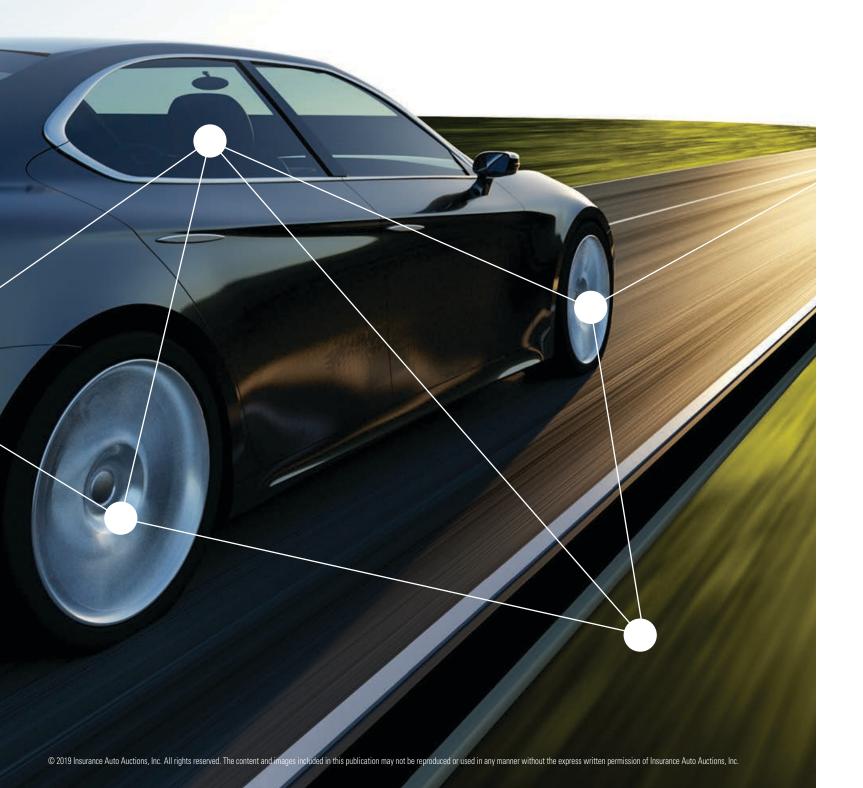


INDUSTRY OR REPORT



Founded in 1982, IAA, the leading live and live-online salvage car auction company, is headquartered in Westchester, IL and employs over 2,800 employees in more than 180 auction facilities throughout the U.S. and Canada. IAA provides global buyers opportunities to bid on and purchase total loss, donated, higher mileage, damaged, and clean-title cars utilizing cutting-edge technology. IAA's multi-platform model enables insurance companies, fleet and rental companies, banks, finance companies, car dealerships and the general public to simultaneously participate in multiple auctions online and in-person. Additional services include registration, financing, towing and title services. Go to <u>IAA-Auctions.com</u> to learn more, and follow IAA on <u>Facebook</u>, <u>Twitter</u>, <u>LinkedIn</u>, <u>YouTube</u> and <u>Instagram</u>.



CONTENTS

- Salvage Value Landscape A Map of Influences
- Executive Summary
- Section One: U.S. Economy
- Section Two: Automotive Industry
- Section Three: Segment Analysis
- Section Four: Economic Indicators
- Section Five: Looking Forward
- Index of Charts
- References
- About the Authors

Disclaimer

The auto salvage industry as discussed in this document refers to the industry as experienced by IAA. IAA does not possess data on the performance of other salvage companies; therefore, the analyses are based on how different economic factors impact the performance of vehicles sold through IAA's auctions.

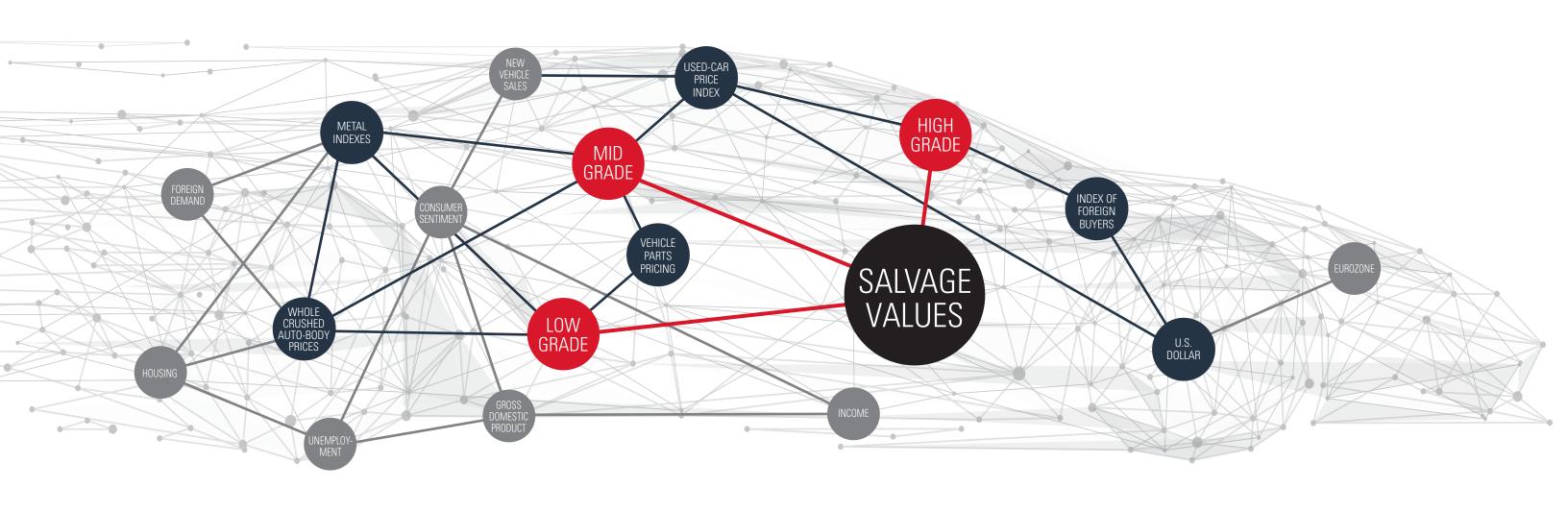
The statements contained in this report and statements the company may make orally in connection with this report that are not historical facts are forward-looking statements. Forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from the results projected, expressed or implied by the forward-looking statements. Factors that could cause or contribute to such differences include those matters disclosed in the company's Securities and Exchange Commission fillings. The company does not undertake any obligation to update any forward-looking statements.

