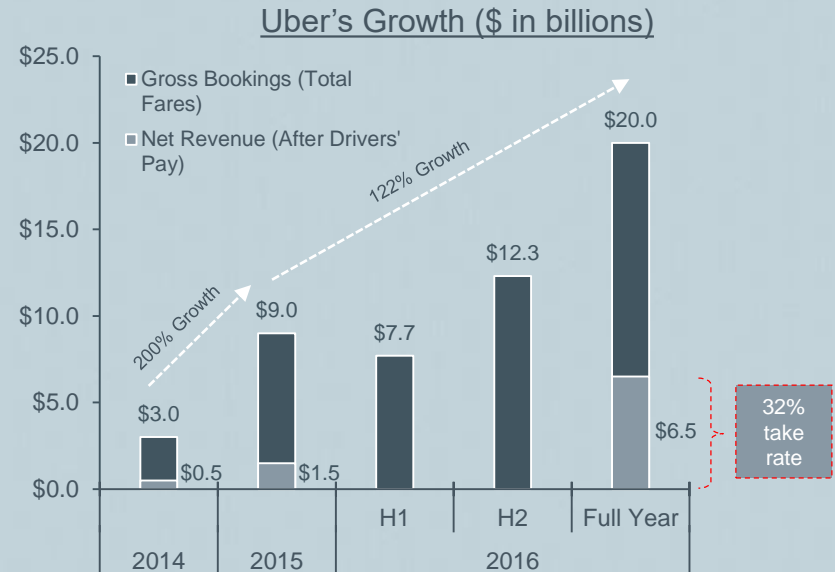
In some metropolitan areas, transit agencies are partnering with companies like Uber and Lyft to enhance their public transport systems in underserved areas. In June 2017, CapMetro in Austin, Texas began testing an on-demand shared van service utilizing an app developed by Via Transportation, Inc. More cities are expected to launch similar systems in 2018⁹.

City politics, though, present risks for the ride-hailing/sharing universe. Unionized and city-regulated cab services dislike the competition and ride-share drivers remain unhappy with their status as nonemployees. In September, Uber pulled itself out of both London and Quebec, insisting that its drivers be treated as independent contractors rather than employees entitled to minimum wage and worker benefits¹⁰.

Facts and Figures



Despite controversy, Uber's released financials display strong growth through the end of 2016, suggesting further growth may come.



Source: "Caution Ahead: Uber's Financials Reveal Staggering Growth But Raise Many Questions." Forbes. April 15, 2017.

Quarterly Tech Trend: Ride-Hailing/ Sharing ●●●

Private, ride-hailing/sharing companies have received funding and interest from many of the same investors, as they believe the future winner will compensate generously for losses from the others. The space is dominated by Uber and its North American rival Lyft. Recent news confirms a \$1 billion deal between Lyft and Alphabet, whose Waymo partnered with Lyft in May to test its self-driving vehicles after suing Uber for allegedly stealing trade secrets during their partnership^{12,13}. After a number of scandals earlier in 2017, Uber appointed a new CEO, Dara Khosrowshahi, former CEO of Expedia, in late August and appears to be recovering from the negative news cycles¹⁴.

First Research suggests implementing mobility strategies like ride-sharing services and trip-planning technologies will help auto companies generate more per-car profit even if overall car sales drop⁸. In early 2018, GM announced plans to launch a fleet of ride-hailing cars without steering wheels starting in 2019¹⁵. With this trend on the horizon, McKinsey & Company still expects overall profit to increase, predicting that growth in Asia and the high required replacement rate of shared cars will drive auto sales to outpace the disruption from ride-share services¹⁶.

Ride-hailing/sharing players are involved in autonomous vehicle development. Uber is currently developing its own technology, while Lyft has partnered with Waymo, General Motors Co., Tata Motors Ltd. and NuTonomy Inc.

OEMs investing in the ride-hailing/sharing trend include Toyota-Uber, Volkswagen-Gett, GM-Lyft, which launched Maven in the spring of 2017, and Ford, which acquired Chariot from Ford Mobility Services and launched the program in NY in 2017¹⁷.

Uber was last valued at **\$48 billion** in a deal led by Softbank to acquire 17.5% of the company's shares, representing a discount to a previous 2017 valuation of **\$68 billion**¹⁸.

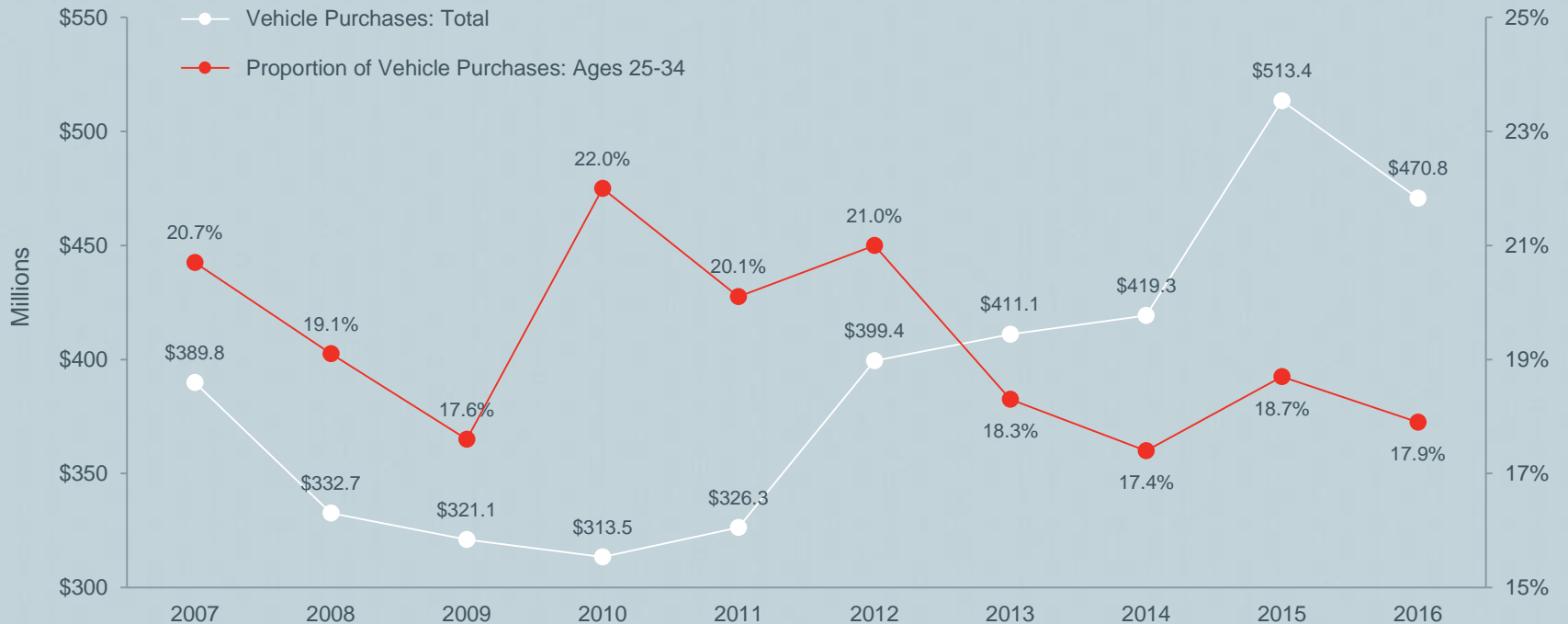
Lyft was last valued at **\$11 billion** in the latest round of investing led by Alphabet, up from its April 2017 valuation of **\$7.5 billion**¹³.

Quarterly Tech Trend: Ride-Hailing/ Sharing

While consumer expenditures on vehicles have increased since 2012, the proportion of vehicle purchases by those between ages 25 and 34 has decreased since 2012¹⁹.

The chart on the subsequent page provides evidence that millennials are utilizing ride-hailing/sharing as the replacement to purchasing a car.

Millennial Trends: Vehicle Purchases



Source: "Table 57. Age of Reference Person: Shares of Annual Aggregate Expenditures and Sources of Income, Consumer Expenditures Survey," U.S. Bureau of Labor Statistics

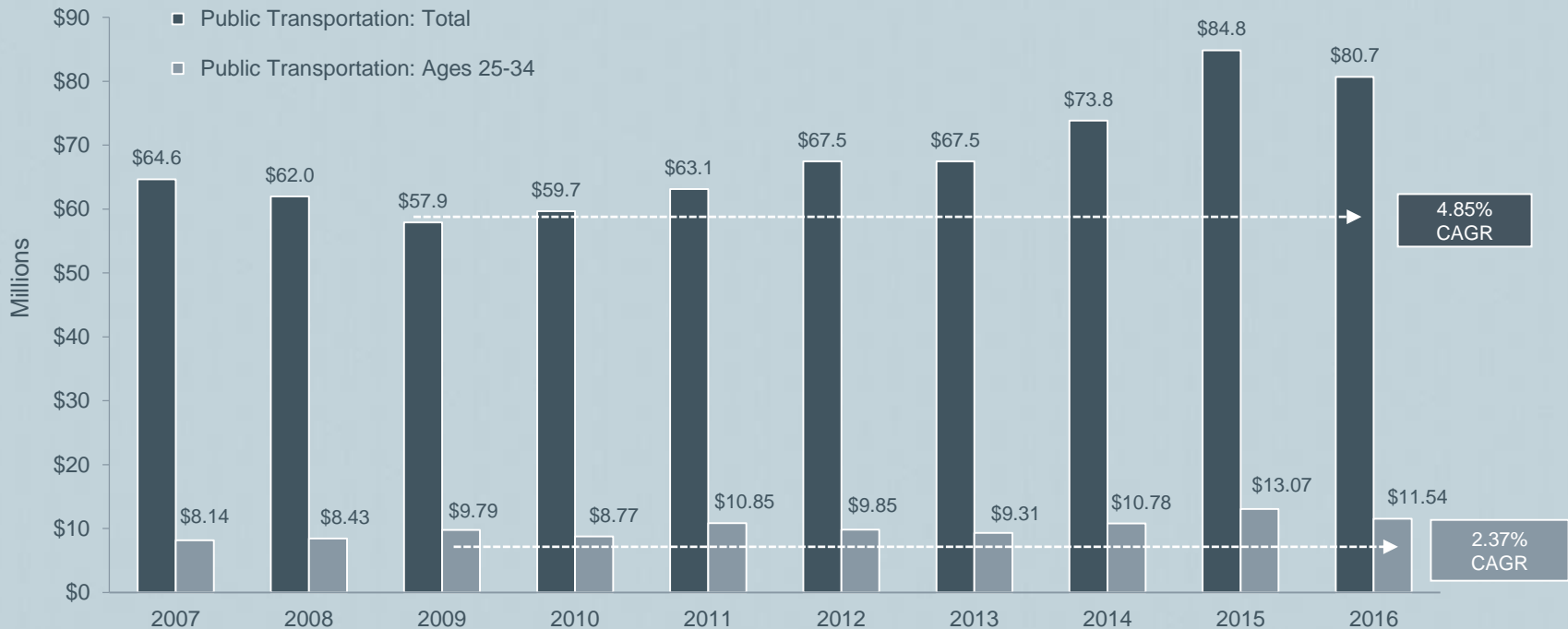
Quarterly Tech Trend: Ride-Hailing/ Sharing ●●●

Compared to total spending on public transportation, spending on public transportation by those between 25 and 34 years of age has remained relatively flat since the trough in 2009.

Millennials are purchasing fewer cars but are not utilizing more public transportation, suggesting they are relying more on other transportation services such as ride hailing/sharing.

