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The Road

Auto insurers are headed down an uncertain road as new safety technologies threaten to shrink the market.

by Tim Dobbyn

Key Points

Who's Behind the Wheel?: Automated driving features are gaining ground and new crash-avoidance technologies are reducing accidents.

Down the Road: The self-driving car will eventually shrink the market for auto insurance, but there may be room for some new insurance products.

A Welcome Mat: Auto insurance has often been an entry point for young clients and insurers will need to find a way to bring new customers on board.

The auto insurance business is eyeing an uncertain future. Automated driving features that were once a speck in the rearview mirror are gaining ground and promise a dramatic cut in crashes while increasingly taking the distracted human driver out of the picture.

There's little disagreement that the self-driving car and its precursor technologies, like automatic braking, will eventually shrink the market for auto insurance, the jewel in the U.S. property/casualty business. Instead, the arguments come down to the timing. Will the effects be felt in the next 10 years, or are we several decades away?

Insurers, in general, think the changes will be gradual, having seen revenue grow despite a parade of advances in auto safety over prior decades that have cut accident frequency but have been insufficient to overcome the growing severity of claims. Indeed, a recent upsurge of claims frequency, and severity of those claims, has seen some major U.S. insurers planning rate increases.

"I think there are insurance executives who are going to confront the emerging technology and how it is shriveling their market, but I think those executives are probably playing T-ball right now," quipped James Lynch, the chief actuary at the industry-backed Insurance Information Institute.

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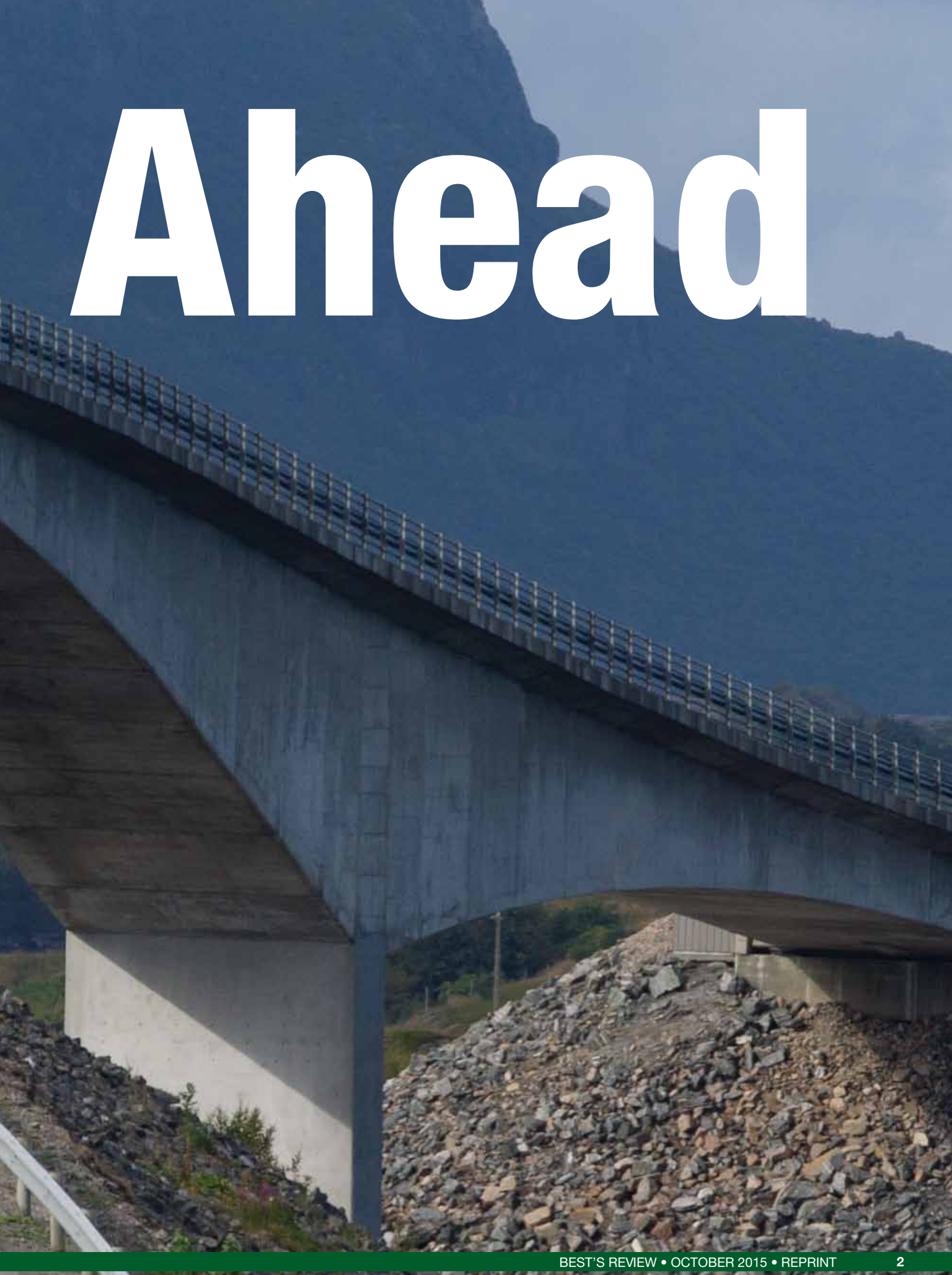
Ahead