This document is meant for informational purposes only.

SALVAGE VALUE LANDSCAPE

A Map of Influences

The complexity of the vehicle salvage industry is revealed when trying to understand how its drivers are linked by factors such as the economy, vehicle sale prices, driver behavior and weather.





Vehicle Grade

Primary Economic Factors

Secondary Economic Factors

EXECUTIVE SUMMARY

A YEAR OF GROWTH FOR THE U.S. ECONOMY Economically, 2018 was a strong year for the United Sates. The economy enjoyed its 10th consecutive expansion, led by personal consumption expenditures, business investment and a rise in private inventories. An increasingly tight labor market, highlighted by a 3.9% unemployment average (a strong showing by historical standards), a rising number of workers in the labor force and real wage growth all contributed to consumer spending pushing real GDP to 2.9% year-over-year growth.^{1,2}



UPS AND
DOWNS
IN THE
AUTOMOTIVE
INDUSTRY

After a record-high 2016 and a down 2017, the market got back on track in 2018, with vehicle sales finishing the year slightly up at 17.27 million units. The trend of increasing demand for light trucks continued with volume up 8.0% year-over-year. Passenger

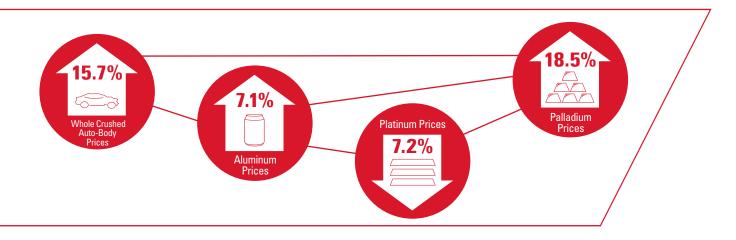
cars, on the other hand, finished 13.1% below 2017 numbers. Downward demand pressures, due to a combination of rising gas and diesel prices and higher loan rates and average monthly loan payments, were outweighed by strong economic growth.^{3,4,5}

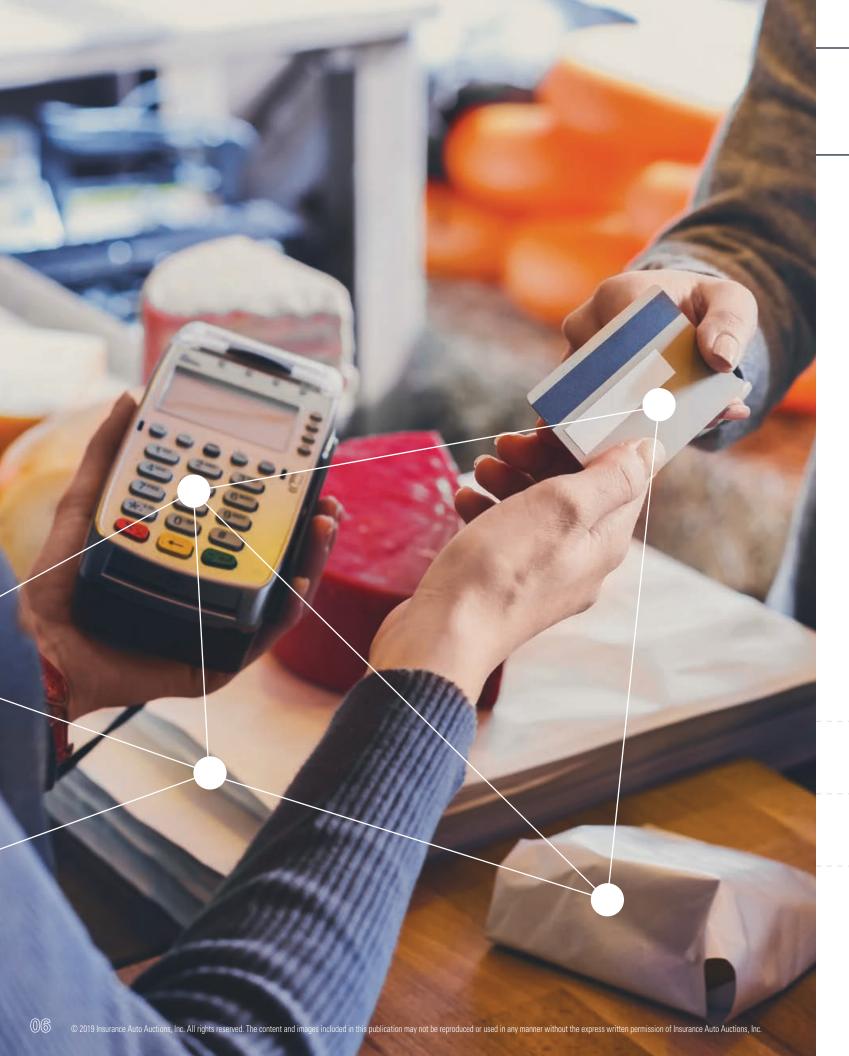


SALVAGE INDUSTRY

For the second straight year, average sale prices of insurance vehicles increased. The biggest gain came from low-grade vehicles, which were up 28% from 2017's numbers. Similarly, mid- and high-grade stocks saw price increases of 13.5% and 9.9%, respectively. There was a positive shift in

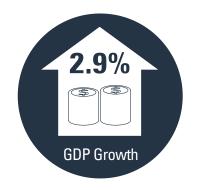
prices for Average ACV, model year age, and mileage, which likely played a role in 2018's impressive returns. Broader industry factors like scrap prices, which were up 15.7% year-over-year, and a depreciated dollar also influenced the increase in average values.