As evidenced by their investments in and partnerships with ride-sharing companies, auto OEMs are racing to make sure they are not left behind.

Millennial Trends: Public Transportation



Source: "Table 57. Age of Reference Person: Shares of Annual Aggregate Expenditures and Sources of Income, Consumer Expenditures Survey." U.S. Bureau of Labor Statistics

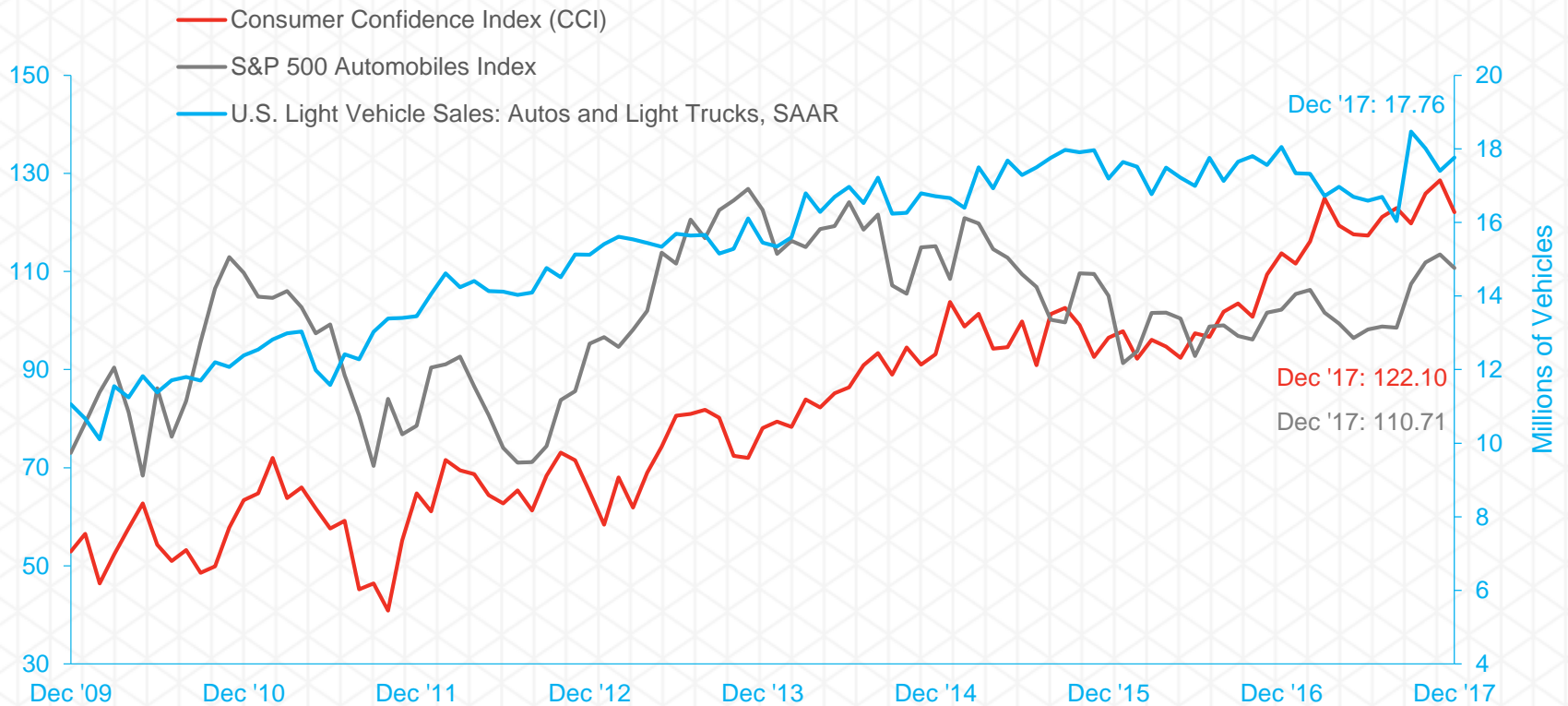
Auto Indicators



In December 2017, the Consumer Confidence Index (CCI) declined slightly from its 17-year high in November, but is still up 7.4% from a year ago²⁰. The S&P 500 Automobiles Index also increased. It hit 113.45 in December 2017, which was the highest peak since 2015⁵.

In December 2017, U.S. light vehicle sales fell to 17.76 million vehicles, slightly below December 2016 sales¹. Meanwhile, auto loan balances and originations have continued their rise since 2011 along with the CCI. Debt balances on auto loans in 2017 reached \$1.22 trillion for the year, up 5.5% from the previous year²¹.

Consumer Confidence



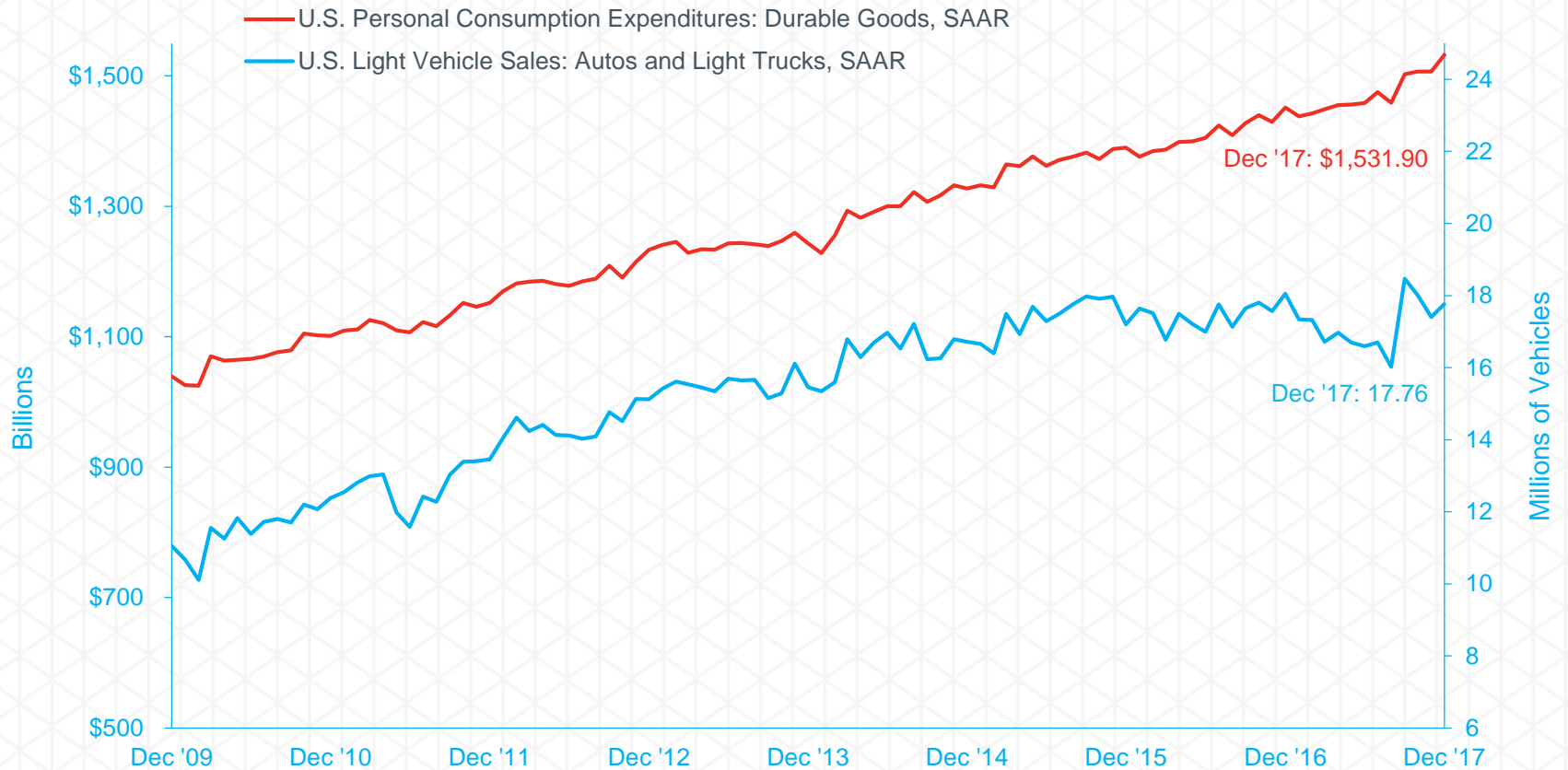
Auto Indicators



U.S. consumer spending has seen a relatively steady increase since late 2013. Expenditures on durable goods reached a record level of \$1,531.90 billion in December 2017⁵.

The rising trend in auto sales has slowed compared to overall durable goods spending. September 2017 saw a big push after an 8-month decline, but at year end sales fell back down to levels seen a year ago¹.

Consumer Spending



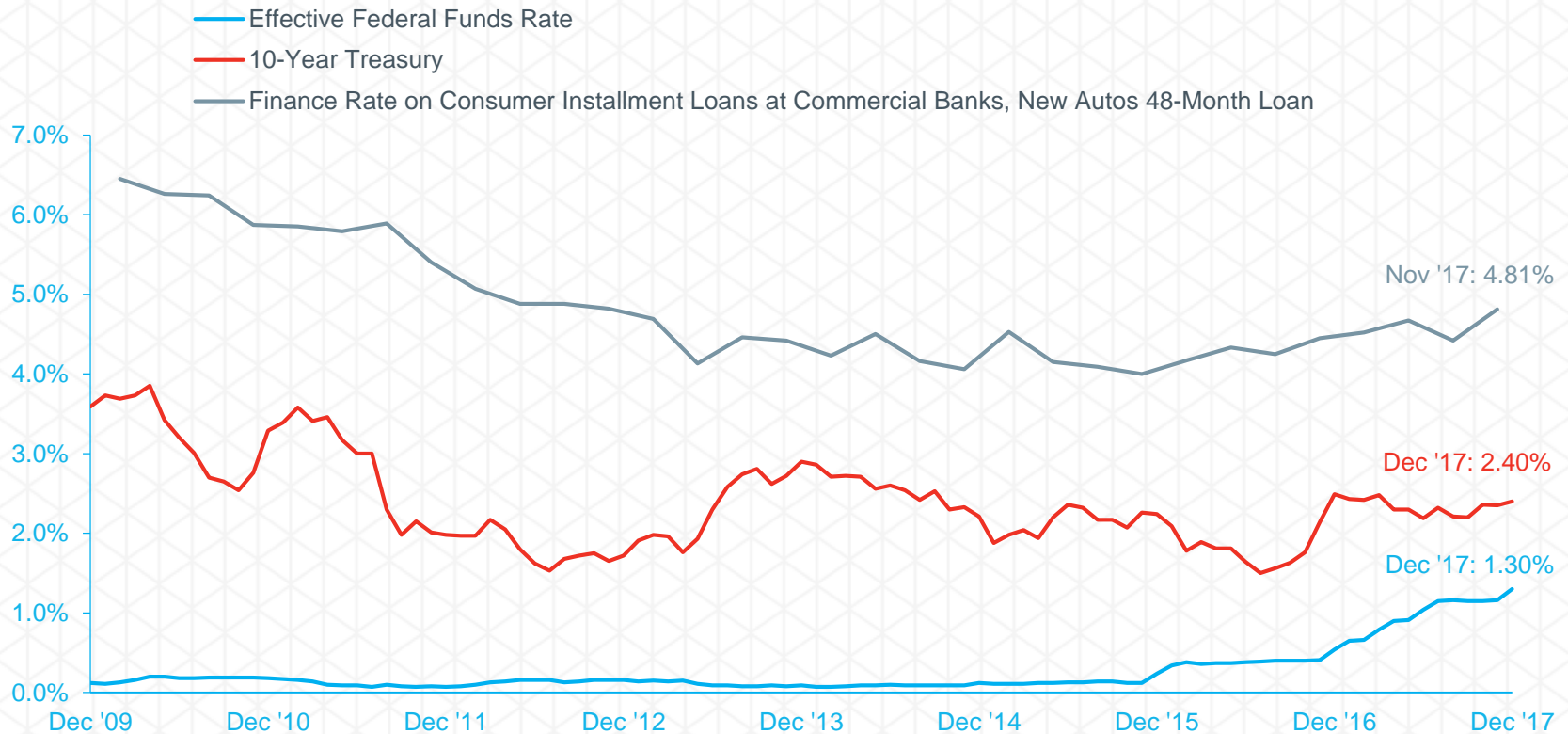
Auto Indicators

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As most consumers lease or buy cars with loans, increases in interest rates can reduce consumer ability to buy vehicles and lower auto sales volumes. Low interest rates help drive car sales.

