

The coming age of self-driving cars: What will auto insurers do when there are no drivers left to insure?

Kristine Oworm | August 21, 2015 4:42 PM ET

An uncertain future for auto insurers



This is the first of a three-part series on the technological changes and challenges that loom over the auto insurance industry.

A driver speeds around a dark curve in the road. He doesn't realize that just around the bend ambles a slow-moving, enormous tractor-trailer. The way the sedan careens around the blind curve, it seems that the worst outcome is unavoidable: a head-on collision. Very likely fatal. But then, suddenly, it doesn't happen.

Crucial seconds before the car finishes the turn, the vehicle's adaptive headlights have turned on their own to spotlight the truck. The car senses the problem with its forward-collision warning system and sends a warning to the driver, as it prepares to automatically activate the car's brakes to stop short of the truck's path.

These accident-prevention systems, already in place in many new vehicles today, are already drastically reducing the likelihood of dangerous car wrecks. The number of fatal collisions on Canadian roads is already nearly 40 per cent lower than it was just 25 years ago, but just between 2012 and 2013 (the latest Transport Canada figures available) they had dropped a remarkable 7.3 per cent, and injuries fell by almost precisely the same amount. These were the lowest recorded auto-fatality rates ever.

Of course, in the two years since then, carmakers have been developing yet more safety features. And in the not-too-distant future, an entirely self-driving car — of the sort being aggressively developed by Google and Ford — may be able to recognize the risk long before the driver even approaches that curve, slowing the car down and adjusting for the turn, even as the truck's own self-driving systems are activating their own avoidance measures. It's conceivable that sometime in our lives, the possibility of an accident like this happening could be virtually eliminated.

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Champions of the coming age of autonomous vehicles envision a time when car accidents do indeed become a regrettable horror of the past, in the same league as smallpox and bloodletting. It's easy to embrace that utopian optimism. But for all the incredible benefits an era like that could bring, there's one industry that may not be looking forward to its arrival: auto insurers.

Insuring autos is a massive industry — Canadian auto insurers wrote \$21.4 billion in new premiums last year. But a growing body of analysis is questioning what will happen as cars become increasingly automated, perhaps one day eliminating the need for drivers to be insured at all.

The technology, said analyst Meyer Shields, has the potential to no less than “eviscerate” the auto-insurance business.

“If there's much less risk involved in owning a car, then there's just less need for insurance,” said Shields, who works at the New York investment bank Keefe, Bruyette & Woods, which specializes in the financial services business.

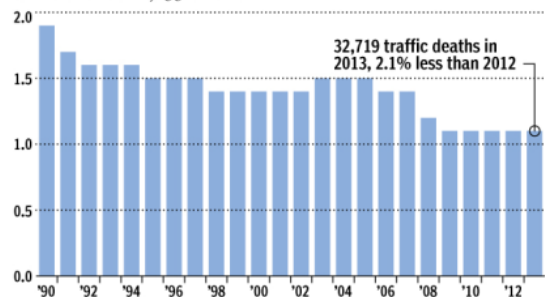
And U.S. research firm Celent predicted in 2012 that, due to the rapid decline in claims, American auto liability premiums will decline by 20 per cent from 2013 to 2017 and then plummet another 60 per cent from 2018 to 2022 as safety technologies become increasingly advanced. Physical damage premiums will drop even more dramatically under the same scenario, by 30 per cent and 80 per cent respectively.

“When I try to put this in perspective, I ask automobile insurers to put themselves in the position of record companies before iTunes came out,” said Mike Fitzgerald, a senior analyst at Celent.

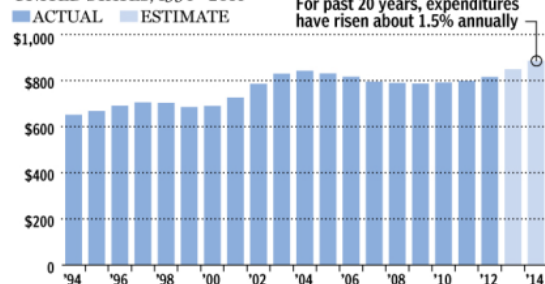
AUTONOMOUS VEHICLES

Cars are getting safer but insurance premiums are still rising. Self-driving cars could change that

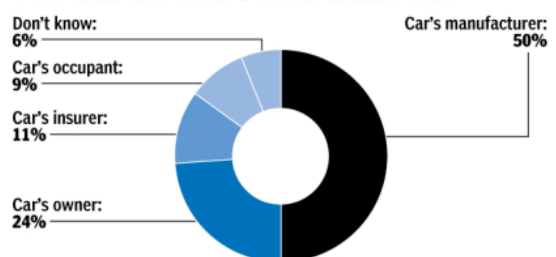
FATALITIES PER HUNDRED MILLION MILES DRIVEN, UNITED STATES, 1990 - 2013



AUTO INSURANCE EXPENDITURES IN U.S. DOLLARS, UNITED STATES, 1994 - 2014



POLL: DRIVERLESS CAR ACCIDENT RESPONSIBILITY
Q. WHO SHOULD BE RESPONSIBLE IF AN ACCIDENT OCCURRED INVOLVING A DRIVERLESS CAR?