SECTION ONE

U.S. ECONOMY



2017 Total Real GDP: \$18.1 Trillion 2018 Total Real GDP: \$18.6 Trillion (Chained 2012 Dollars)

Economic Growth: The Tide Continues to Rise

Despite a downard revision to real GDP growth from 2.6% to 2.2% in Q4, the productivity measure grew 2.9% in 2018. This figure continued the upward trend from the two years prior, which saw 2.2% and 1.6% growth respectively. 2018 outpaced 2017's productivity marks in large part because of higher growth of nonresidential fixed investment, private inventory investment, federal government spending and consumer spending. However, the year did see a fall in residential investment that created a small drag on gains.⁶

After beginning the year at 2.2%, quarter-to-quarter, GDP growth shifted upward for a major Q2 result of 4.2%. The figure finished the second half of the year at 3.4% and 2.2% for Q3 and Q4, respectively. Consumer spending continued as the GDP's leading growth factor.⁷ Near record unemployment rate lows, continued growth in primeage labor force participation, growing real wages, and tax cuts were all factors pushing consumer spending to lead the country to its 10th consecutive year of expansion.

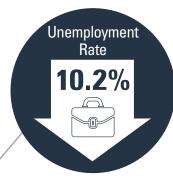
U.S. Real GDP Growth



Jobs Up, Unemployment Down

The average unemployment continues to fall. This year it dropped 0.5 percentage points, with December marking the 99th consecutive month of job gains. Overall, 2.64 million employees were added to payrolls in 2018, up from 2.19 million in 2017.8 Trade concerns, rising rates, and political uncertainty typically make employers less likely to add to their

workforce, but businesses rode the wave of strong consumer demand to extend the longstanding hiring streak. In Q4, healthcare, professional and business services, and food services led all industries in net payroll increases.9 In total, it was the best year of net employment growth since 2015, which was a major factor in the country's continued economic success.



2017 Average: 4.4% 2018 Average: 3.9%

Down Goes the Dollar

U.S. Dollar

2.3%

2017 Average: 91.1

2018 Average: 89.0

This document is meant for informational purposes only.

The U.S. Dollar depreciated for the second straight year, down 2.3%. Specifically, the first two quarters tallied 8.8% and 5.1% depreciation on a year-over-year basis, respectively. These numbers marked a continuation of the depreciation trend set in motion after a sharp rise following the 2016 U.S. election. Many analysts think the down numbers in the first two quarters of the year were influenced by an initial overvaluation. As a result, investors from China and central banks around the world shifted their money toward other currencies. This change in asset allocation was made relatively smooth thanks to impressive growth in global markets. That growth contributed to central banks, including in the EU and

Japan, to push benchmark interest rates higher. Consequently, returns on currencies like the Euro and Yen remained at least as attractive as the dollar.14

In the second half of the year, the dollar rebounded on the back of a third and fourth fed-funds rate increase. All told, the benchmark rate rose 100 basis points for the year, surpassing the 75 basis point increase seen in 2017. As the interest rate gap among the dollar and other currencies rose, global growth subsided in Q2, while U.S. productivity continued to increase. As a result, the dollar gained back some of the depreciation seen in early 2018, but not enough to finish higher than its 2017 average. 15

Wallet Watch: More Average Weekly Earnings Increases

Workers enjoyed a slight uptick in weekly earnings, with growth of .8% versus .4% in 2017. An increase in both average hours worked per week and average hourly earnings resulted in the income measure's growth. 10,11 Given the tight labor market, weekly earnings growth was expected due to competition for workers, though strong labor market conditions have led to relatively modest earnings gains over the past few years. However, according to the Bureau of Labor Statistic's Employer Cost Index, 2018 was a relative boom for workers. Average wages and salaries rose 3.1% – the most sizable growth of the last decade. 12,13

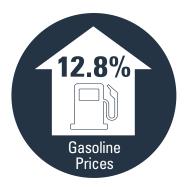


2017 Average: \$369.2 2018 Average: \$372.2

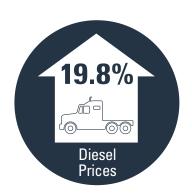








2017 Average: \$2.342018 Average: \$2.64



2017 Average: \$2.65

2018 Average: \$3.18

Fuel Prices Take End of Year Dives

After three quarters of strong and steady growth to start the year, gasoline prices took a massive dive in November and December. Peaking in May, average prices were at their highest since late 2014. The rise came in part because of the transition toward a more expensive seasonal blend. Additionally, structural factors like higher crude oil prices and gasoline demand, along with decreasing inventories played a pivotal role as well.¹⁶