As the benchmark federal funds rate has continued to rise since 2015, car loans stand to become more expensive. Finance rates on new auto loans have followed suit, reaching 4.8% in November 2017, the highest since February 2013². The gradual rise since 2015 has complemented a modest rise in delinquency rates, which reached 4.1% of auto loan balances in Q4 2017²¹.

Key Interest Rates

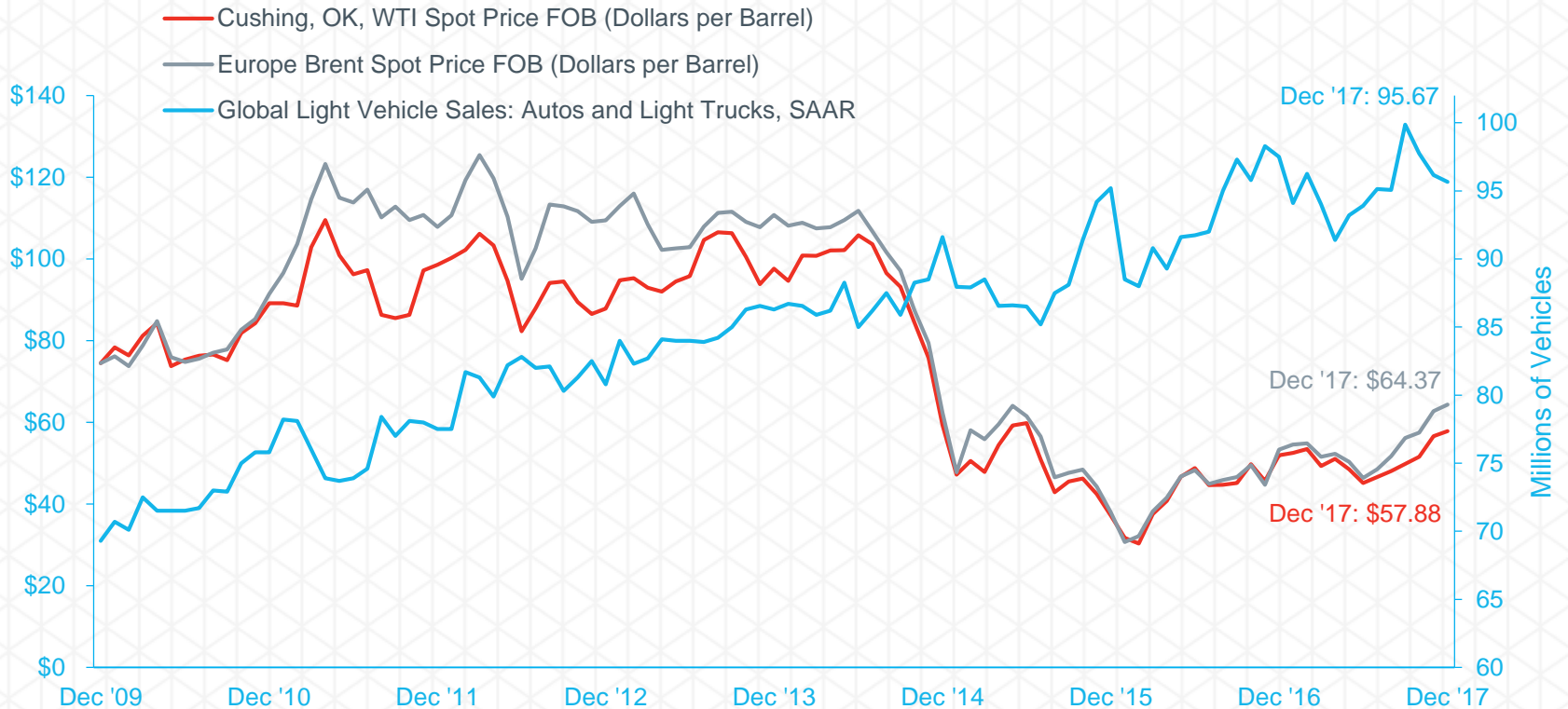


Auto Indicators



Crude oil prices have steadily risen since early 2016. In December 2017, the West Texas Instrument (WTI) spot price averaged \$57.88 per barrel and the Brent spot price averaged \$64.37 per barrel²². Oversupply, largely due to growth in U.S. production, and the decision by Organization of the Petroleum Exporting Countries (OPEC) to maintain rather than cut production levels in response to declining prices, led to a 56.3% drop in crude oil prices between June 2014 and January 2015²³. Before the drop, global light vehicle sales continued to grow despite rising gas prices; since the drop, lower gas prices have provided tailwinds for further growth in auto sales. September 2017 saw a record high global auto SAAR of 99.87, though at year end it fell back to 95.66⁶.

Crude Oil Prices



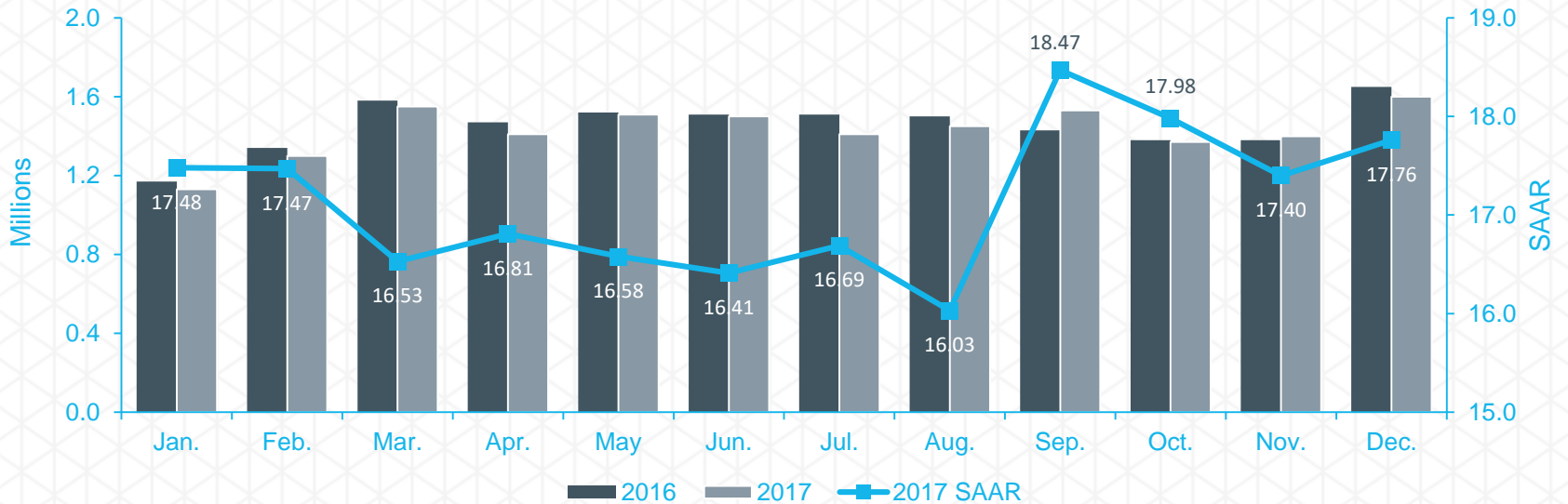
Sources: S&P Global Market Intelligence; "Global Light Vehicle Sales Update." LMC Automotive Public Data; U.S. Energy Information Administration, February 1, 2018.

Auto Indicators



Following a record in 2016, in which U.S. light vehicle sales reached nearly 17.8 million vehicles, U.S. sales dropped off slightly in 2017 to 17.2 million vehicles. Light vehicle sales experienced y-o-y growth in just 2 months, September and November, which demonstrated 7.0% and 1.4% sales growth, respectively. September's 7.0% y-o-y growth was largely a consequence of widespread hurricane damage, which induced people to replace their damaged vehicles²⁴. July 2017 saw the largest y-o-y sales decline, falling 6.6% to approximately 1.41 million sales. December continued to demonstrate the highest monthly sales and reached 1.60 million for the third straight year. Finally, September reached the highest SAAR recorded in 2017, registering 18.47 million-unit SAAR¹.

Monthly U.S. Light Vehicles Sales



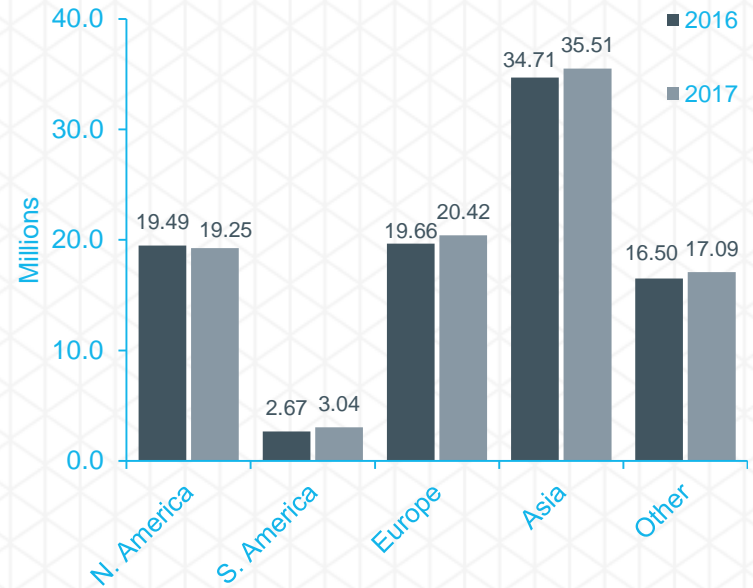
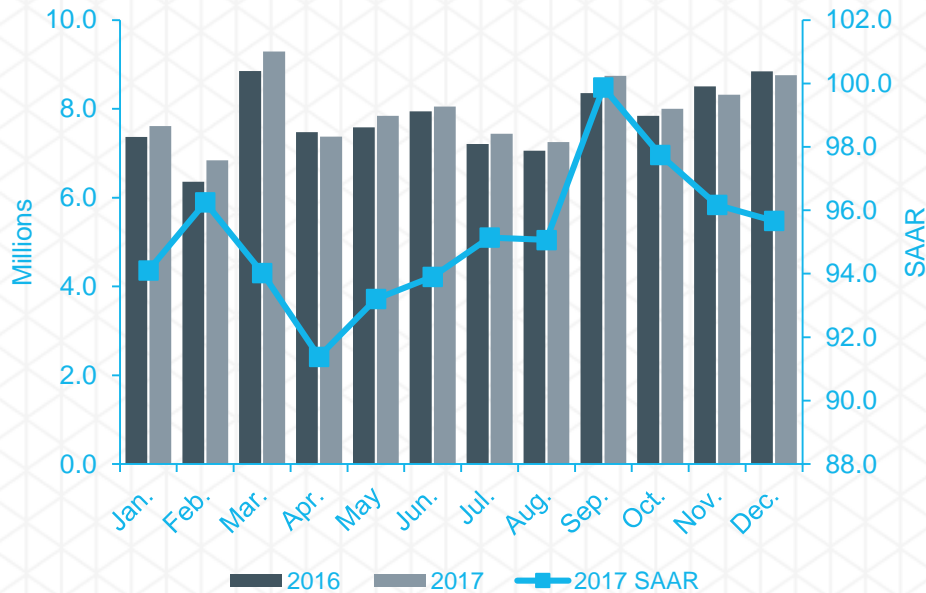
Auto Indicators



Global light vehicle sales rose approximately 2.3% in 2017, with 9 of the 12 months experiencing light vehicle sales growth y-o-y. March generated the highest light vehicle sales volume at 9.29 million, while August registered the lowest, totaling just 7.25 million. March's strong y-o-y growth (5.0%) was a result of strong sales increases in South America (13.4%), Western Europe (9.6%) and Japan (9.4%), which offset a modest 2.6% decline in sales in the U.S. Finally, September registered the highest SAAR, reaching just above 99.5 million-unit⁶.

