



CCC  
TRENDS

TOP  
HEADLINES  
OF 2021

As we head into 2022, the momentum for change is perhaps larger than we've seen in many years. The COVID-19 pandemic accelerated consumer and business adoption of technologies from mobile, to cloud, to AI, to more. Despite the rapid adoption of innovations, many of the top stories of 2021 underscored the interruptions caused by the pandemic and challenges meeting an imbalance of supply and demand. Specifically, in the collision repair and insurance industries the top stories of 2021 look at the impact of supply chain disruption, labor shortages, and the growing complexity of vehicles and vehicle repairs.

In this issue of CCC Trends, we revisit the headlines from 2021 that we think best represent the market forces that drove change within our industry over the last year, and that have the potential to drive further disruption in the coming year.

## Personal auto ownership sees a resurgence.

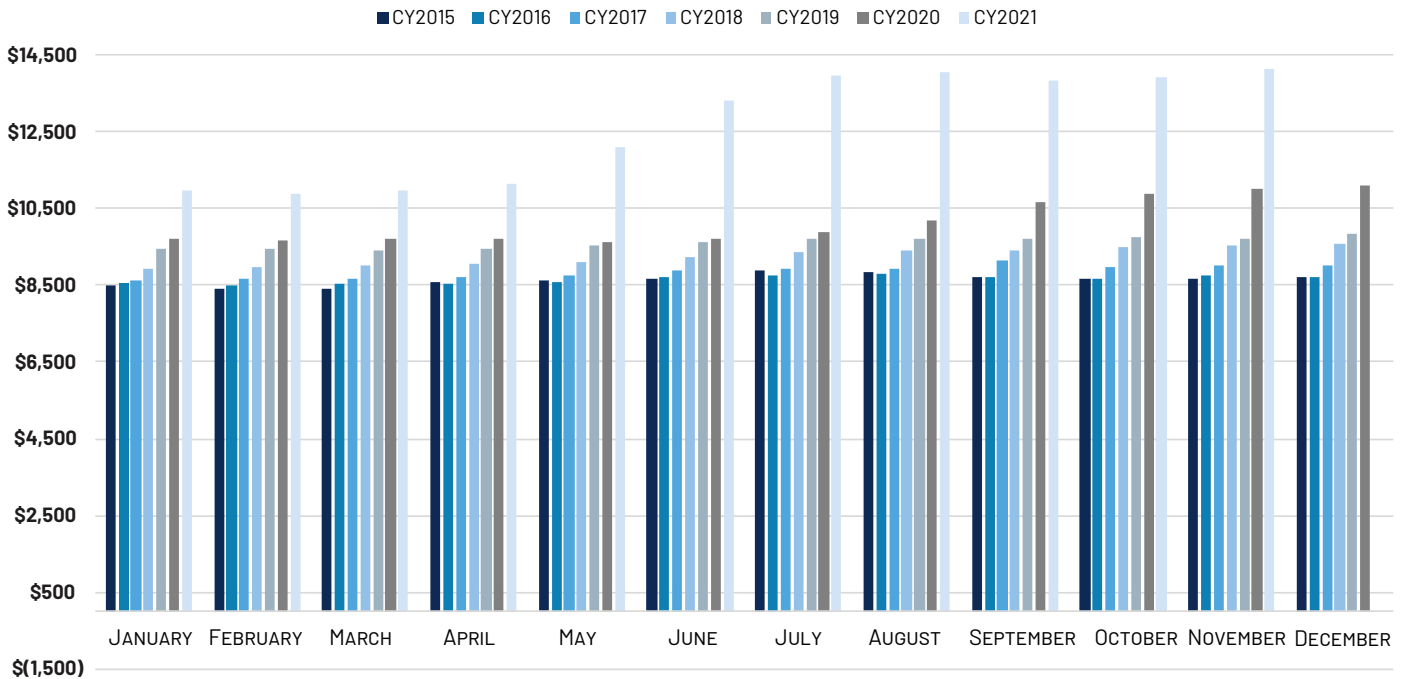
Stories like *"New York car ownership jumps nearly 40% as pandemic creates mass transit worries"* discussed how many individuals bought their very first vehicle in 2020, as pandemic fears kept people from using public transportation, ride sharing apps, and even rental scooters and bikes. After numerous years of predictions that personal vehicle ownership was dead, it instead emerged from the pandemic stronger than ever. New car registrations rose 37 percent in NYC alone between August and October 2020, with the borough of Manhattan experiencing an increase of 76 percent.<sup>1</sup> Overall CY 2020 closed out with 14.6 million new vehicle sales, better than automakers had feared back in April 2020 when new sales plummeted in response to the pandemic. Early in 2021 analysts projected new vehicle sales in 2021 would recover further, potentially hitting the 16 million mark. Unfortunately, automakers experienced significant disruption in new vehicle production throughout 2021, largely due to major shortage of semiconductor chips – underscoring possibly the biggest story of 2021 – supply chain disruptions.