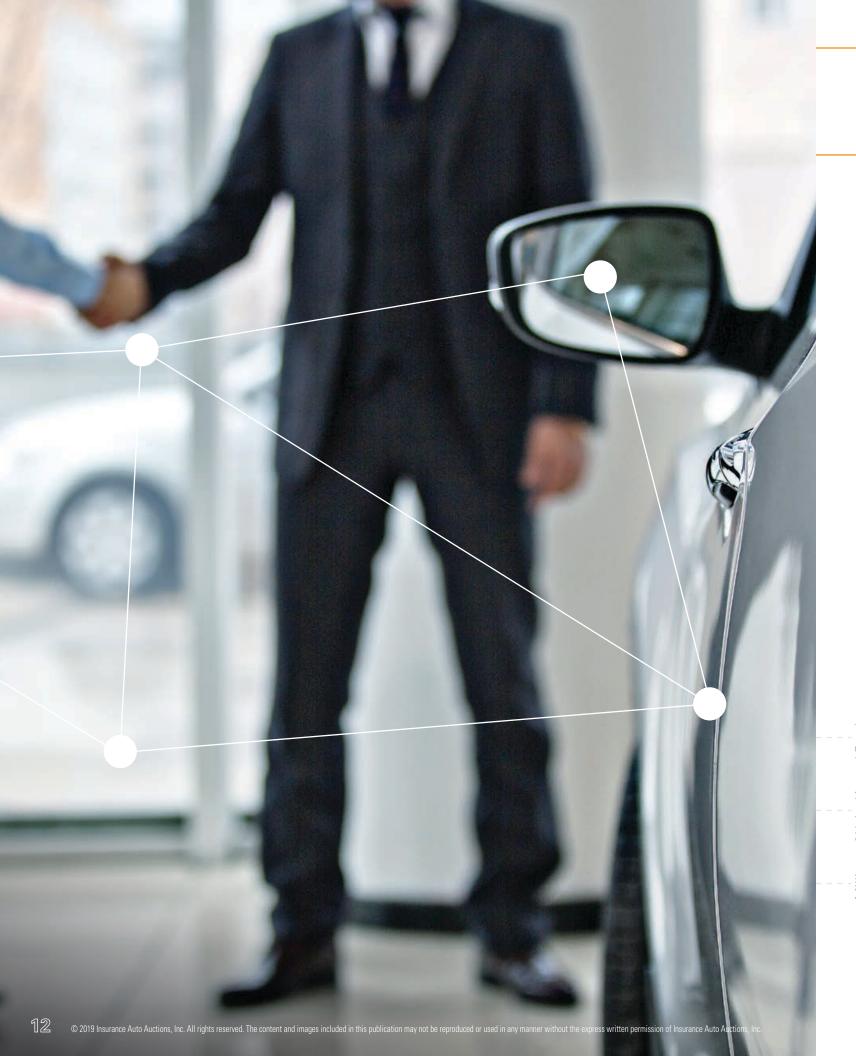
Price increases leveled out in Q3, and saw a consistent decline during the last 12 weeks of the year, finishing with a lower average price than we saw in January. The structural factors that contributed to rising prices in the first half of the year reversed in the second half, but not enough to push average prices below 2017 levels.¹⁷ In fact, average gasoline prices were up 12.8% in 2018, an increase of \$0.30 per gallon.

Diesel prices followed a similar pattern to gasoline throughout the year, with 2018 year-over-year average price having increased by 19.8%. The Energy Information Administration pinned this result to higher demand. That demand came from strong global growth in the first half of the year, most notably South America, which has had trouble sourcing oil from Venezuelan refineries. Partly due to refinery damage incurred during hurricane season last year, by May, inventories had reached their lowest levels since 2014.

Overall, diesel finished the year just over \$0.53 per gallon higher than its 2017 average price.

U.S. Average Monthly Price of Gasoline





SECTION TWO

AUTOMOTIVE INDUSTRY



2017: 17.2 million units 2016: 17.3 million units

New Vehicles Sales Beat Expectations

After a record-setting 2016 and a year-over-year dip in 2017, new-vehicle sales were back on the rise in 2018. Light truck demand continued trending upward, with an 8.0% increase from 2017 levels. On the other hand, passenger car demand saw a decrease of about 13.0%. In the resulting vehicle mix, light trucks represented about 70.0% of all new sales, up from about 65.0% in 2017.¹⁹

Seasonally adjusted quarterly sales were above 17 million units for all quarters except Q3, which came in just below, at 16.9 million. Tax cuts

are often cited as one reason 2018 volumes exceeded expectations. Yearly reductions in average taxes paid ranged from about \$435 to just under \$2,200 for taxpayers in the middle three-quintiles of the income distribution.²⁰ Despite a slight dip, incentives remained historically high and interest rates for financing new vehicles increased about 60 to 70 basis points over the year.²¹ Along with higher average new-vehicle prices, the effect of these factors on new sales growth is difficult to decipher. Nonetheless, 2018 finished strong, posting average seasonally adjusted sales of 17.5 million units in Q4.

U.S. Lightweight-Vehicle Sales: Automobiles and Light Trucks



SECTION THREE

SEGMENT ANALYSIS

IAA's framework for analyzing the salvage vehicle market includes six indicators of industry health.

Whole Crushed Auto-Body Prices

Compiled monthly by *American Recycler*, this measures five regional monthly averages for whole crushed car prices.

Metal Prices

Aluminum (London Metal Exchange spot prices), Platinum (Johnson Matthey base prices) and Palladium (Johnson Matthey base prices).

Vehicle Parts and Equipment Prices

A Bureau of Labor Statistics index that measures the average change over time in consumer prices paid for vehicle parts and equipment.

Used-Car Price Index

Measures the average monthly selling price of used cars and light trucks in the whole-car auction industry; compiled by ADESA, IAA's sister company.

U.S. Dollar Index

A Federal Reserve Bank of St. Louis index that measures the value of the U.S. dollar against an index of seven major currencies: the euro, Canadian dollar, Japanese yen, British pound, Swiss franc, Australian dollar and Swedish krona.

Index of Foreign Buyers

An index measuring the percentage of High Grade IAA vehicles sold to buyers from countries outside the United States.

To more accurately track how these six indicators relate to the market for salvage vehicles, IAA divides its inventory into three segments based on selling price. Each vehicle grade has unique characteristics and reacts to the aforementioned market factors differently.

Low Grade Vehicles

represent the bottom quintile (bottom 20%) and are older, have more miles or are more damaged than the average vehicle sold at auction. These vehicles are primarily purchased for their usable parts or scrap value. Therefore, their value is tied to the price of parts and scrap metals.