Still, Lynch can see the eventual arrival of the truly self-driving car. "There's simply too many people working too hard on both autopilots and driverless vehicles for that not to be happening some time in the future," said Lynch.

Others think the auto insurance industry is much closer to a period of unprecedented change as ever-vigilant computers start to take over the driving. Not only will cars crash much less often, the vehicle fleet could shrink as autonomous vehicles give a further boost to ride-sharing services, and insurers could face new competition as the manufacturers of self-driving cars bundle insurance into the purchase price.

Almost every week seems to bring news on the automated vehicle front, as either an automaker, or a technology company like Google, announces a further step toward the self-driving car.

"There's a tension right now between the traditional insurers' view of what's happening in the future versus the technology companies'," said Jerry Albright, principal in KPMG's actuarial and insurance risk practice. "And my view on this is that the technology companies are saying: 'Fine, keep your point of view, we'll keep ours and, by the way, we'll sell insurance too.'"

Auto insurance is currently a huge business, with around $190 billion in private passenger auto liability and auto physical damage premiums collected from U.S. drivers in 2014, according to A.M. Best data, or 38% of all U.S. property/casualty net written premiums.

KPMG has said its models suggest a scenario where personal automobile insurance shrinks by 60% within 25 years. While product liability insurance for automakers becomes a new line of business, and commercial insurance of fleets assumes a greater proportion of the work, KPMG sees the total auto insurance pie shrinking by 40%.

That's a lot of business to try to make up. "There's going to be major disruption across the insurance carriers over the next couple of decades and not all of them are going to make it," Albright said.

"Will it be a leap to self-driving? I don't think so. It will be an evolution. There will be more and more levels of automation available."

Chris Mullen,
State Farm

Gauging the Threat

Some of the biggest U.S. auto insurers have explicitly acknowledged the threat, while sometimes playing down the pace of change.

"It will be a reality at some point. I think it's a long way off and I don't think everybody will adopt it," said Warren Buffett, whose Berkshire Hathaway Inc. owns Geico, when asked at a conference in March about the self-driving car. But he added: "The truth is, if it's a safer way of driving it's good for society and bad for our insurance business." Geico is the second-largest U.S. private passenger auto insurer according to A.M. Best.

Allstate Chief Executive Officer Thomas Wilson, writing to shareholders in April, said fewer, safer cars would benefit consumers and the environment, but could affect demand for auto insurance. Allstate, he said, was moving forward into uncertainty rather than waiting to see how autonomous cars play out.