## Global automakers hit by major shortage of semiconductor chips.

Numerous variations of this headline *"Chip Shortage Hits Global Automakers"* appeared throughout 2021. After cancelling orders for semiconductor chips in April 2020, automakers soon discovered they could no longer get their hands on them, starting out 2021 with major disruptions to new vehicle production that would snowball through the course of the year. Effects rippled through the industry driving down new vehicle production and driving up new and used vehicle prices. Total loss vehicle loss costs soared, reflecting the significant increases in used vehicle prices in 2021 (see Figure 1).

## Figure 1: National Industry Non-Comprehensive Average Adjusted Total Loss Vehicle Value by Calendar Month

SOURCE: SOURCE CCC INTELLIGENT SOLUTIONS INC. DATA AS OF 29NOV21



With fewer new vehicles available for sale, demand for used vehicles surged, driving prices up to levels previously not seen. *“Used Car Prices Soar, Depreciation Rates Drop”* was just one of numerous stories highlighting the rise in used vehicle prices and improved vehicle retention.

While several automakers have indicated they are starting to see supplies of chips improve, pent-up demand from nearly 4.5 million fewer new vehicle sales in 2021, and significantly lower inventory levels overall will mean tighter inventories likely through Q4 2022.<sup>2</sup> Less supply with high demand means new and used vehicle prices will likely remain elevated through most of next year.

## U.S. inflation soars, as Consumer Price Index rises 6.2% in October 2021 from October 2020, the biggest 12-month jump since 1990.

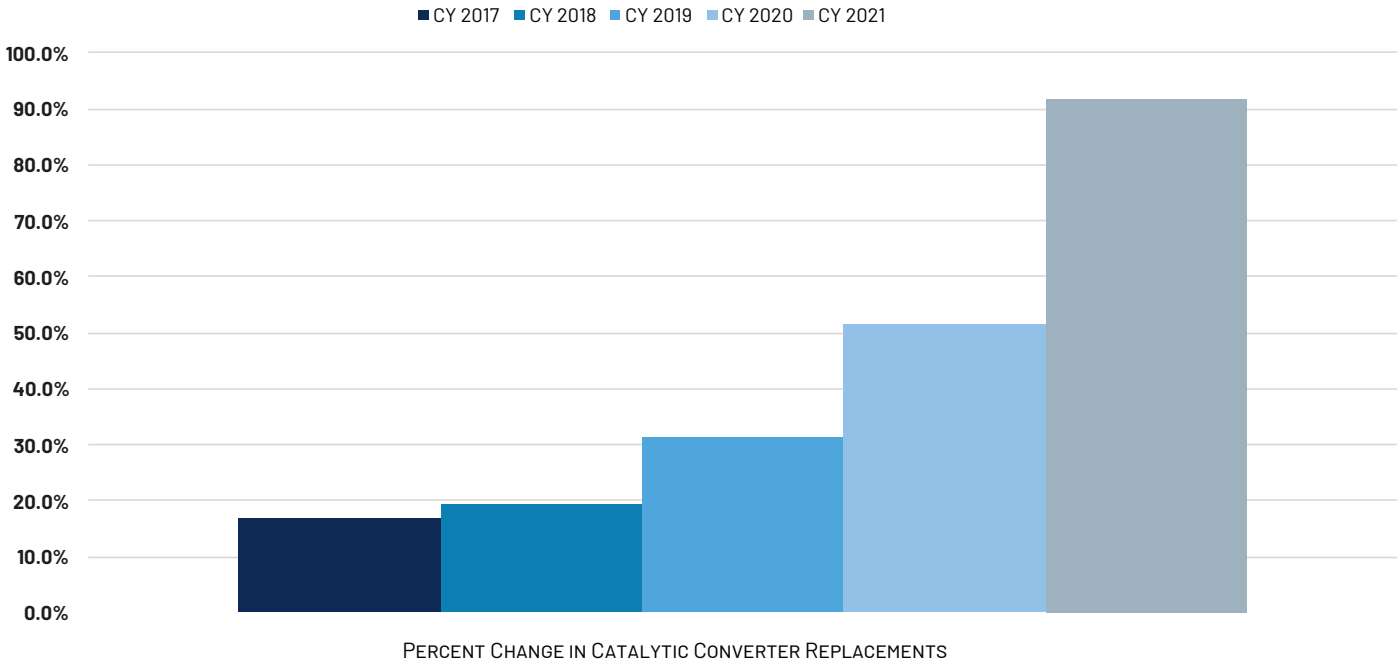
During the early part of the pandemic in 2020, companies eliminated jobs reduced investment and elected not to restock goods. With most countries in some form of lockdown, industries like mining and manufacturing were closed, resulting in fewer raw materials and goods to meet the surge in demand that came with huge government stimulus and availability of vaccinations. As the global