Mid Grade Vehicles

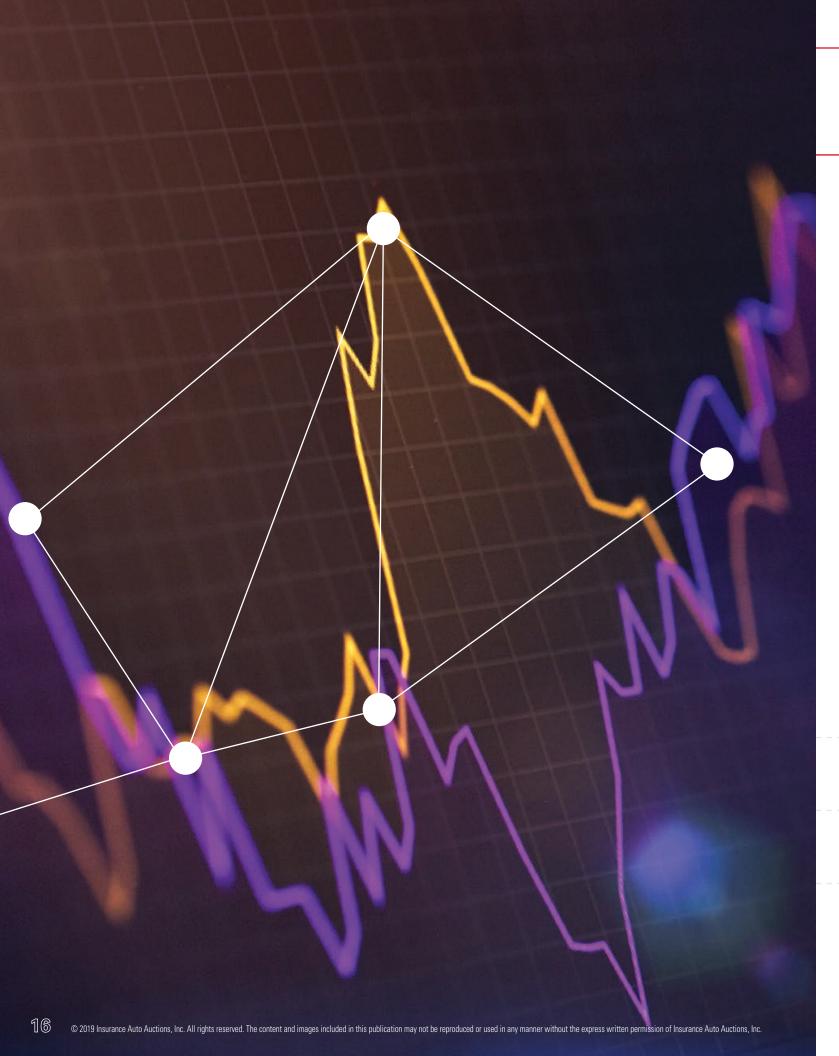
represent the middle three quintiles (middle 60%) and compose the largest portion of IAA's inventory. These vehicles range from those that will be dismantled for parts and scrap to those that will be repaired and driven again.

High Grade Vehicles

represent the top quintile (top 20%) and tend to have little or no damage. This segment also includes high-value vehicles with desirable parts.







SECTION FOUR

ECONOMIC INDICATORS



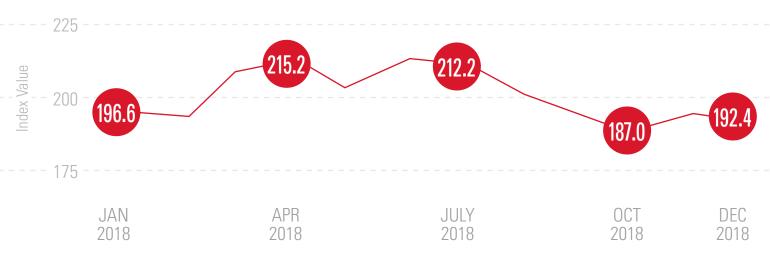
2017 Average: \$1742018 Average: \$202

Fast Start, Slower Finish for Whole Crushed Auto-Body Prices

Crushed car prices hit the ground running in 2018, with quarter-to-quarter growth marks of 20.6% and 5.3% in Q1 and Q2, respectively. The first two quarters were reflective of a an increase in steel prices, which jumped 50% in June after steel tariffs were put into effect.²²

Average prices would then drop in the second half of the year, likely because of a decrease in global demand.²³ Quarterly year-over-year prices remained around 15% above 2017's average values, with the yearly average finishing at a 15.7% increase.

Whole Crushed Auto-Body Price Index

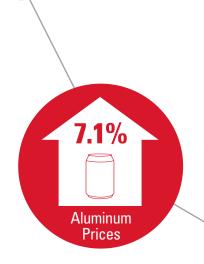


IAA tracks three key metals for their content in salvage vehicles — aluminum, platinum and palladium. Like with whole crushed auto-body prices, the value of these metals is strongly affected by the strength of the U.S. dollar because they're denominated in the currency. When the dollar gains value, metal prices typically fall because it takes fewer dollars to purchase the same amount of a particular metal. A strong U.S. dollar also turns away foreign buyers, as it means the metal becomes relatively more expensive for those customers, decreasing demand and consequently the prices.

A Long Streak Comes to an End for Aluminum

After 25 consecutive months, the streak of year-over-year monthly price increases broke in September. Not surprisingly, aluminum prices reached a seven-year high in April after the U.S. imposed sanctions on United Co. Rusal, a major player in the aluminum production supply chain. As a result, market concerns over the supply shift pushed prices upward, but with

investors expecting the U.S. to walk back enforcement of the sanctions, those numbers ultimately came back down in the third quarter.²⁴ Likely adding to the downward pressure on aluminum was an appreciation of the U.S. Dollar in late 2018. Ultimately, the metal's average price per pound concluded the year 7.1% higher than its 2017 mark.