In 2017, South America registered the highest sales volume increase at 13.9%, followed by Eastern Europe (8.4%) and Canada (4.5%). In total, Asia contributed approximately 35.5 million light vehicle sales, followed by Europe (20.4 million) and North America (19.2 million)⁶.

Global Light Vehicle Sales



Sources: "Global Light Vehicle Sales Update." LMC Automotive Public Data.

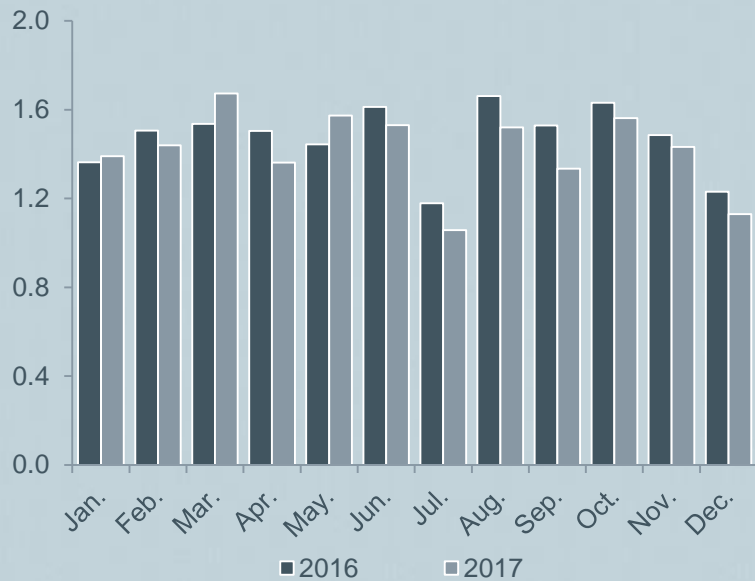
Sources: "Global Light Vehicle Sales Update." LMC Automotive Public Data.

North American Automotive Landscape

Amid declining light vehicle car sales, North American automobile manufacturers plan to cut production. For example, Ford scheduled temporary downtime at five of their North American plants, including both of their Mexican locations and three U.S.-based facilities²⁵. In 2017, the industry experienced a roughly 4.3% decline in light vehicle production²⁶.

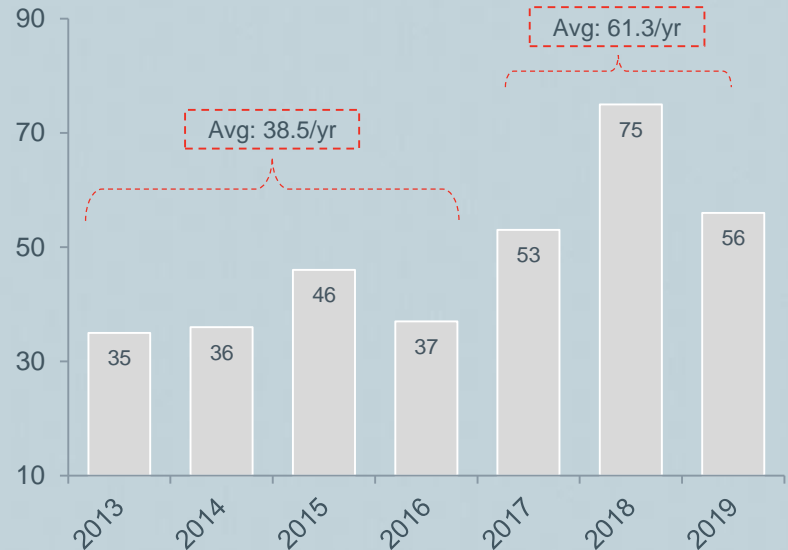
On the other hand, North America has seen an influx of foreign automobile manufacturing facilities. In September, Honda stated their plan to invest an additional \$267 million in its Marysville, Ohio Auto Plant²⁷. In general, however, OEMs have begun to shift away from the Great Lakes region, shifting production to Mexico to take advantage of lower operating costs and to the Southeastern U.S. region. Analysts expect 35.0% of North American-made new vehicles to be assembled in Mexico next year, while production in the Southeastern U.S. is now forecasted to increase to 4.8 million vehicles per year in 2020, up from 2.7 million in 2000²⁸. In September, Volvo committed an additional \$1 billion to add a second production line to its Charleston facility²⁹. Finally, in October, DENSO Corporation committed an additional \$1 billion to its Maryville, Tennessee plant, which is expected to create more than 1,000 jobs³⁰.

Monthly North American Light Vehicle Production (millions)



Source: "North American Light Vehicle Production." WardsAuto Public Data.

North American New Vehicle Program Launches



Source: "US Light Vehicle Market to See Increased Product Launch Activity in 2018, IHS Market Says." IHS Market. January 9, 2018; "Number of New Car Models Launched on the U.S. Market from 2000 to 2020." Statista.

Chinese Automotive Landscape

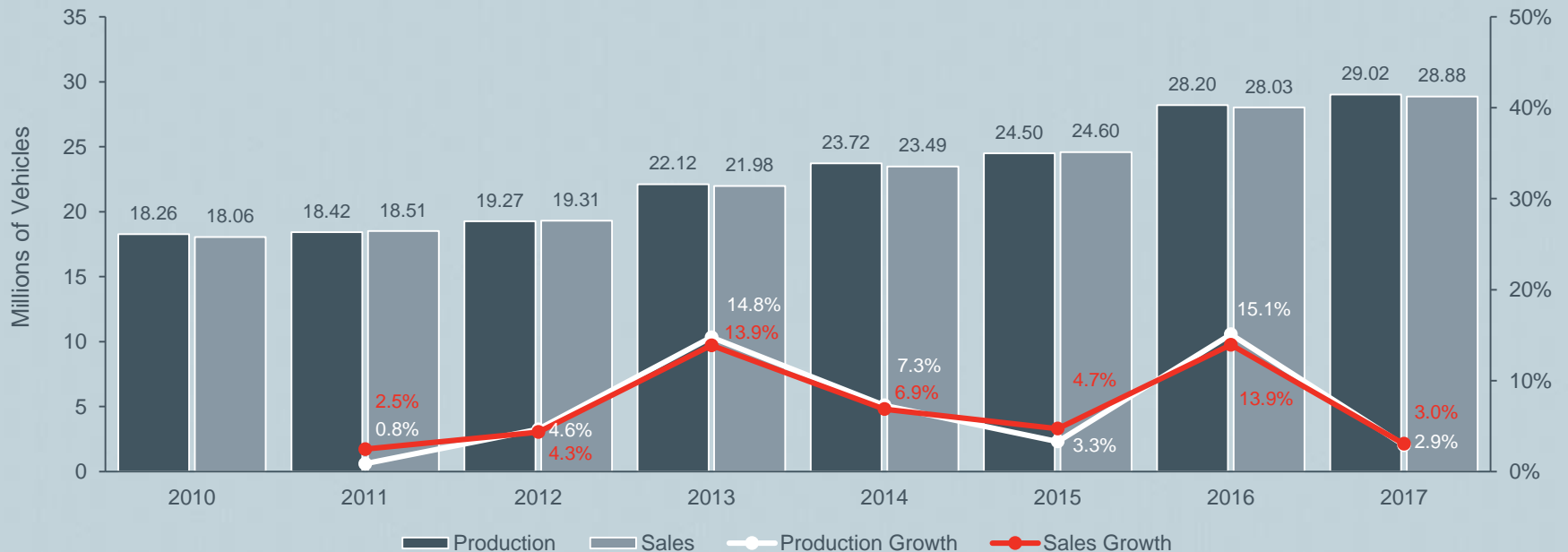


In 2017, China's auto production and sales were up 2.89% and 3.04%, respectively, y-o-y³. Compared to respective 2016 growth levels of 15.08% and 13.95%, the slow growth in 2017 is partly due to China's reduced purchase tax waiver for small-engine vehicles, an incentive that was introduced in 2016, and partly due to new electric vehicle (EV) policies for the industry³³.

The Chinese automotive market is leading the way toward electrification and now offers 100 electric models. EV sales in China reached almost 4.0% of the country's passenger vehicle market in December 2017³⁴. By unit, plug-in sales were up 72.0% from the previous year, representing 30 times faster growth than the overall car market in China. Such strong growth is driven by mandated ownership restrictions on internal combustion engine vehicles. China's plug-in passenger car sales were 49.0% of the global total in 2017³⁴.

China, South Korea and Japan currently dominate the space for EV battery production, benefiting from the shift toward EVs both at home and globally.

Auto Production and Sales



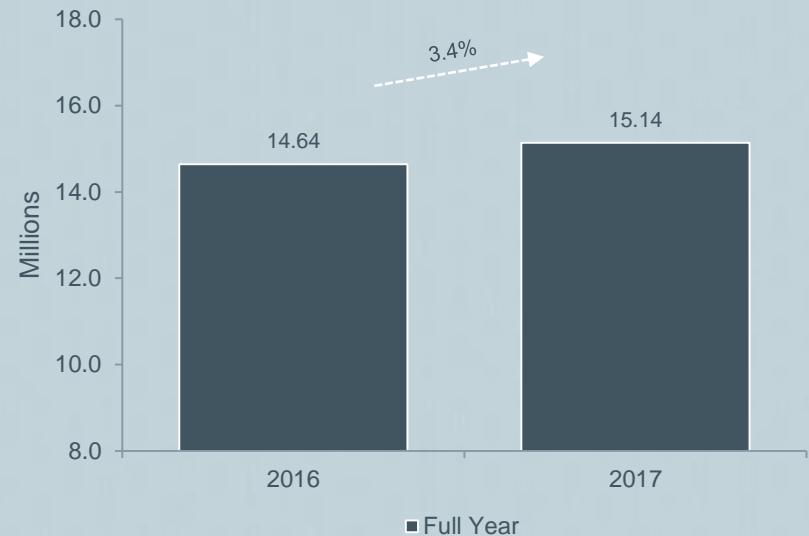
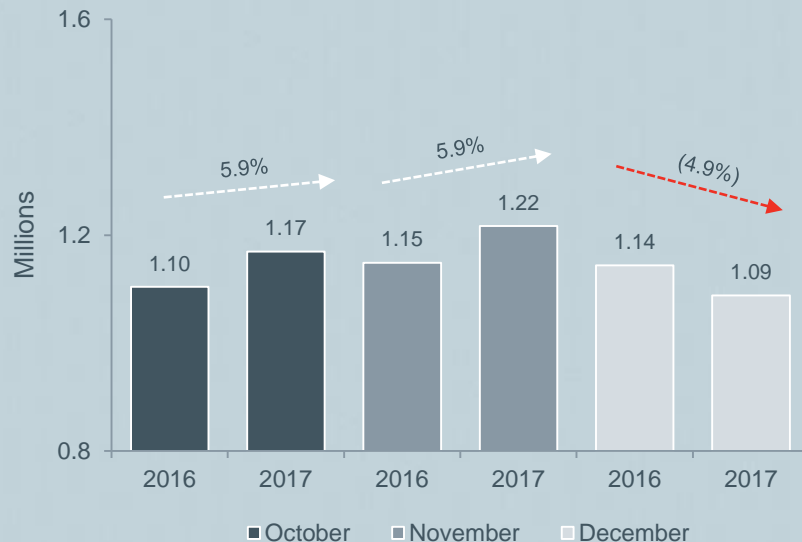
European Automotive Landscape



New passenger vehicle registrations in Europe demonstrated healthy growth in 2017, increasing 3.4% for the full year. New registrations increased 5.9% in both October and November y-o-y, however, December saw new passenger registrations slip 4.9% y-o-y. This decrease in registrations in December was the first y-o-y decline since 2012, and was driven by decreases in 4 of the 5 largest markets: Germany (1.0%), France (0.5%), United Kingdom (14.4%) and Italy (3.2%)⁴.