economy ramped up to meet demand, it ran into numerous roadblocks from the Delta variant of COVID-19 and even a ship blocking a key trade route; *“A big ship got stuck in the Suez Canal and blocked traffic. Again.”*

In recent months, labor and raw material shortages have driven U.S. inflation to highs not seen in decades. The cost of things like lumber, steel, eggs, bacon, hard metals surged. Rhodium, palladium and platinum prices soared, and have ramped up thefts of catalytic converters: Stories like this *“Thefts Of Catalytic Converters Spike Amid Pandemic”* highlighted the significant increase in catalytic converter theft experienced across the U.S., with industry-wide auto claims data collected by CCC on behalf of its customers revealing a 90 percent increase in the number of catalytic converter replacements in CY 2021 from one year prior (see Figure 2)

**Figure 2: National Industry Percent Change in Catalytic Converter Part Replacements from Prior Calendar Year (CY 2016 – CY 2021)**

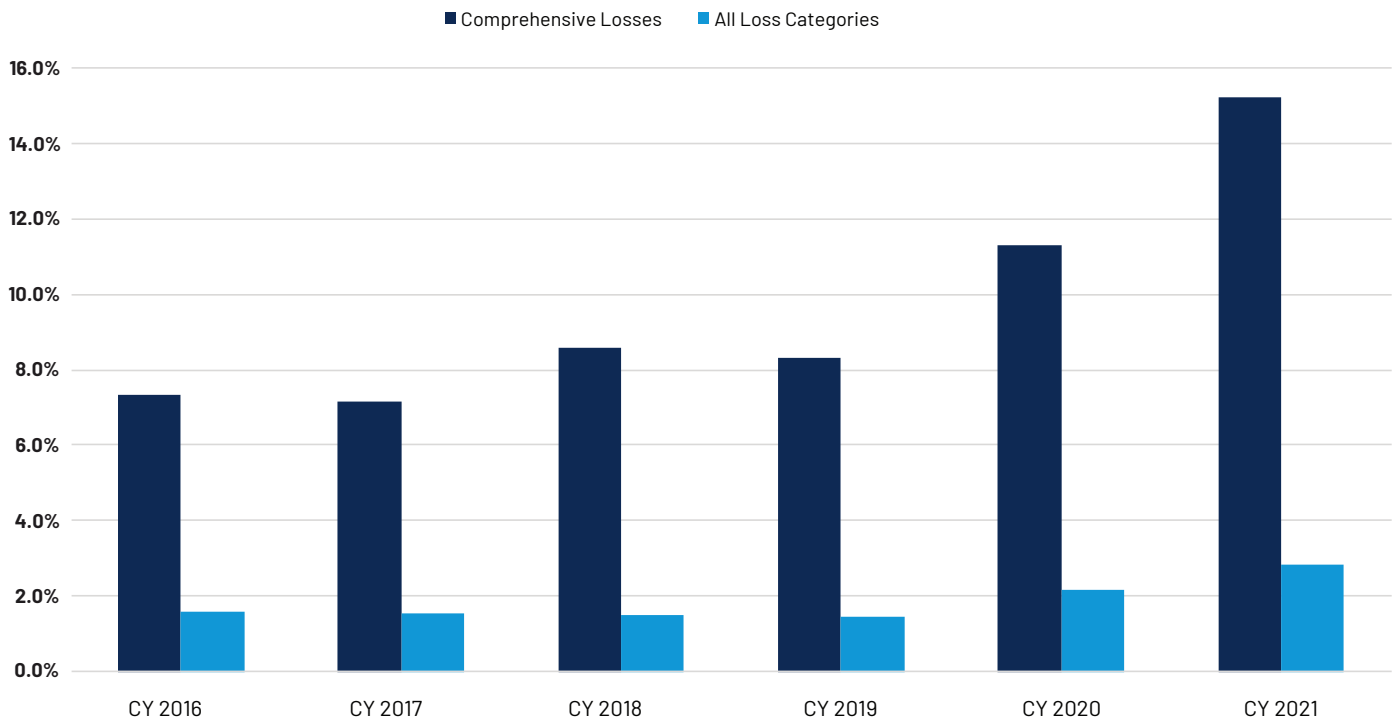
SOURCE: SOURCE CCC INTELLIGENT SOLUTIONS INC. DATA AS OF 29NOV21



Auto thefts, partial or total, were up across the board per NICB. The story *“Violent Crime and Auto Thefts Continue Record High Trends”* reported CY 2020 saw the most vehicle thefts in more than a decade, with theft volumes climbing 13 percent in the 12 months from June 2020 forward. Industry-wide, total loss theft rates have climbed steadily each quarter, with the latest data showing thefts accounted for over 3 percent of total loss volume across all loss categories, and 15 percent of comprehensive losses (see Figure 3).