Allstate, the third-largest U.S. private passenger auto insurer according to A.M. Best, declined to comment further for this article, but Bloomberg in July reported that Wilson calls the futuristic worst-case scenario for the business "The Jetsons," and Allstate has started a group to study the issue. "There will be fewer cars. There will be fewer accidents. And it will be safer," Wilson told Bloomberg. "When you're as big as we are and insure 16 million households, it doesn't take much of a degradation to be a real revenue issue for you. So we are focused on it."

State Farm has embraced the testing of automated vehicles as a circle member with the University of Michigan's Mobility Transformation Center.

The university's Mcity test facility opened in July, a 32-acre simulated environment that includes a network of roads with intersections, building facades, sidewalks and construction obstacles. State Farm said it is eager to learn how automated vehicle technology will affect its customers and its business. A.M. Best ranks State Farm the largest private passenger auto insurer in the United States.

The timing for the arrival of the self-driving car is uncertain but features like automatic braking and adaptive cruise control are starting to appear on mainstream models, said Chris Mullen, State Farm's director of technology research.

Mullen said fleet penetration will be one important key to timing. It takes 15 years to turn over the U.S. auto fleet and the average car on the road is about 11 years old.

"Will it be a leap to self-driving? I don't think so," she said. "It will be an evolution. There will be more and more levels of automation available."

Meanwhile, technology companies and many automakers are charging ahead with plans for self-driving cars.

The Race to Autonomy

Google is using a test fleet that includes modified Lexus SUVs and prototype vehicles that are designed from the ground up to be fully self-driving. It says on its website it has driven over one million miles on the

streets of Mountain View, California and Austin, Texas. There are "safety drivers" onboard for now.

Tesla Chief Executive Officer Elon Musk told shareholders in June he thinks fully self-driving versions of the company's cars could be marketed in about three years, although he added it could take longer for regulators to approve taking a nap behind the wheel.

Mercedes already has a formidable suite of automated driving technologies that come standard or as an option on most of its vehicles.

Nissan has said it will have vehicles capable of autonomous driving by 2020. Audi says its flagship A8 model will be capable of self-driving in 2017. Apple, according to correspondence obtained by Britain's *Guardian* newspaper, has made inquiries about an autonomous vehicle testing center located near San Francisco.

The highest level of automation, as described by the U.S. National Highway Traffic Safety Administration, is a vehicle "designed to perform all safety-critical driving functions and monitor roadway conditions for an entire trip." The driver would provide navigation input but would not be expected to be available for control at any time.

For now it looks like a human driver will still have to be available for situations the car can't handle, but in certain conditions some vehicles will soon let the driver go hands-free, subject to regulatory approval.

One of the problems for insurers is that auto insurance has often been a gateway product, an entry point for young customers who then go on to buy other insurance products, said Craig Beattie, a senior analyst with Celent, an advisory firm to financial institutions. "Don't wait for the auto insurance industry to shrink before thinking about 'how do we bring customers on board?'" he said. Countries like Sweden are aiming for zero-accident roads, said Beattie. "It's a good thing for the insured, but if there's no risk, then you don't need insurance, do you?"

Brian Sullivan, editor of the *Auto Insurance Report* newsletter, said U.S. auto insurance is a gigantic business that will remain gigantic for years to come, but there are signs it may have already plateaued, despite an uptick in both losses and premiums in 2013-2014 that he attributes to economic growth and cheaper gasoline causing an increase in miles driven. That uptick looks to have carried into 2015, with U.S. motor vehicle deaths up 14% in the first half of the year, according to the National Safety Council. Buffett sees distracted driving as a factor in rising claims. "If cars are better—and they clearly are—drivers must be worse (adjusted for mileage)," he said in an email to the *Wall Street Journal*. Geico is raising premiums "as needed," Berkshire's second quarter report said. Allstate's Wilson, in a September interview with FOX Business, warned customers could see a 5% increase in their rates.