2017 Average: \$0.89 2018 Average: \$0.96

Platinum Zigs Palladium Zags

Average platinum prices fell for the 7th straight year. It was a different story for palladium, which climbed to the best year-over-year performance of all the macro-indicators IAA tracks. Platinum's struggles in 2017 continued in 2018. A stronger dollar combined with lower purchases of diesel-powered vehicles, which is a significant source of the metal's overall demand, contributed to the continued decline of the metal's price.²⁵ As a result, platinum stockpiles are growing, and continue to do so, as

it shares its mining crop with palladium — a mining operation that remains lucrative. ²⁶ The latter metal continues to benefit from increasing demand for its use in gas-engine-powered vehicles. The price point of the metal exceeded platinum's for the first time ever in 2017, and maintained above parity for all of 2018. The price gap steadily accelerated throughout the year, ultimately averaging \$152. It was a significant increase in comparison to the -\$72 difference in 2017.



2017 Average: \$953.0

2018 Average: \$884.3



2017 Average: \$874.5

2018 Average: \$1,036.7







UCPI 0.4%

2017 Average: \$114.02018 Average: \$113.6

2017 Hurricanes Still a Factor for Used-Car Price Index

With the exception of Q3, each quarter of 2018 featured modest year-over-year decreases. Due to a lower share of younger, off-lease vehicles than in 2017, the first and second quarter saw their yearly price comparisons drop a bit. Third quarter prices shifted slightly upwards, influenced by an increase in the mix of off-lease units. However, wholesale values were still

slightly lower than in Q3 of 2017, as replacement demand from Hurricanes Harvey and Irma inflated short-term prices. The same factors influenced the final three months of the year, which showed lower than average returns in comparison to 2017, when replacement demand for hurricane-damaged vehicles was at its peak. Overall, average used-car values fell by 0.4% year-over-year.²⁷

Used-Car Price Index





0.3% Foreign Buyer Index

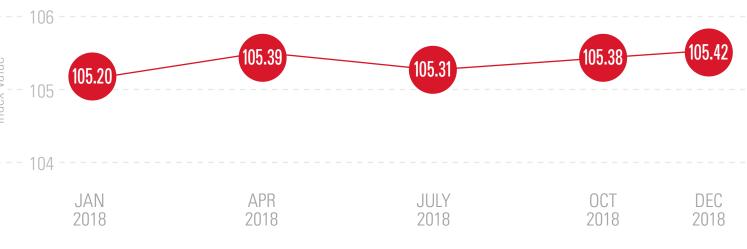
2017 Average: 105.02018 Average: 105.4

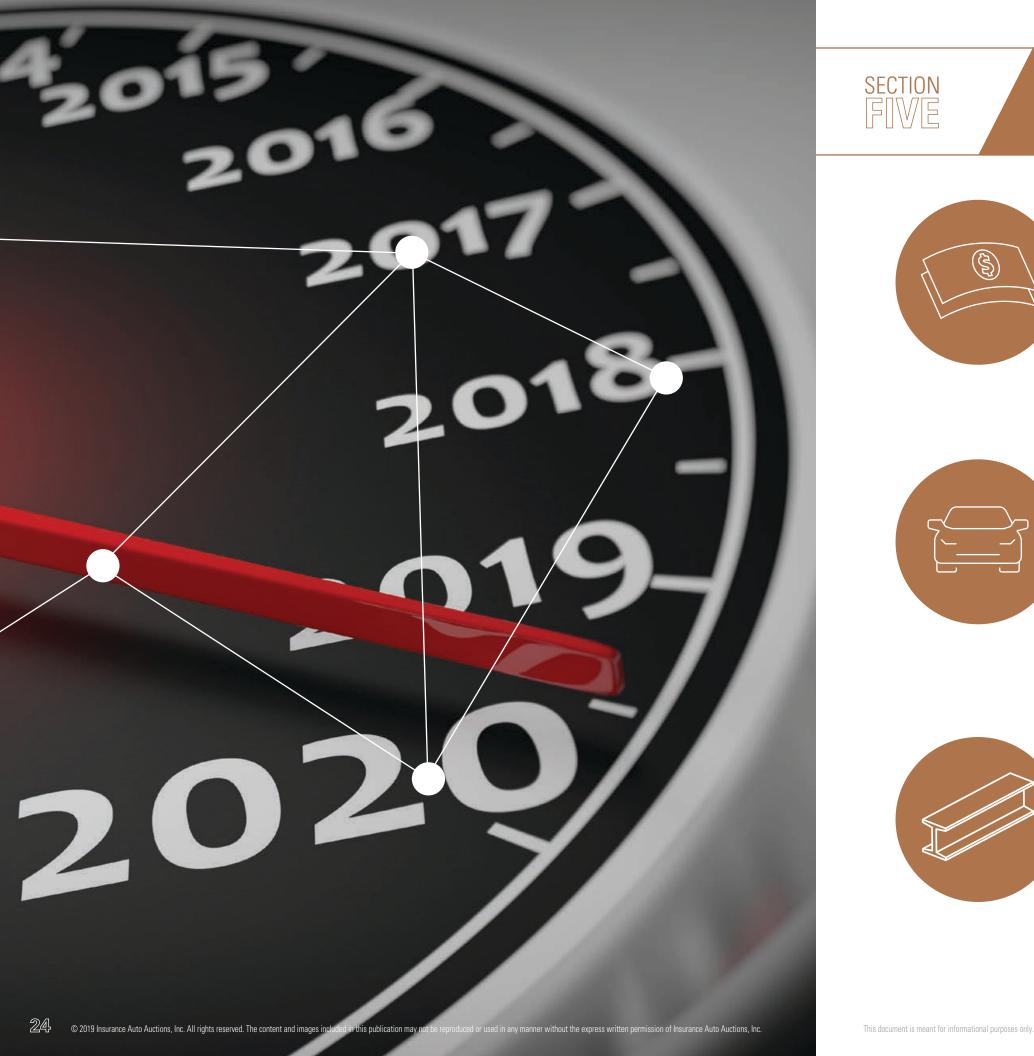
Foreign Buyer Index See-Saws with U.S. Dollar

To account for noisy month-to-month fluctuations in each indicator, IAA uses a 12-month moving average for both the Foreign Buyer Index and U.S. Dollar Index. While the foreign buyer index saw a modest increase of 0.7%, the adjusted U.S. Dollar depreciated 3.7%. On a yearly basis, foreign buying power was higher for the first half of 2018, but that growth decelerated through the final two quarters. Global

growth followed a similar pattern, with strong productivity earlier in the year that leveled out in Q3 and Q4. The unadjusted U.S. Dollar Index appreciated in the second half, mirroring the decrease in the share of purchases from foreign buyers. This likely also played a role in the index's decelerating second-half movement this year.