### Figure 3: National Industry Thefts as Percent of Total Loss Valuation Counts CY 2016 – CY 2021

SOURCE: SOURCE CCC INTELLIGENT SOLUTIONS INC. DATA AS OF 29NOV21



Finally, magnesium may be the next key component holding up automotive production. China produces 85 percent of global magnesium supply, and had slashed production in 2021, reducing supplies needed by auto suppliers to produce lighter weight vehicle components integral to EV manufacturing: *“Automakers say magnesium shortage not a problem, for now.”*

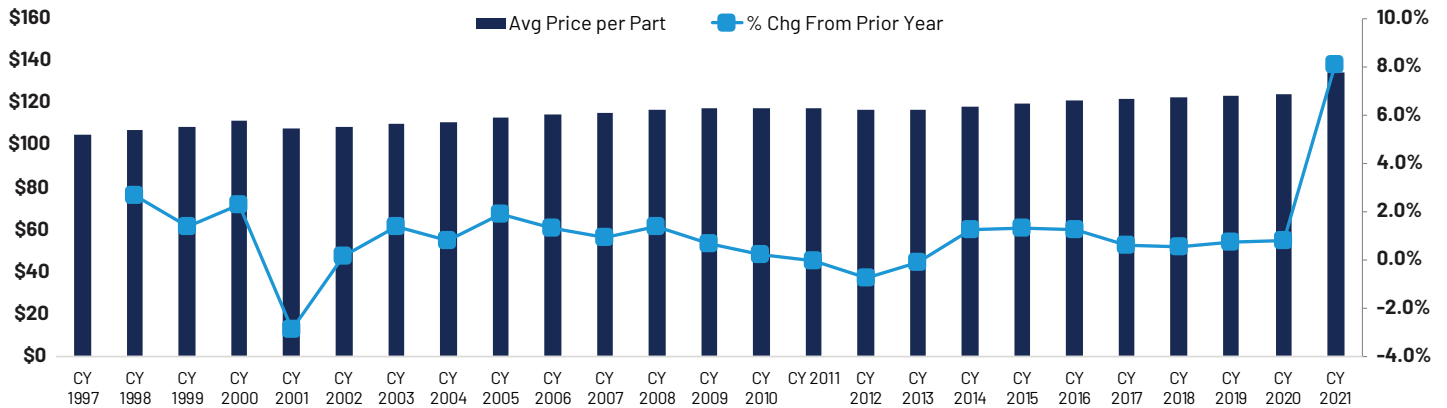
Shortages of labor (specifically for truck drivers and port workers), available shipping containers, rail and ship capacity, and warehouse space have also driven up the cost of replacement auto parts to record levels (see Figure 4). Through November the average price per part (all parts and part types) had increased 8.1 percent in 2021 versus the average for full year 2020.

### The pandemic wasn’t the only thing that caused large increases in fatalities in the U.S. in 2021.

NHTSA and GHSA show motor vehicle fatalities jumped in 2021 (see Figure 5) *“USDOT Releases New Data Showing That Road Fatalities Spiked in First Half of 2021.”* Pedestrians killed in a motor vehicle accident saw some of the largest increases in 2021 *“States Step Up Efforts to Protect People Walking Amid Surge in Unsafe Driving During Pandemic”*

## Figure 4: National Industry Repairable Appraisals - Average Cost per Part (Includes All Parts Incl Attachments Across All Part Types)