Sullivan, however, has looked at longer-term trends. On an inflation-adjusted basis, personal auto in 2014 was essentially the same size it was in 2002. "But will it grow? That's very hard to accept that it will grow in the long run," he said.

Even before the arrival of the self-driving vehicle, data shows that new crash-avoidance technologies are reducing accidents.

"I think there's a potential for [self-driving cars] to penetrate much faster than the normal rate of fleet turnover if they prove to be as good as they are touted."

Robert Peterson,
Santa Clara University School of Law

The Highway Loss Data Institute found Volvo 2011-2012 S60s and 2010-2012 XC60s with the City Safety automatic braking feature had 16% and 15% fewer claims respectively than similar luxury vehicles under property damage liability coverage, which pays for damage to vehicles that an at-fault driver hits.

In a separate look at front crash prevention systems that function at higher speeds, the institute found 14% fewer insurance claims under property damage liability coverage for Acura and Mercedes-Benz vehicles with forward collision warning with automatic braking than for the same vehicles that weren't equipped with the technology.

Automated features are spreading in mainstream brands such as Ford and Hyundai, to just name two makers, with automatic collision braking, cross traffic alerts, lane-keeping aids and adaptive cruise control being offered.

Grappling with the Future

Robert Peterson, a professor at Santa Clara University School of Law, thinks the self-driving car could be adopted more quickly than expected as people put driving time to better uses and the safety benefits become clear. "I think there's a potential for these to penetrate much faster than the normal rate of fleet turnover if they prove to be as good as they are touted," said Peterson, director of the law school's Center for Insurance Law and Regulation.

There may be room for some new insurance products if the majority of crashes turn into product liability claims, which tend to be more expensive and take longer to settle, Peterson said. "From a public policy perspective, we may have to think about some more convenient way to compensate people who are injured."

Deutsche Bank wrote in a July note, announcing a sell recommendation on Progressive Corp., that it was commonly guessed that the "autonomous car revolution" is 10 or 20 years away. "It is possible that Progressive could dominate a new kind of auto

insurance market, but the probabilities also potentially favor new entrants who may grasp the winds of change faster than the incumbents."

Progressive declined to comment directly on the Deutsche Bank note but pointed to comments made by its chief financial officer, John Sauerland, during Progressive's investor relations meeting in May. Sauerland, citing declining accident frequency, offset by rising severity of claims and slight fleet growth, said: "We fully expect to see real modest growth over the longer term in what is approaching a $200 billion marketplace."

The Insurance Information Institute's Lynch questions a lot of the assumptions behind predictions of an imminent end to auto insurance as we know it. He said there will still need to be comprehensive coverage on vehicles to protect against fire or a tree falling, and probably uninsured motorist coverage.

Lynch said the smartest people he talks to think truly autonomous vehicles don't appear on the market until the end of the next decade. Add to that the time it takes for them to penetrate the fleet, and Lynch believes it is 2050 before such cars become the norm on the roads.

One of the promises of vehicle automation is cut road fatalities by avoiding crashes. There were an estimated 32,675 people killed in traffic accidents in 2014, according to a National Highway Traffic Safety Administration report in June despite auto safety advances that have reduced the number of people killed per mile driven since the 1920s. Driver error was the "critical reason" in 94% of a sample of crashes examined from the 2005-2007 period, NHTSA said separately in February.

Lynch said a Casualty Actuarial Society task force looked at the data and determined that about half the accidents had at least one factor that could disable or reduce the effectiveness of autonomous technology.

Celent's Beattie thinks the auto insurance environment that lies ahead will be more complicated than a steady reduction in demand. He said he can see a bump up in losses for a time as the automated fleet, that will be more expensive to repair, interacts with older vehicles.

KPMG's Albright said accidents will never go away altogether, but the auto insurance market will surely shrink.

There will always be snow, technology failures or people choosing to drive themselves. "This isn't a big bang," he said. "This is going to be a series of incremental changes that keep moving that [accident] direction down." BR

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