Overall in 2017, 9 of the 27 countries in the European Union demonstrated new passenger registration growth higher than 10%. In addition, 4 of the 5 largest markets experienced growth in 2017: France (4.7%), Germany (2.7%), Italy (7.9%) and Spain (7.7%)⁴.

New Passenger Vehicle Registrations



Note: Europe is defined as the European Union
 Source: "Passenger Car Registrations: +3.4% in 2017; -4.9% in December." European Automobile Manufacturers Association. January 17, 2018.

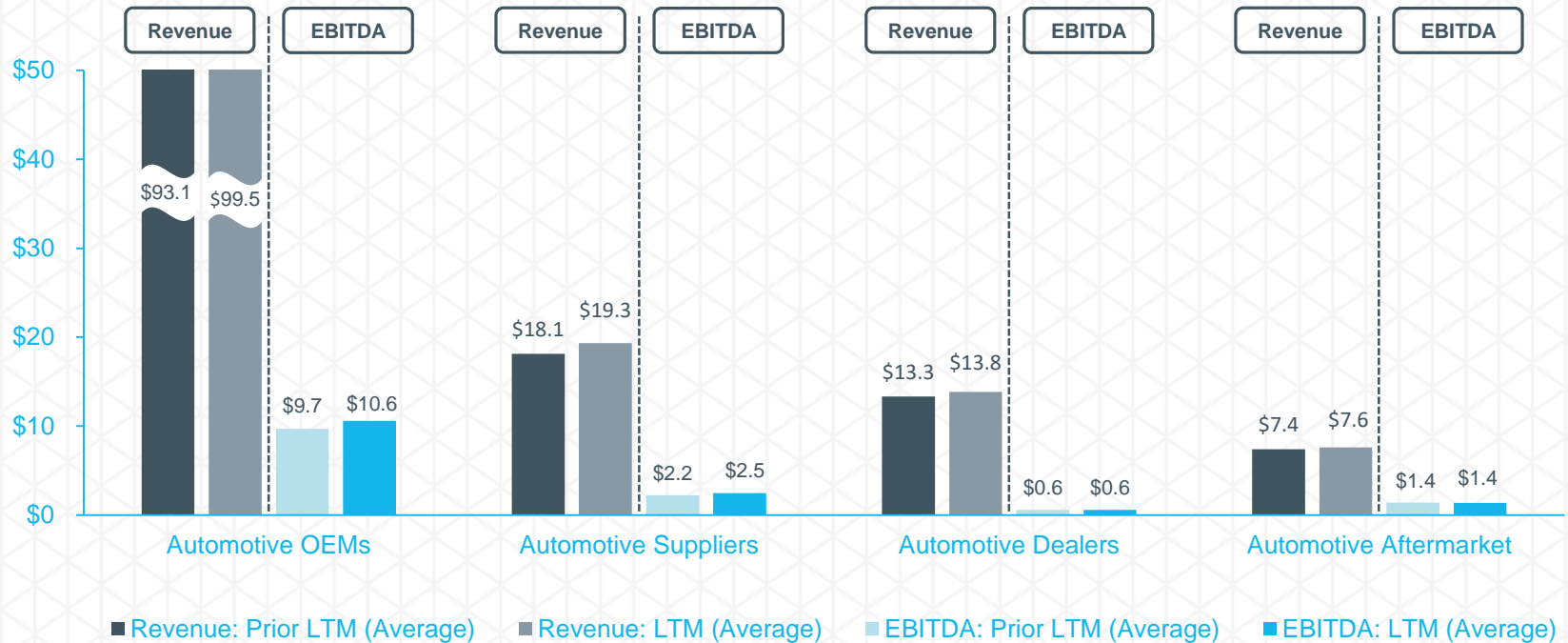
Source: "Passenger Car Registrations: +3.4% in 2017; -4.9% in December." European Automobile Manufacturers Association. January 17, 2018.

Revenue and EBITDA Growth



Automotive OEMs averaged approximately \$99.5 billion and \$10.6 billion in LTM revenue and EBITDA, respectively, and demonstrated substantial EBITDA growth (21.9%) over the prior last-twelve-months period. Automotive Supplier revenue and EBITDA grew at rates of 7.6% and 13.1%, respectively, exhibiting higher sales growth than their customers but slightly lower EBITDA expansion. Automotive Dealers generated an average of \$13.8 billion in revenue and \$592 million in EBITDA, and demonstrated limited top- and bottom-line growth in the LTM period. Finally, the Automotive Aftermarket Parts and Repair industry on average experienced revenue growth (5.6%) and EBITDA contraction, declining 2.1% to an average of \$1.37 billion⁵.

LTM Revenue and EBITDA (\$ billions)



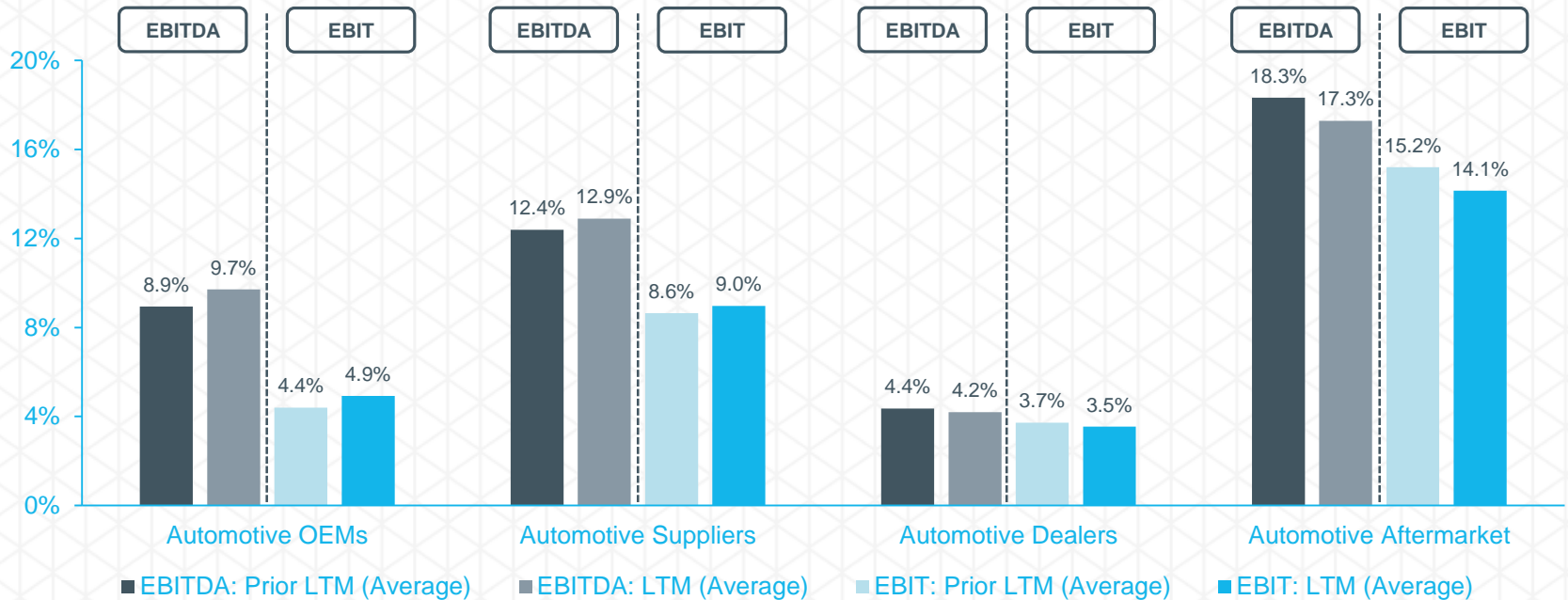
Definitions
 EBITDA: Earnings Before Interest, Taxes, Depreciation, and Amortization
 LTM: Last Twelve Months

Note: LTM as of the most recently available reporting date for each company
 Source: S&P Global Market Intelligence as of December 29, 2017 and company filings

Earnings Performance

Average LTM EBITDA margins exhibited varying levels of consistency relative to the prior LTM period, depending on the automotive segment. On an EBITDA basis, Automotive OEMs experienced a roughly 80 basis points (bps) increase, while Automotive Suppliers saw an average increase of 50 bps y-o-y. Meanwhile, Automotive Aftermarket Suppliers saw EBITDA margins contract by an average of 100 bps y-o-y. On the other hand, Automotive Dealers on average had relatively little margin delta, experiencing on average a small margin contraction of 20 bps⁵.