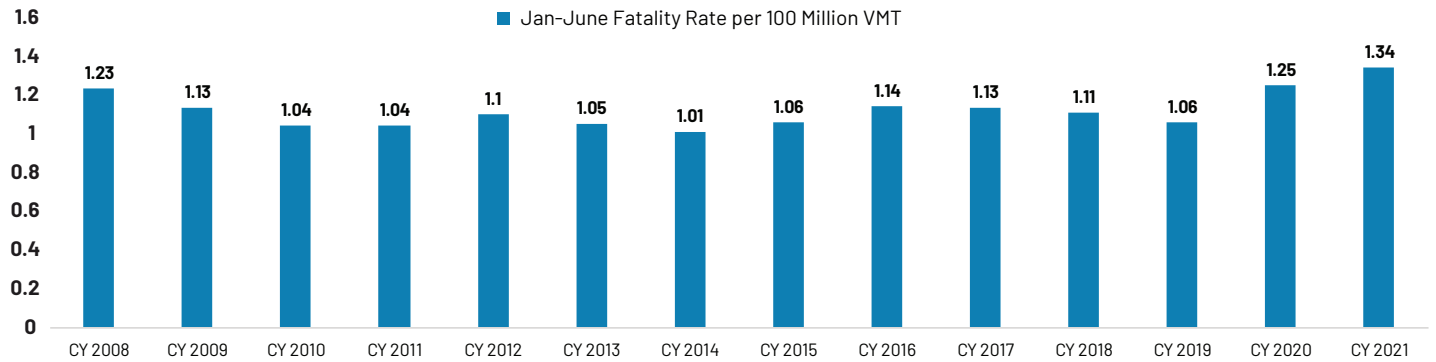
SOURCE: SOURCE CCC INTELLIGENT SOLUTIONS INC, CY 2021 DATA THROUGH 29NOV21



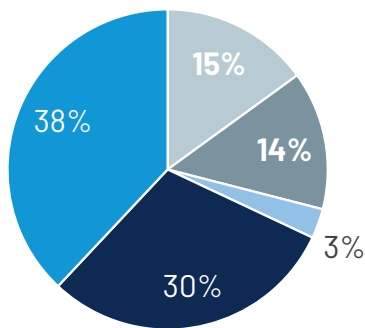
## Figure 5: U.S. Motor Vehicle Fatality Rate Climbed During Pandemic Pre-Pandemic Those Outside a Vehicle Most at Risk

SOURCE: SOURCE: NHTSA, CCC INTELLIGENT SOLUTIONS INC.

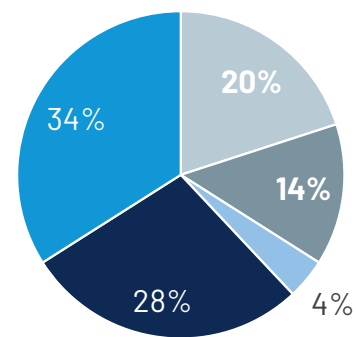
NHTSA Jan-June Fatality Rate per 100 Million VMT