Index of Foreign Buyers





SECTION FIVE

LOOKING FORWARD



U.S. Economy Forecasts: Growth

The First Quarter Federal Reserve Survey of Professional Forecasters predicts a 2019 median forecast for annualaverage over annual-average Real GDP growth of 2.4%. Additionally, the median

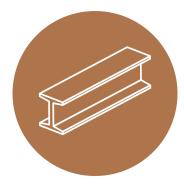
forecast for average unemployment rate and average monthly payroll increases come in at 3.9% and 191.8 thousand jobs, respectively.²⁸



A Down Year Could Loom for the Automotive Industry

The National Automobile Dealers Association (NADA) forecasts a drop in new vehicle sales, falling from 17.2 million in 2018 to 16.8 million newvehicles sales in 2019. Though strong labor market conditions tend to be favorable for vehicle sales, concerns over rising prices and increasing auto loan rates have lowered the 2019

prediction to 1.1% fewer year-overyear new-vehicle sales. NADA noted that relatively low gasoline and diesel prices have shifted consumer preference towards light trucks. Along with a prediction that fuel prices will remain relatively stable, the Association does not forecast any major shift in preferences back toward passenger cars.²⁹

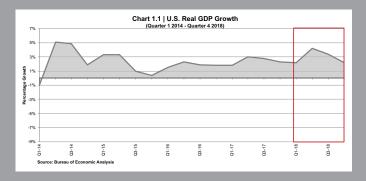


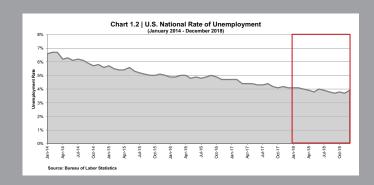
Metals

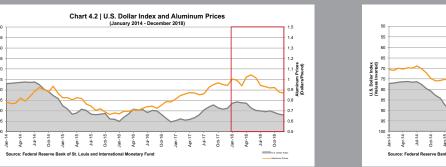
Platinum and palladium prices look to be highly dependent on the strength of the dollar and vehicle demand. A Reuters poll for 2019 shows a median forecast for average platinum at \$856 and palladium prices coming in at and \$1,200.30

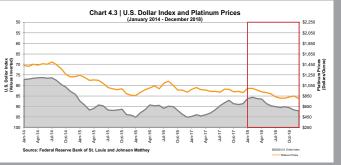
Reuters also reports that a poll of 30 analysts for the London Metals Exchange indicated a median 2019 aluminum price forecast of \$1,978/ metric ton (\$0.90/lbs). Total Chinese aluminum exports will likely be the largest factor in moving the metal's 2019 price.31

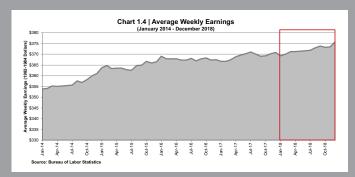
INDEX OF CHARTS

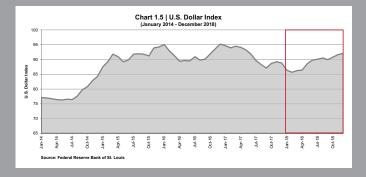


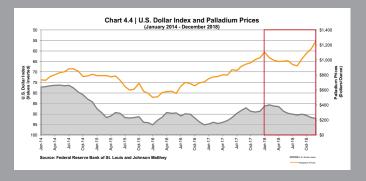


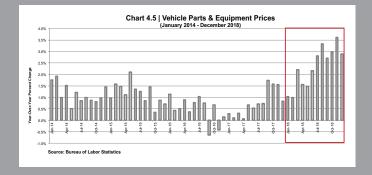


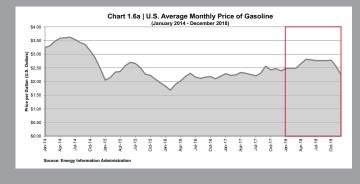


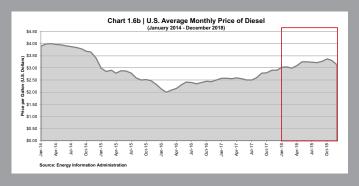


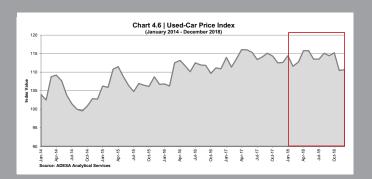


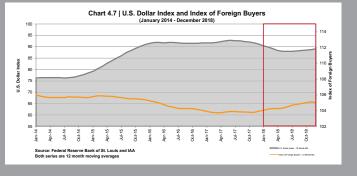


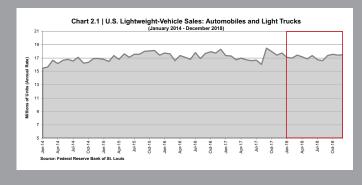


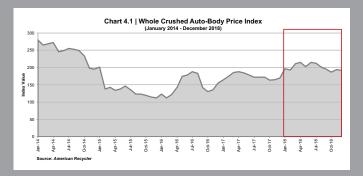












The U.S. Dollar Index in charts 4.2-4.4 is inverted to clearly showcase the relationship between the value of the U.S. dollar and metals prices.