Margin Performance

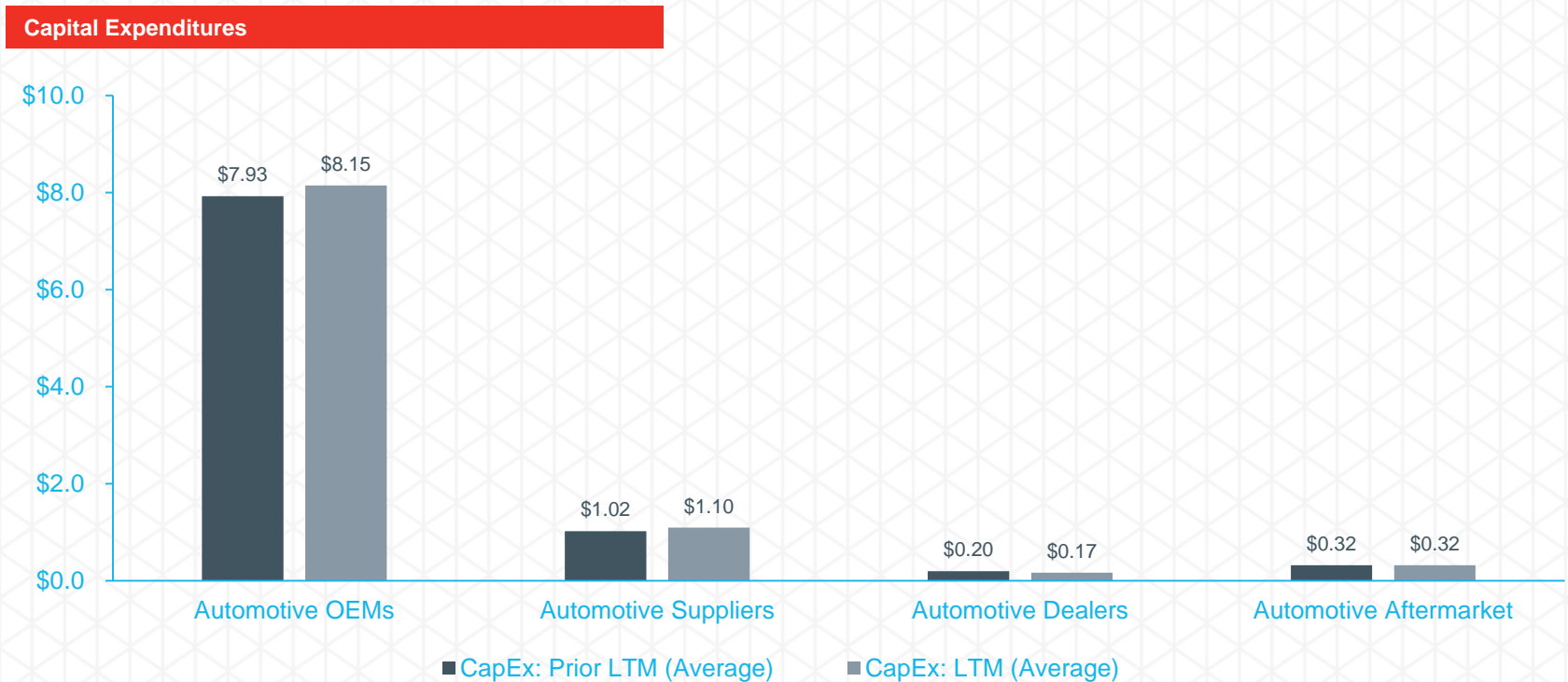


Definitions
EBITDA: Earnings Before Interest, Taxes, Depreciation, and Amortization
EBIT: Earnings Before Interest and Taxes
LTM: Last Twelve Months

Note: LTM as of the most recently available reporting date for each company
 Source: S&P Global Market Intelligence as of December 29, 2017 and company filings

Capital Expenditures

Automotive OEM and Automotive Supplier capital expenditures increased approximately 2.8% and 7.0%, respectively, in the LTM period versus the prior LTM period. On the other hand, Automotive Dealers and Automotive Aftermarket each decreased their capital expenditures over the prior LTM period, at 15.0% and 0.1%, respectively⁵.



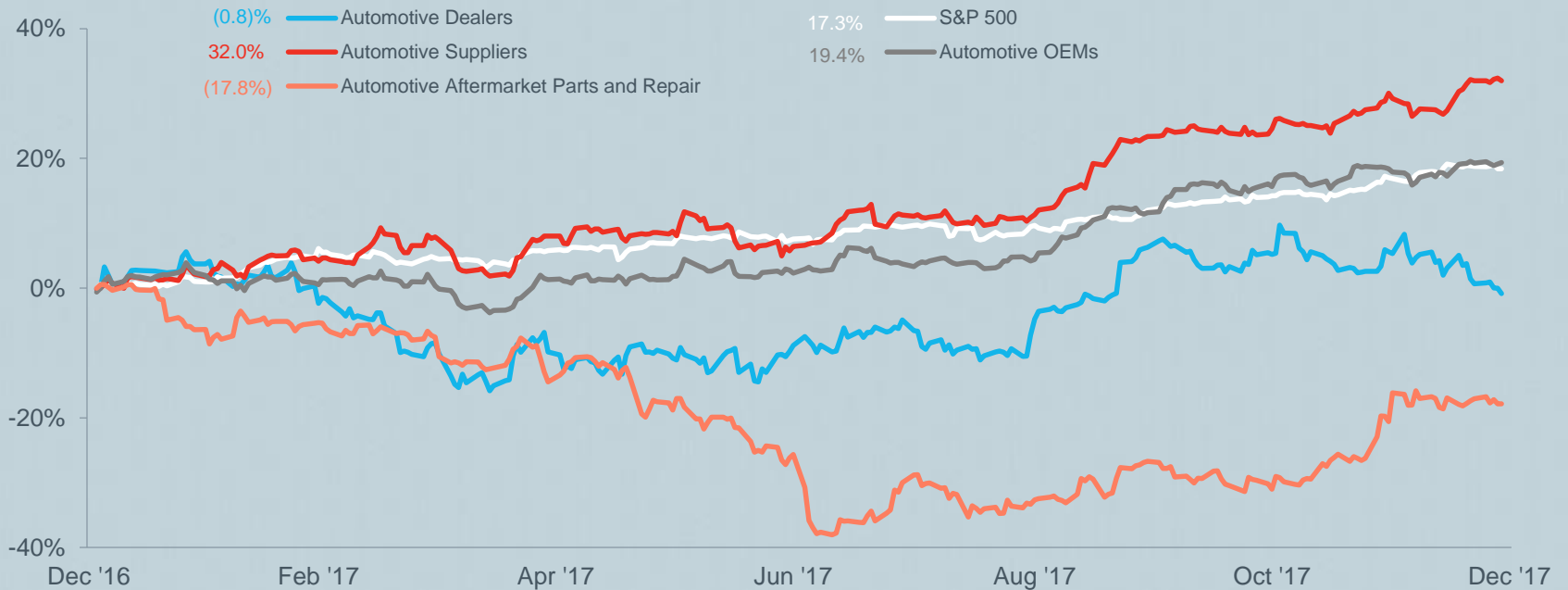
Note: LTM as of the most recently available reporting date for each company
 Source: S&P Global Market Intelligence as of December 29, 2017 and company filings

Public Company Equity Performance



Over the past 12 months, the Automotive OEM index has trended similarly to the S&P 500. The index of Automotive Suppliers posted the largest gain, 32.0%. The Automotive Dealer index and Aftermarket Parts and Repair index both varied considerably relative to the S&P 500, declining 0.8% and 17.8% over the last 12 months, respectively⁵. This decline in Aftermarket Parts equity performance is due in part to online retailers gaining market share; however, some industry analysts believe that the increased market share of foreign vehicles is also to blame, as consumers are more likely to visit the dealership for service on foreign vehicles, rather than automotive repair shops³⁵.

Equity Market Performance



Source: S&P Global Market Intelligence as of December 29, 2017; represents most actively traded public automotive sector companies

Public Companies' Trading Statistics

Company	12/29/17 Stock Price	% of 52 Wk High	Market Capitalization	Enterprise Value	Enterprise Value as a Multiple of						Stock Price as a Multiple of		LTM	
					Revenue			EBITDA			LTM	2018	EBITDA	Revenue
					LTM	2018E	2019E	LTM	2018E	2019E	EPS	EPS	Margin	Growth
Automotive OEMs														
North American OEMs														
Fiat Chrysler Automobiles N.V.	\$17.90	94.2%	\$27,573	\$34,282	0.26x	0.24x	0.24x	2.4x	2.0x	1.9x	6.5x	5.7x	10.6%	0.9%
Ford Motor Company	\$12.49	94.1%	\$49,614	\$37,940	0.26x	0.26x	0.27x	3.1x	3.0x	3.0x	13.9x	7.8x	8.5%	(0.1)%
General Motors Company	\$40.99	87.7%	\$58,223	\$57,509	0.38x	0.40x	0.39x	3.1x	3.6x	3.4x	11.5x	6.9x	12.1%	8.8%
Tesla, Inc.	\$311.35	79.9%	\$52,328	\$64,750	6.02x	3.29x	2.62x	NM	NM	16.9x	NA	NM	2.4%	NM
Asian OEMs														
Faw Car Co., Ltd.	\$1.65	71.3%	\$2,691	\$2,293	0.54x	0.52x	0.49x	12.8x	11.0x	8.2x	NA	53.8x	4.2%	22.3%
Geely Automobile Holdings Limited	\$3.47	90.9%	\$31,113	\$29,146	2.53x	2.10x	1.65x	22.3x	14.2x	11.3x	28.3x	21.1x	11.4%	118.1%
Honda Motor Co., Ltd.	\$34.29	98.1%	\$60,412	\$48,532	0.43x	0.35x	0.34x	3.6x	3.9x	3.6x	8.1x	10.0x	11.8%	12.9%
Hyundai Motor Company	\$146.03	90.2%	\$30,236	NM	NM	NM	NM	NM	NM	NM	12.7x	7.8x	8.0%	16.3%
Nissan Motor Co., Ltd.	\$9.97	93.0%	\$39,017	\$22,062	0.23x	0.20x	0.20x	2.9x	2.1x	2.0x	11.5x	7.1x	7.9%	8.1%
SAIC Motor Corporation Limited	\$4.92	93.6%	\$57,531	\$47,643	0.38x	0.34x	0.32x	10.5x	7.7x	6.5x	11.3x	9.5x	3.6%	14.7%
Suzuki Motor Corporation	\$58.01	98.6%	\$25,596	\$23,030	0.74x	0.71x	0.67x	5.3x	5.0x	4.6x	15.3x	14.2x	13.9%	12.1%
Tata Motors Limited	\$6.76	78.0%	\$21,457	\$26,660	0.65x	0.58x	0.51x	6.3x	4.8x	3.7x	NA	14.9x	10.4%	(5.8)%
Toyota Motor Corporation	\$64.04	98.6%	\$186,837	\$108,551	0.46x	0.42x	0.41x	3.6x	3.8x	3.6x	12.6x	10.4x	12.8%	4.8%
European OEMs														
Bayerische Motoren Werke AG	\$104.54	95.0%	\$67,872	\$99,455	1.18x	0.82x	0.79x	7.6x	5.5x	5.2x	10.8x	7.9x	15.4%	1.1%
Daimler AG	\$85.01	96.1%	\$90,948	\$52,127	0.31x	0.26x	0.25x	2.8x	2.1x	2.0x	9.9x	7.7x	11.3%	4.3%
Peugeot S.A.	\$20.36	80.7%	\$11,236	\$11,414	0.18x	0.15x	0.12x	2.1x	1.5x	1.4x	10.3x	7.7x	8.6%	(0.4)%
Renault SA	\$100.76	91.9%	\$27,202	\$3,808	NM	NM	NM	NM	NM	NM	6.9x	5.3x	8.8%	15.3%
Volkswagen AG	\$199.87	92.8%	\$101,043	\$40,522	0.17x	0.14x	0.14x	1.3x	0.9x	0.8x	8.2x	6.3x	13.1%	6.7%
	Median	92.9%			0.40x	0.38x	0.37x	3.6x	3.8x	3.6x	11.3x	7.8x	10.5%	8.1%
	Mean	90.3%			0.92x	0.67x	0.59x	6.0x	4.7x	4.9x	11.9x	12.0x	9.7%	14.1%

Source: S&P Global Market Intelligence as of December 29, 2017 and company filings; represents most actively traded public automotive companies
EBITDA and Enterprise Value adjusted for pension liabilities; Enterprise Value adjusted for noncontrolling interests, equity investments and financial services segments
For definitions, see page 24.