SOURCE: INSURANCE INFORMATION INSTITUTE

MIKE FAILLE / NATIONAL POST

That means emphasizing “the huge degree of denial” recording executives were in about the coming radical transformation of their business.

“It took them literally years before they could really see how they were going to change their business model to accommodate the new technology,” he said. “This is a different version of the same tune, but when that tune starts playing, (I tell insurers to) make sure you’re really listening carefully to how you’re reacting.”

Like music after iTunes, auto insurance isn’t bound to disappear, but it will change drastically, with the liability likely shifting away from the human owners and, instead, onto those who program the robot brains that actually drive the vehicles: The car manufacturers.

But that kind of product-liability insurance is typically the domain of commercial insurers, not the companies that specialize in personal lines of coverage like home and auto insurance.

“There’s still some risk that a car can be hacked or that the technology can fail, but this is not the sort of risk that most car-insurance companies are comfortable with,” Shields said. “If we were to find out that technology in one brand of car was deficient, then that’s a major claim that would occur very infrequently but cost an enormous amount. The expertise that the car insurers have is dealing with claims that happen frequently and are typically much smaller.”

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Still, while some see the auto insurance business looking more and more like roadkill, not everyone is convinced that the shock to underwriters will be so devastating.

Certainly there is still some dispute as to whether the fully automated vehicle is really all that realistic, or more like those elusive flying cars that futurists promised so many decades ago. Last fall, Lee Gomes, a science writer for Slate.com, listed all the reasons that we’re getting our hopes too high about self-driving cars: The incredibly intricate 3D maps the cars need could not be made efficiently for the whole U.S. road network; keeping them updated with every slight change, made thousands of times a day across the nation, would be even harder; and robot cars can’t tell the difference between a big rock to be avoided or a balled up newspaper, to be driven over.

And until the day when we do have cars that have solved all these problems and shed all their brake pedals and steering wheels, drivers will still need some kind of insurance, notes Robert Bell, a partner and product-liability lawyer at Lerner LLP.

“A driver is still going to have a duty of care, but case law will have to develop on what the standard of care is when a car is more automated than it is now,” Bell said.



AP Photo/Tony Avelar, File

And from the manufacturers' perspective, even self-driving cars won't be "a game-changer in terms of the liability regime," he added.

"Because cars have so many safety systems already, the law is actually pretty robust on how to deal with what happens when a safety system fails," Bell said.

"Frankly, I would look at the autonomous car as another safety system. If it fails, the law is going to deal with it; if it works, we're all the better off for it."

In some ways, this is nothing new. The insurance industry has been adjusting to the steady decline in accidents for decades. But that has so far been offset by a much larger rise in severity, or the size of claims, according to James Lynch, chief actuary at the U.S.-based Insurance Information Institute. Accidents are fewer, but the damage being claimed, and paid for, is more costly.

Autonomous vehicles will challenge auto insurers, but they won't obliterate them

For example, the severity of bodily injury claims rose 1,251 per cent between 1963 and 2013 even though the frequency of bodily injury fell 63 per cent over the same time period. Lynch attributes this to inflation in medical expenses, but it's also related to the growing cost of repairing increasingly complex vehicles, said Alexey Saltykov, co-founder and CEO of consumer advocacy site InsurEye. (The same data show the frequency of property damage fell 55 per cent in the past 50 years while severity rose 1,666 per cent.)

At some point, though, the decline in crash frequency will outstrip the rise in severity. And, due to dramatic improvements in all different sorts of safety technology, it could well happen long before self-driving cars become widespread.

According to the U.S. National Transportation Safety Board, forward-collision avoidance systems — which use sensors to detect and avoid rear-end crashes — could prevent or reduce deaths and injuries in 87 to 94 per cent of all accidents.



AP Photo/Matthias Schrader, File)

Similarly, the Highway Loss Data Institute found that if all passenger vehicles were equipped with forward-collision warning, lane-departure warning, blind-spot detection and adaptive headlights, about one in three fatal crashes and one in five injury crashes could be prevented or mitigated.

Still, Lynch cautions against underestimating the insurance industry's ability to adapt. "Autonomous vehicles will challenge auto insurers, but they won't obliterate them," Lynch wrote in a recent article for *Contingencies*, an insurance trade publication.

There's still the need for comprehensive coverage, which insures against the risk of damage unrelated to a crash: things like theft, vandalism or a tree falling on your car.