CY2010



CY2019



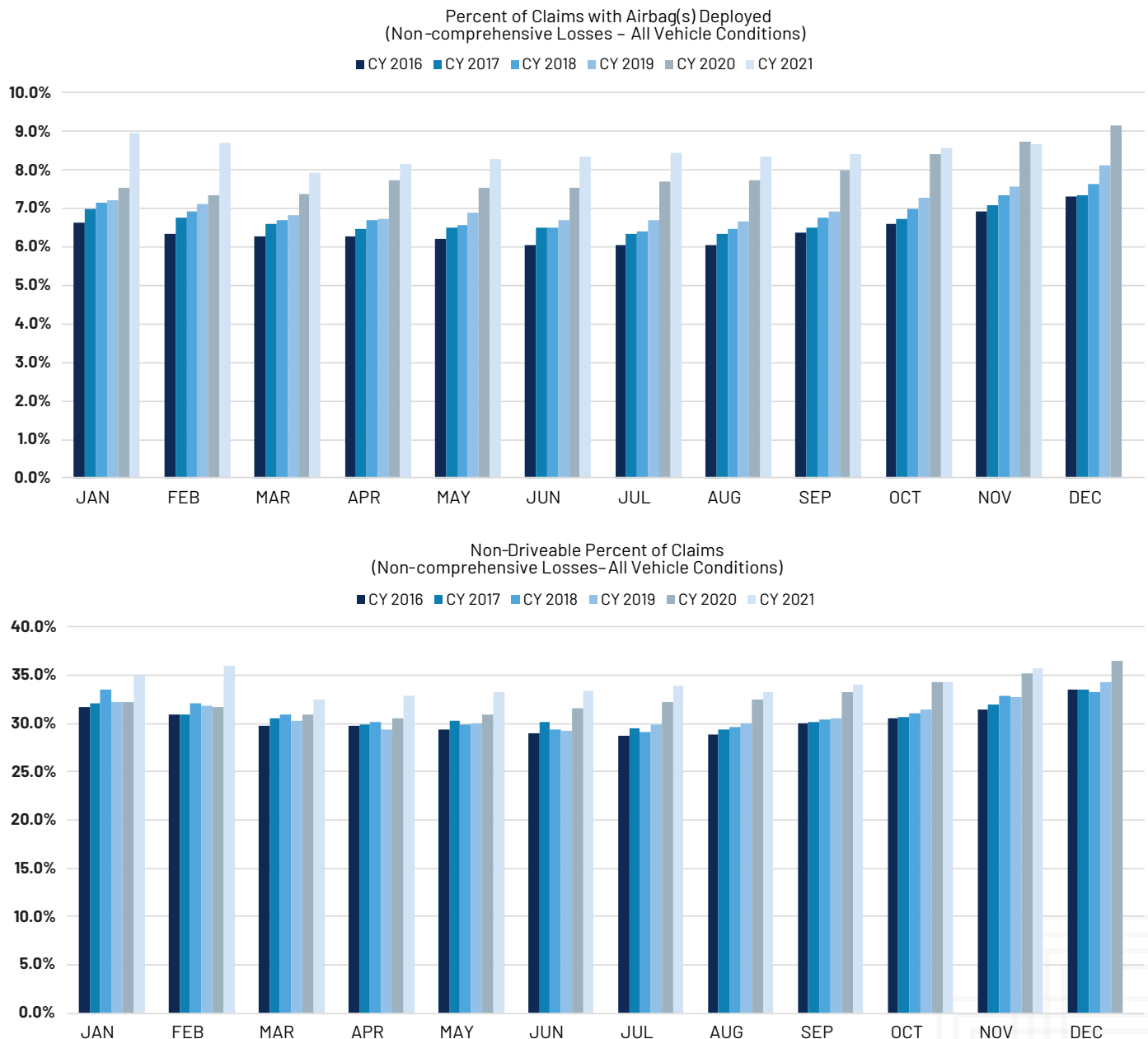
■ Pedestrians, Bicyclists and Other Non-Occupants 
 ■ Motorcyclists 
 ■ Large-Truck, Bus and Other Vehicle Occupants 
 ■ Light-Truck Occupants 
 ■ Passenger Car Occupants



Vehicle speeding has emerged as a new factor from the open roads created by the COVID-19 pandemic *“Pandemic Set off Deadly Rise in Speeding That Hasn't Stopped.”* Data from IIHS has shown higher speeds lead to significantly higher risk of injury and fatalities *“New crash tests show modest speed increases can have deadly consequences.”* Through November 2021, vehicle appraisal data collected by CCC on behalf of its customers continued to show elevated levels of non-driveable vehicles and vehicles with at least one air bag replacement needed (see Figure 6), highlighting the ongoing impact of faster speed driving.

## Figure 6: Claims Data Continues to Suggest More Higher Speed Crashes Still Occurring

SOURCE: SOURCE CCC INTELLIGENT SOLUTIONS INC.



Opioid overdoses hit 100K *“Overdose Deaths Have Surged During the Pandemic, C.D.C. Data Shows.”* The surge in deaths underscores the public health crisis that grew worse in 2020 and 2021 as fewer resources were available. Higher usage overall means more motor vehicle accidents may involve drugs (as identified by NHTSA in mid-year 2020), and more complicated treatments for auto casualty claims.

## Climate change leads to more severe storms and drought in 2021.

In February 2020, over 75 percent of the U.S. was covered in some form of ice or snow, and Texas was one of the worst hit areas. The deep freeze and significant ice cover that hit Texas took out the power grid and caused billions of dollars in damage *“Texas was warned its grid would fail in cold – and it did.”*

In 2021 the western states were clobbered by forest fires *“Global Catastrophe Recap October 2021.”* The U.S. experienced its biggest drought in 2021, with 72% of the western U.S. currently in “severe” drought or worse, raising significant risk of wildfires in coming years *“Drought in the Western United States.”*

As temperatures rise, severity of convective storms and hurricanes increase<sup>3</sup>, as do the cost of those claims. RMS reported that storm-related personal lines insurance claims increased 11 percent between 2001 to 2017, much higher than overall inflation which averaged just over 2 percent.<sup>4</sup>