Public Companies' Trading Statistics

Company	12/29/17 Stock Price	% of 52 Wk High	Market Capitalization	Enterprise Value	Enterprise Value as a Multiple of						Stock Price as a Multiple of		LTM	
					Revenue			EBITDA			LTM	2018	EBITDA	Revenue
					LTM	2018E	2019E	LTM	2018E	2019E	EPS	EPS	Margin	Growth
Automotive Suppliers														
Adient plc	\$78.70	91.1%	\$7,327	\$8,644	0.53x	0.50x	0.49x	7.3x	4.8x	4.3x	7.2x	6.8x	7.3%	(3.4)%
Aisin Seiki Co., Ltd.	\$56.20	98.6%	\$15,389	\$19,736	0.60x	0.56x	0.53x	5.0x	4.4x	4.1x	14.3x	12.2x	11.9%	10.0%
American Axle & Manufacturing Holdings, Inc.	\$17.03	80.1%	\$1,895	\$5,528	1.01x	0.81x	0.81x	5.8x	4.6x	4.8x	3.9x	5.1x	17.5%	38.4%
Aptiv PLC	\$84.83	80.8%	\$22,551	\$27,174	2.17x	2.00x	1.88x	11.1x	11.8x	10.9x	NM	16.6x	19.5%	6.5%
Autoliv, Inc.	\$127.08	97.9%	\$11,050	\$11,736	1.14x	1.06x	0.98x	9.3x	8.2x	7.2x	21.1x	18.0x	12.4%	2.7%
BorgWarner Inc.	\$51.09	91.5%	\$10,772	\$12,843	1.36x	1.23x	1.16x	8.1x	7.3x	6.8x	11.3x	12.2x	16.7%	6.0%
Continental AG	\$270.86	98.7%	\$54,174	\$57,683	1.11x	1.04x	0.98x	7.2x	6.5x	6.0x	14.1x	12.8x	15.4%	8.0%
Cooper-Standard Holdings Inc.	\$122.50	95.3%	\$2,148	\$2,559	0.72x	0.69x	0.67x	6.1x	5.3x	5.0x	13.4x	10.6x	11.8%	3.0%
Dana Incorporated	\$32.01	95.7%	\$4,637	\$5,833	0.86x	0.77x	0.74x	7.8x	6.4x	5.9x	NA	11.3x	11.0%	18.5%
DENSO Corporation	\$60.04	98.4%	\$46,817	\$45,266	1.08x	0.95x	0.92x	7.9x	7.1x	6.5x	16.7x	16.2x	13.8%	5.4%
Faurecia S.A.	\$78.21	96.5%	\$10,657	\$11,321	0.48x	0.52x	0.48x	6.4x	4.7x	4.4x	14.6x	12.3x	7.6%	3.5%
Lear Corporation	\$176.66	97.4%	\$11,935	\$12,909	0.65x	0.61x	0.59x	6.3x	5.8x	5.6x	10.4x	9.8x	10.4%	5.9%
Magna International Inc.	\$56.81	95.9%	\$20,390	\$23,822	0.63x	0.56x	0.53x	5.9x	5.3x	5.1x	10.0x	8.6x	10.7%	5.7%
Schaeffler AG	\$17.61	88.3%	\$11,725	\$14,879	0.90x	0.86x	0.82x	5.3x	4.9x	4.6x	9.2x	9.0x	16.9%	4.9%
The Goodyear Tire & Rubber Company	\$32.31	86.9%	\$7,959	\$13,767	0.91x	0.89x	0.87x	6.4x	5.6x	5.0x	NA	8.8x	14.3%	(2.8)%
Valeo SA	\$74.77	91.8%	\$17,736	\$19,036	0.89x	0.76x	0.70x	8.0x	5.7x	5.2x	14.3x	12.7x	11.1%	16.1%
Visteon Corporation	\$125.14	94.1%	\$3,892	\$3,629	1.15x	1.10x	1.03x	10.5x	9.0x	8.2x	19.9x	17.9x	10.9%	0.3%
	Median	95.3%			0.90x	0.81x	0.81x	7.2x	5.7x	5.2x	13.8x	12.2x	11.9%	5.7%
	Mean	92.9%			0.95x	0.88x	0.83x	7.3x	6.3x	5.9x	12.9x	11.8x	12.9%	7.6%

Source: S&P Global Market Intelligence as of December 29, 2017 and company filings; represents most actively traded public automotive suppliers
For definitions, see page 24.

Public Companies' Trading Statistics

Company	12/29/17 Stock Price	% of 52 Wk High	Market Capitalization	Enterprise Value	Enterprise Value as a Multiple of						Stock Price as a Multiple of		LTM	
					Revenue			EBITDA			LTM	2018	EBITDA	Revenue
					LTM	2018E	2019E	LTM	2018E	2019E	EPS	EPS	Margin	Growth
Automotive Dealers														
Asbury Automotive Group, Inc.	\$64.00	90.1%	\$1,332	\$2,329	0.36x	0.35x	0.35x	7.7x	7.1x	7.3x	11.2x	9.9x	4.7%	(0.8)%
AutoNation, Inc.	\$51.33	88.8%	\$4,684	\$7,488	0.35x	0.34x	0.34x	9.1x	7.8x	7.5x	17.8x	12.7x	3.9%	(0.6)%
CarMax Inc.	\$64.13	82.6%	\$11,639	\$24,622	1.37x	1.34x	1.23x	18.4x	17.5x	16.6x	17.2x	15.8x	7.5%	10.1%
Group 1 Automotive, Inc.	\$70.97	84.0%	\$1,430	\$2,754	0.25x	0.24x	0.24x	7.6x	7.1x	6.8x	12.7x	9.2x	3.3%	(0.1)%
Lithia Motors, Inc.	\$113.59	92.0%	\$2,835	\$3,920	0.41x	0.35x	0.34x	9.6x	8.0x	7.7x	15.2x	12.3x	4.2%	15.5%
Penske Automotive Group, Inc.	\$47.85	86.6%	\$4,104	\$5,153	0.25x	0.24x	0.24x	8.1x	6.8x	6.2x	12.6x	10.5x	3.0%	3.6%
Sonic Automotive, Inc.	\$18.45	67.2%	\$797	\$1,862	0.19x	0.19x	0.19x	6.9x	6.2x	5.7x	14.3x	9.6x	2.8%	1.1%
	Median	86.6%			0.35x	0.34x	0.34x	8.1x	7.1x	7.3x	14.3x	10.5x	3.9%	1.1%
	Mean	84.5%			0.45x	0.44x	0.42x	9.6x	8.6x	8.3x	14.4x	11.4x	4.2%	4.1%

Source: S&P Global Market Intelligence as of December 29, 2017 and company filings; represents most actively traded public automotive dealers
 EBITDA and Enterprise Value adjusted for floor plan debt and interest expense
 For definitions, see page 24.

Public Companies' Trading Statistics

Company	12/29/17 Stock Price	% of 52 Wk High	Market Capitalization	Enterprise Value	Enterprise Value as a Multiple of						Stock Price as a Multiple of		LTM	
					Revenue			EBITDA			LTM	2018	EBITDA	Revenue
					LTM	2018E	2019E	LTM	2018E	2019E	EPS	EPS	Margin	Growth
Automotive Aftermarket Parts and Repair														
Advance Auto Parts, Inc.	\$99.69	56.2%	\$7,363	\$8,044	0.85x	0.84x	0.82x	8.8x	8.1x	7.3x	18.5x	16.9x	9.7%	(1.0)%
AutoZone, Inc.	\$711.37	88.7%	\$19,458	\$24,140	2.19x	2.13x	2.05x	10.0x	9.7x	9.4x	15.9x	15.1x	22.0%	2.7%
Monro, Inc.	\$56.95	93.2%	\$1,866	\$2,253	2.05x	1.87x	1.66x	13.3x	11.5x	10.4x	30.4x	25.9x	15.4%	15.6%
O'Reilly Automotive, Inc.	\$240.54	84.7%	\$20,453	\$23,316	2.62x	2.47x	2.34x	11.9x	11.3x	10.8x	20.6x	18.3x	22.1%	5.3%
	Median	86.7%			2.12x	2.00x	1.86x	10.9x	10.5x	9.9x	19.5x	17.6x	18.7%	4.0%
	Mean	80.7%			1.93x	1.83x	1.72x	11.0x	10.1x	9.5x	21.3x	19.1x	17.3%	5.6%

Definitions

EBITDA: Earnings Before Interest, Taxes, Depreciation, and Amortization

Enterprise Value: Market Capitalization + Total Debt + Preferred Equity + Minority Interest – Cash and Short-Term Investments

LTM: Last Twelve Months

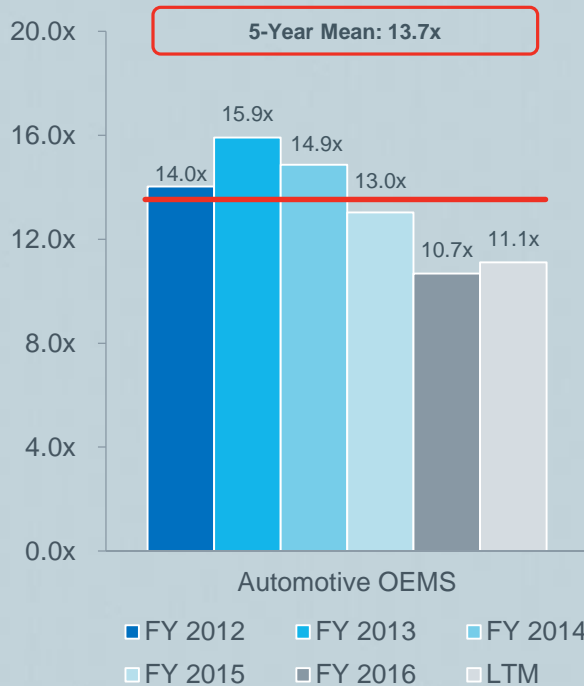
EPS: Earnings Per Share

Source: S&P Global Market Intelligence as of December 29, 2017 and company filings
Represents most actively traded public automotive aftermarket companies

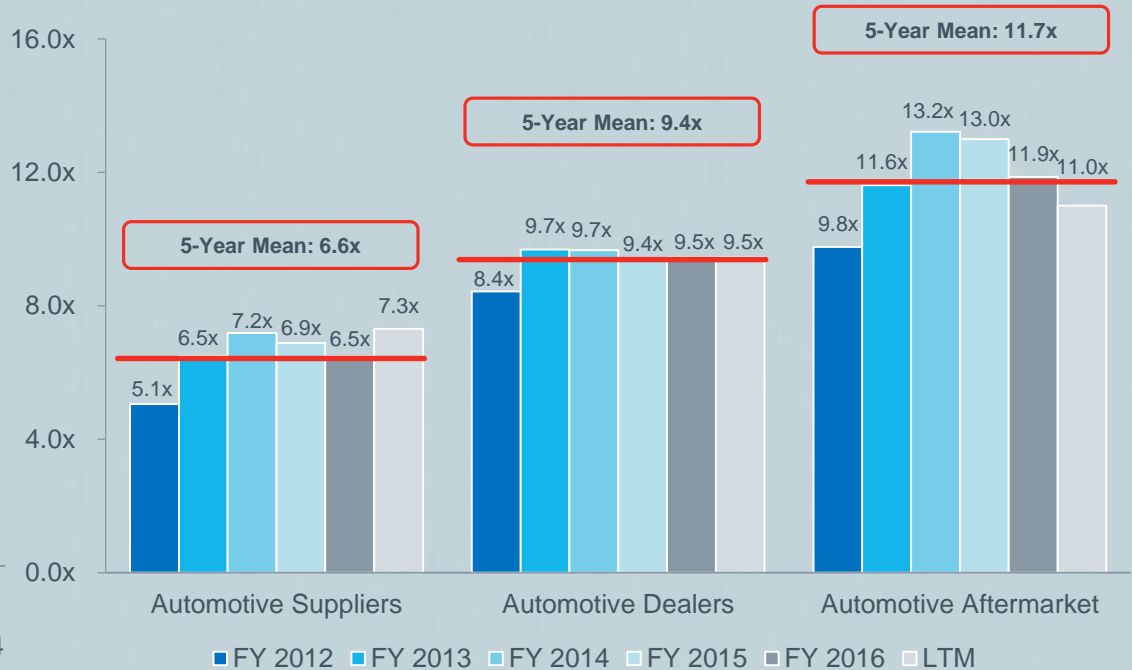
Historical Trading Multiples

On average, Automotive OEMs are trading at 11.1x LTM EPS, more than 2.5x lower than their 5-year average multiple, yet higher than the average FY2016 price-to-earnings (P/E) multiple. Automotive Suppliers (7.3x) are on average trading at EBITDA multiples higher than each of the last 5 fiscal year ends, while Automotive Dealers (9.5x) are roughly in line with their 5-year average. The Automotive Aftermarket index is currently trading at a lower EBITDA multiple relative to their 5-year average, and their LTM average of 11.0x was lower than four of the last five fiscal year end average EBITDA multiples⁵.