Back to Contents

- 1. US Department of Labor. "Databases, Tables & Calculators by Subject," Data.bls.gov. April 2019.
- 2. Bureau of Economic Analysis. "Gross Domestic Product, 4th quarter and annual 2018 (third estimate); Corporate Profits, 4th quarter and annual 2018," Bea.gov. March 2019.
- 3. Krisher, Tom. "US New-Vehicle Sales in 2018 Rise Slightly to 17.27 Million," Foxnews.com. January 2019.
- 4. Marklines. "USA Flash report, Sales volume, 2018," Marklines.com. December 2018.
- 5. Zabritski, Melinda. "State of the Automotive Finance Market," Experian.com. December 2018.
- 6. Bureau of Economic Analysis. "Gross Domestic Product, 4th guarter and annual 2018 (third estimate); Corporate Profits, 4th guarter and annual 2018," Bea.gov. March 2019.
- 7. Torry, Harriet. "U.S. Economy Grew 2.6% in the Fourth Quarter," WSJ.com. February 2019.
- 8. Chandra, Sho. "U.S. Payrolls Rise 312,000, Wages Accelerate in Jobs Blowout," Bloomberg.com. January 2019.
- 9. Kiernan, Paul and Chaney, Sarah. "Strong U.S. Job and Wage Growth Provides Assurance on Economy," WSJ.com. January 2019
- 10. Federal Reserve Bank of St. Louis. "Average Weekly Hours of All Employees: Total Private," Fred.org. March 2019.
- 11. Federal Reserve Bank of St. Louis. "Average Hourly Earnings of All Employees: Total Private," Fred.org. March 2019.
- 12. US Department of Labor. "Employment Cost Index Summary," Bls.gov. January 2019.
- 13. Cassleman, Ben. "U.S. Job Gains Show Employers Shrugged Off Government Shutdown," NYtimes.com. January 2019.
- 14. Financial Times. "Reasons for a Weak Dollar," (SUBSCRIPTION NEEDED FOR MORE INFO)
- 15. U.S. Energy Information Administration. "National Average Gasoline Prices Approach \$3 Per Gallon Heading into Memorial Day," Eia.gov. May 2018.
- 16. U.S. Energy Information Administration. "U.S. Average Retail Gasoline Prices Ended the Year Lower than they Started." Eia.gov. January 2019.
- 17. U.S. Energy Information Administration. "High Gasoline Inventories Help Drive U.S. Refining Margins to Five-Year Lows," Eia.gov. November 2018.
- 18. Saefong, Myra. "Here's Why Diesel Prices Are Aiming for Record Highs," Marketwatch.com. May 2018.
- 19. Marklines. "USA Flash Report, Sales Volume, 2018," Marklines.com. December 2018.
- 20. Steverman, Ben, Merill, Dave and Lin, Jeremy. "A Year After the Middle Class Tax Cut, the Rich Are Winning," Bloomberg.com. December 2018.
- 21. Cyrill, Charles. "NADA Forecasts 16.8 Million New-Vehicle Sales in 2019," Nada.org. December 2018.
- 22. Rappeport, Alan. "U.S. Steel Companies Face Downturn Despite Trump Claims of Revival," NYtimes.com. January 2019.
- 23. Lasky, Zach. "Scrap Metal Market: December 2018 Steel Prices Going Forward," Advanced Remarketing Services. December 2018.
- 24. Burton, Marke and Fedorinova, Yuliya. "Aluminum Risks Return to Crisis With Rusal Left Out in the Cold," Bloomberg.com. September 2018.
- 25. Rowling, Ruper. "Platinum's Worst May Soon Be Over Despite Record Bearish Bet," Bloomberg.com. July 2018.
- 26. Fickling, David. "Palladium Still Isn't Pricey Enough," Bloomberg.com. January 2019.
- 27. Kommentary, Kontos. Adesa Auctions.
- 28. Federal Reserve Bank of Philadelphia. "First Quarter 2019 Survey of Professional Forecasters," Philadelphiafed.org. March 2019.
- 29. Cyrill, Charles. "NADA Forecasts 16.8 Million New-Vehicle Sales in 2019," Nada.org. December 2018.
- 30. Hobson, Peter and Bose, Arijit. "Palladium to Fall Behind Gold but Leave Platinum in the Dust: Reuters Poll," Reuters.com. January 2019
- 31. Onstad, Eric, and Bose, Arijit. "Copper, Other Metals, Set for Modest Rebound in 2019: Reuters Poll," Reuters.com. January 2019

ABOUT THE AUTHORS



Sebastian Gancarczyk

Vice President of Finance

Mr. Gancarczyk manages the organization's financial planning and budget management functions. Additionally, he leads efforts in monitoring and reporting on customer performance with emphasis on analyzing industry trends. He's been with IAA since 2004, and held several positions at the company before assuming his current role. Prior to joining IAA, Mr. Gancarczyk served as a Financial Analyst for GE Capital and Heller Financial. He is a Certified Public Accountant (CPA) and holds a bachelor's degree in accounting from National Louis University.



This document is meant for informational purposes only.

Jeanene O'Brien Sr. Vice President of Global Marketing and Buyer Development

Ms. O'Brien is responsible for all marketing efforts, including branding, public relations, advertising, market research, sales enablement and event programs. She analyzes and reports business and economic trends that impact the salvage industry, aligning IAA's expertise and leadership. Previously, Ms. O'Brien served as vice president of provider marketing.

An 18-year veteran in the property and casualty claims industry, Ms. O'Brien has a history of executing innovative brand strategy and comprehensive client growth and retention campaigns. She led marketing efforts at CCC Information Services Inc. and consulted with claims vendors, including independent appraisal firms, collision repair facilities and integrated technology providers. Ms. O'Brien started her marketing career as an associate in a Chicago advertising firm.

Ms. O'Brien holds a bachelor's degree in English from the College of Wooster (Ohio), and a master's degree in market research and advertising from Loyola University Graduate School of Business in Chicago.



IAA Two Westbrook Corporate Center, Tenth Floor Westchester, IL 60154 | 800.821.4596









IAA-Auctions.com