## Automakers continue to integrate ADAS and connected car technologies into their fleets.

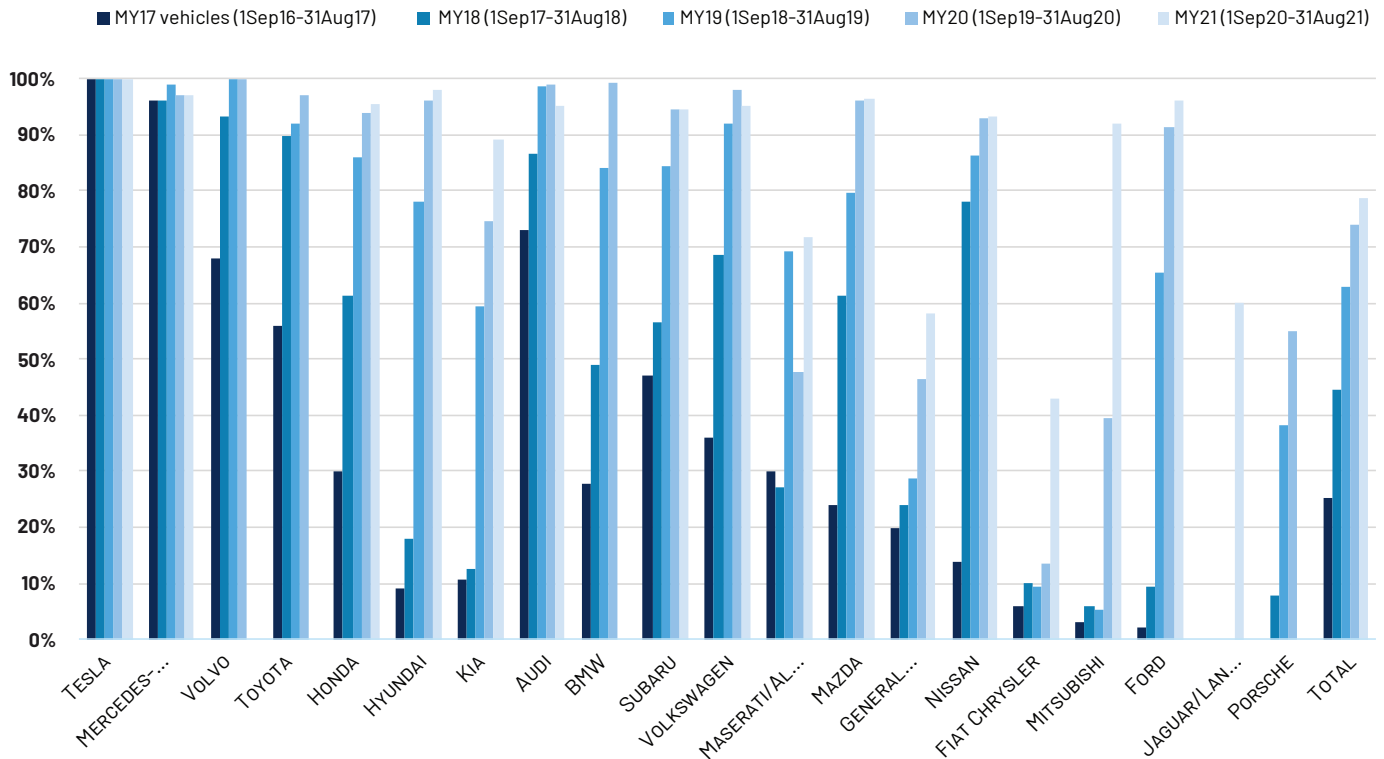
For vehicles of 8500 pound curb weight or less produced and sold in the U.S. between 9/1/2019 and 8/31/20, nearly 75 percent were minimally equipped with automatic emergency braking – up from only 25 percent four years prior. With automakers adding more ADAS technology as well as connected car technology into their vehicles, the debate regarding who should repair them has increased (see Figure 7).