Historical P/E Multiples Since 2012



Historical EBITDA Multiples Since 2012



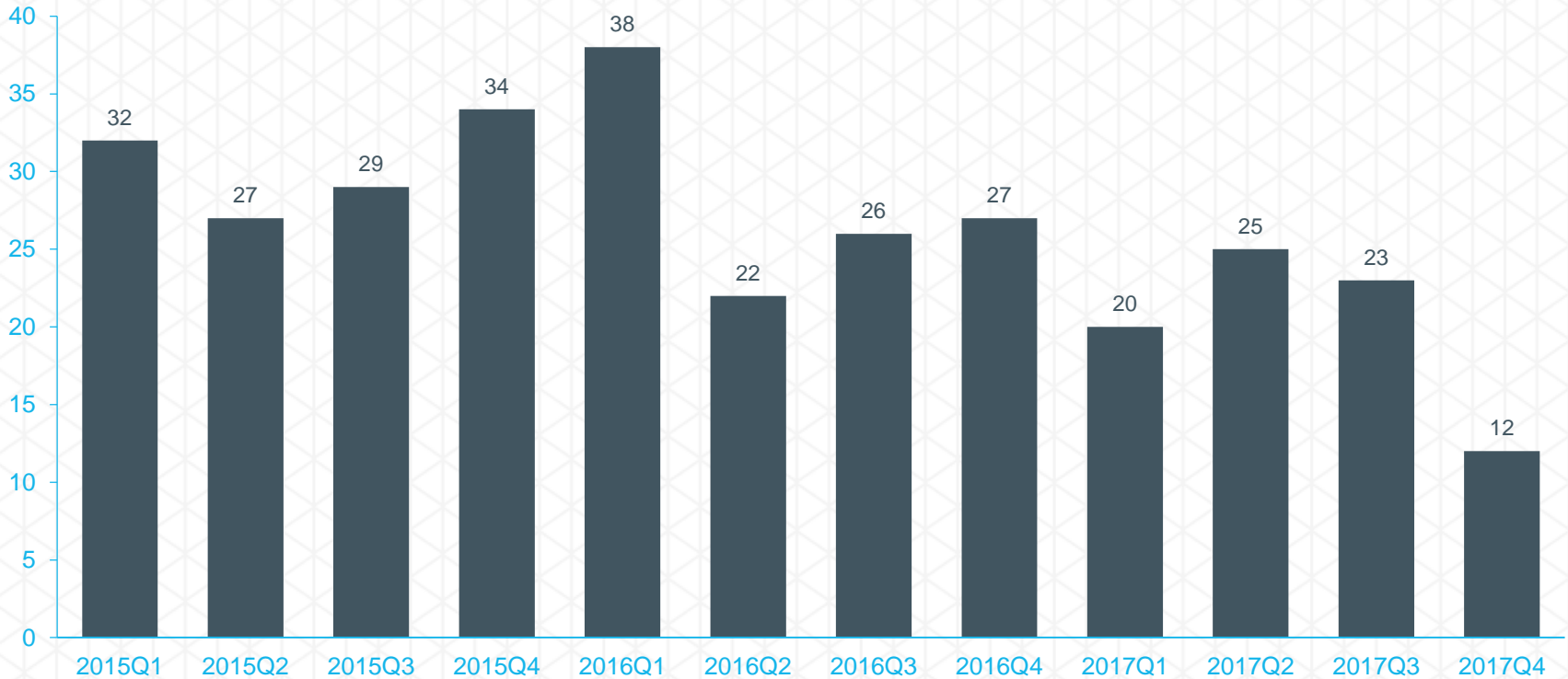
Multiples have been adjusted historically to reflect corresponding adjustments made on pages 21-24 Source: S&P Global Market Intelligence as of December 29, 2017 and company filings

Multiples have been adjusted historically to reflect corresponding adjustments made on pages 21-24 Source: S&P Global Market Intelligence as of December 29, 2017 and company filings

M&A Activity by Quarter ●○○

M&A activity in the automotive sector decreased in Q4 2017 over the third quarter, with 12 completed transactions. With a total of 80 transactions for the full year, 2017 M&A activity was weak compared to recent years. In 2016, 2015, and 2014, 113, 122 and 124 transactions, respectively, were closed in the automotive sector. Activity has been low since it dropped after Q1 2016, when 38 transactions were completed⁵.

Automotive Industry M&A Trends



Note: All transactions with available target financial
Source: S&P Global Market Intelligence

Notable M&A Activity – Last 12 Months

○○○

Automotive Suppliers

Selected M&A Transaction Analysis

(\$ in millions)

Announced	Target Name	Target Business Description	Acquirer Name	Enterprise Value	LTM Revenue	LTM EBITDA	EBITDA Margin	EV / Revenue	EV / EBITDA
Dec-17	Uni-Bond Brake, LLC	Manufactures brake components for automotive and heavy-duty applications	Amanda Products, LLC	\$3.0	\$13.0	NM	NA	0.23x	NA
Nov-17	AA Gaskets Pty Ltd	Designs, manufactures and supplies gaskets and sealing products for automotive markets and manufacturing industries	GUD Holdings Limited	\$22.9	\$12.8	NM	NA	1.78x	NA
Oct-17	CAP Corporation	Develops, manufactures and sells wiper blades wiper arms and related auto parts in South Korea	NPD Co., Ltd.; SG2017 Private Equity Fund	\$70.1	\$79.5	\$11.5	14.5%	0.88x	6.1x
Sep-17	STARCO Europe A/S	Manufactures and distributes wheel and tire solutions for OEMs worldwide	Kenda Rubber Industrial Co. Ltd.	\$21.2	\$129.4	NM	NA	0.16x	NA
Sep-17	IMC S.r.l.	Manufactures automotive parts	Mittel S.p.A	\$71.6	\$47.8	NM	NA	1.50x	NA
Aug-17	NEUE HALBERG-GUSS GmbH	Manufactures engine blocks, cam shafts and cylinder heads	S.D.L. Süddeutsche Beteiligungs GmbH	\$16.4	\$483.4	NM	NA	0.03x	NA
Jul-17	METALLARTE srl.	Manufactures entry and compartment doors for manufacturers of leisure vehicles	Lippert Components, Inc.	\$16.7	\$12.5	NM	NA	1.34x	NA
Jun-17	Pacific Insight Electronics Corp.	Together with its subsidiaries, designs, develops, manufactures and sells electronic products and full-service solutions	Methode Electronics, Inc.	\$104.4	\$92.7	\$10.8	11.6%	1.13x	9.7x
Jun-17	Groeneveld Groep B.V.	Engages in the development, production, marketing and sale of automatic greasing systems and effective safety systems for various vehicles and equipment	The Timken Company	\$280.0	\$105.0	NM	NA	2.67x	NA
Jun-17	Nexen Tech Corporation	Provides wiring harnesses for the automobile industry in South Korea	Route One Fund	\$65.5	\$69.5	\$5.8	8.3%	0.94x	11.3x
Jun-17	United Welding Services Inc.	Manufactures truck accessories	CURT Manufacturing, LLC	\$21.5	\$35.3	NM	NA	0.61x	NA

Source: S&P Global Market Intelligence and company filings

Notable M&A Activity – Last 12 Months



Automotive Suppliers

Selected M&A Transaction Analysis

(\$ in millions)

Announced	Target Name	Target Business Description	Acquirer Name	Enterprise Value	LTM Revenue	LTM EBITDA	EBITDA Margin	EV / Revenue	EV / EBITDA	
May-17	Yixing Prince Ceramics Co., Ltd.	Researches, produces and trades honeycomb ceramics for customers in China and internationally	Shandong Sinocera Functional Material Co., Ltd.	\$99.7	\$18.9	NM	NA	5.27x	NA	
Apr-17	Velvac Inc.	Designs, manufactures and supplies mirrors, parts and components to truck equipment and recreational (RV) aftermarket, as well as heavy truck, RV and specialty vehicle OEMs	The Eastern Company	\$39.5	\$58.7	NM	NA	0.67x	NA	
Mar-17	FLTC Europe a.s.	Designs automotive LED lightings	Carclo plc	\$0.5	\$1.9	NM	NA	0.28x	NA	
Mar-17	UNIWHEELS AG	Develops, produces and sells alloy wheels for the automotive and accessory markets	Superior Industries International Germany AG	\$753.5	\$491.3	\$74.7	15.2%	1.53x	10.1x	
Mar-17	Halla Stackpole Corporation	Produces and sells powder metallurgy products and automobile parts in South Korea	Johnson Electric International (UK) Limited	\$160.4	\$131.3	\$24.4	18.5%	1.22x	6.6x	
Mar-17	BORG Automotive A/S	Remanufactures and sells automotive parts in Europe	Aktieselskabet Schouw & Co.	\$166.2	\$144.5	NM	NA	1.15x	NA	
Mar-17	Medallion Plastics Incorporated	Manufactures and distributes custom thermoform products	Patrick Industries, Inc.	\$10.0	\$20.0	NM	NA	0.50x	NA	
Mar-17	Hunan Hengxin Electric Co., Ltd	Engages in the research and development, production, sales and after-sale service of energy-absorbing equipment and other auxiliary products	Chengdu Yunda Technology Co., Ltd.	\$29.1	\$7.1	NM	NA	4.12x	NA	
Feb-17	Grupo Antolín Irausa, S.A., Seating and Metal Business Unit	Comprises the seating and metal business unit of Grupo Antolín Irausa, S.A.	Lear Corporation	\$307.0	\$322.0	NM	NA	0.95x	NA	
Jan-17	Teutech Industries Inc. and Teutech Industries LLC	Manufacture and sell transmission and drive line components for the automobile industry	The Hi-Tech Gears Limited	\$44.0	\$41.1	NM	NA	1.07x	NA	
				Mean	\$109.7	\$110.4	\$25.4	13.6%	1.34x	8.8x
				Median	\$44.0	\$58.7	\$11.5	14.5%	1.07x	9.7x

Source: S&P Global Market Intelligence and company filings

Duff & Phelps' Ongoing and Recent Transactions

Fairness Opinion



has been acquired by



Sell Side Advisor



has been acquired by



Solvency Opinion



has completed the spin-off of



Sell Side Advisor



has been acquired by



ERISA Advisory



Valuation opinion to determine fair market value of securities owned by the GM UAW Retiree Medical Benefits Trust

Sell Side Advisor



has been acquired by



Sell Side Advisor



has been acquired by



Solvency Opinion



has completed a recapitalization transaction

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