In early November 2020, Massachusetts voters voted into law The Right to Repair Law Vehicle Data Access Requirement *“Massachusetts Question 1, “Right to Repair Law” Vehicle Data Access Requirement Initiative (2020)”* which requires manufacturers that sell vehicles with telematics systems in MA to provide vehicle owners and independent repair facilities with the right to access mechanical data and run diagnostics in a standardized format via an open data platform.<sup>5</sup> And in July 2021, the Biden administration issued an executive order urging the FTC to issue rules on repair



## Figure 7: Percent Change in U.S. Collision Repair Facility Count by State CY 2009 to CY 2019

SOURCE: CRASH NETWORK ANALYSIS OF U.S. CENSUS BUREAU DATA



REPRESENTS APPROXIMATELY

**80%** OF MY21\*

**74%** OF MY20

**63%** OF MY19

**45%** OF MY18

**25%** OF MY17

restrictions imposed by manufacturers. As we head into 2022, numerous issues are still being looked at by the courts, so expect more headlines in the coming year.

In late June 2021, NHTSA issued a standing general order requiring automakers and other operators of vehicles equipped with Level 2 – Level 5 ADAS technology to report all crashes *“NHTSA orders mandatory crash reports for cars with automated-driving tech”*. The goal is to better understand how these systems and the drivers using them are operating in real-world scenarios. Scrutiny of these systems has risen as motor vehicle fatalities have soared, and numerous reports of systems not working as expected have grown, *“Tesla’s Autopilot clinging on to a Cliff edge?”*.

Early data from NHTSA, automakers, IIHS, CCC and others does show that ADAS technology will ultimately help reduce auto accident frequency. Yet some of the features at Level 2 – Level 4 such as adaptive cruise control require an engaged driver and may actually be encouraging distracted driving. With increased focus on understanding how safe these ADAS systems really are, it's not surprising they also appear in the new infrastructure bill.

## The U.S. finally approves legislation focused on addressing major issues in its infrastructure

In November 2021, a \$1.2 trillion infrastructure bill was signed into law, delivering \$550 billion of new federal investments in bridges, roads, broadband, water, energy systems and more. The need to invest in U.S. infrastructure has been long overdue - *"The American Society of Civil Engineers released its 'Infrastructure Report Card' for the U.S., giving it an overall grade of C-."* Included in the bill's Title IV, Subtitle B "Vehicle Safety", are numerous provisions to expand crash avoidance technology and reduce driver distraction *"Here's What The Infrastructure Bill Will Mean For New Car Design And Safety."*

\$1.9 billion was also allocated to improve government cybersecurity. Suspected ransomware payments of \$590 million were made in the first 6 months of 2021 versus \$416 million for all of 2020.<sup>6</sup> The attack by a criminal extortion ring on Colonial Pipeline, the company controlling nearly half the gasoline, jet fuel and diesel flowing along the East Coast in May of 2021 in particular underscored the vulnerability of government and industry computer networks *"Pipeline Attack Yields Urgent Lessons About U.S. Cybersecurity"*. With losses mounting globally from cybercrime, insurers are re-evaluating the amount of cyber coverage they are underwriting, and having to raise premiums for the business they are taking on *"Insurers Cut Their Appetite for Cyber Cover as Ransomware Losses Mount."*

As more of everything moves to the cloud or becomes embedded with sensors, the definition of infrastructure will expand even further, and so too the need to protect and maintain in the future.

## Companies re-evaluate how and where their employees will work.

When the pandemic hit in early 2020, many companies furloughed employees or let them go, while those that could have their employees work remotely quickly set them up to do so. Nearly two years in, where and how people are working remains changed, and continues to transform. A lot of transformation is being driven by what has been coined The Great Resignation. In the 20 years prior to February 2021, the percent of the U.S. total workforce each month voluntarily resigning never

exceeded 2.4 percent; but by April of 2021, that number shot up to nearly 3 percent. A Deloitte survey from October 2021 of CEOs from Fortune 1000 companies reported 73 percent of CEOs anticipate the work shortage will disrupt their business over the next 12 months *“The Great Resignation is no joke”*. Labor shortages within the collision repair industry have been discussed in prior CCC Trends and continue to result in longer cycle times as repair volumes begin to build again.

Finally in a nod to the success of remote work in certain industries, Allstate announced it would be selling its headquarters *“Allstate selling HQ as insurer embraces remote work.”* As more companies consider their own approach to a hybrid work environment, the importance of tools to automate repetitive tasks and support team and business partner collaboration will grow.

As we enter 2022, the need to evaluate key issues like supply chain sourcing, telecommuting, and how to work with other business partners and customers remains ever critical. Changes to our environment, our population, and how and where we work, will continue to present both challenges and opportunities in the future. And while new technologies can often introduce new challenges, we will see technologies like cloud, mobile, and AI continuing to be strategic enablers and critical components to the ability to meet ever-evolving customer expectations.

# CCC TRENDS SOURCES

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