Consumer Federation of America

Statement of
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before the
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on
"The Impact of Autonomous Vehicles on the Future of Insurance"
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Good afternoon. My name is Jack Gillis and I am the incoming executive director of the Consumer Federation of America (CFA) and author of *The Car Book*. CFA is an association of 275 state, local and national organizations working to protect consumer interests. I have been a long time auto safety advocate having begun my career at the National Highway Traffic Safety Administration and, along with many other auto safety advocates including former National Highway Traffic Safety Administration administrator Joan Claybrook, the Center for Auto Safety, and the Advocates for Highway and Auto Safety, worked closely with the insurance industry in the fight for safer vehicles. In fact, this collaboration between these parties that hold opposing views on a variety of other public policy issues, has been responsible for the majority of advances in auto safety. I've also worked with the insurance industry on efforts to keep accident repairs affordable while protecting consumers from unsafe and shoddy repair parts.

CFA is a research-based advocacy organization and we sincerely appreciate this Subcommittee raising the issue of auto insurance as it relates to the autonomous vehicle (AV). I would like to submit for the record a report recently issued by one of our members, California's Consumer Watchdog. This report goes into detail on many of the issues associated with autonomous vehicles including consumer liability, insurance practices and regulatory oversight with the widespread introduction of the AV.

We appreciate the Subcommittee's efforts today and going forward because, quite frankly, we have many more questions about insuring the AV than answers. The good news is that this Subcommittee is beginning to raise and address these questions and, as a practical matter, because the AV is still in a relatively early stage of development, there is no need to rush to judgment when it comes to resolving the intricacies associated with insuring these extraordinarily complex products.

When you consider the universal importance of the automobile to each one of us, as well as the nation's economic well-being, there are few products that have more impact on society. They play a critical role in our family life, ability to work, and for many of us, there is the emotional quotient that comes with buying and owning a particular vehicle. Because of the enormous risk associated with car ownership and operation, automobile use would be impossible without a highly functioning system of insurance. Individuals simply could not afford to absorb the risk associated with automobiles without insurance. In fact, insurance is so important to the automobile's existence and public safety, that 49 states require consumers to purchase auto insurance. Going forward, as the autonomous vehicle is introduced and becomes a primary mode of transportation, the importance of insurance will remain, but the intersection of driver, car, and insurer could change dramatically.

First of all, let me be clear: autonomous vehicles have the potential to be a technological vaccine that can significantly reduce the tragic toll that automobiles take on America's public health. However, like any vaccine, they must <u>not</u> be introduced into the market until they are thoroughly tested and proven effective. Because they are still years away from widespread introduction, we have plenty of time to raise and answer questions of liability and insurance. On a very basic level, one should expect that insurance costs associated with personal injury could

be significantly minimized as autonomous vehicles are expected to significantly reduce the number of driver related causes of accidents. On the other hand, because of the electronic sophistication needed to operate these vehicles, even the inevitable 'fender-bender' could be enormously expensive to repair.

In order to better understand the insurance needs, let me provide a brief overview of the various levels of vehicle "autonomy":

Level 0: No automation, the driver controls all aspects of the vehicle.

Level 1: Most of the functions are controlled by the driver; however, certain features can be automatic such as steering or braking.

Level 2: This is the case in which the control of certain functions that have been combined, such as steering and braking, is turned over to the vehicle and the driver can take their hands off the wheel and feet off of the pedals. However, the driver must be able to instantly retake control of the vehicle.

Level 3: This is when the vehicle can take over all critical functions and the driver does not need to monitor the vehicle's performance but must be ready to instantly take control of the vehicle at all times with notice. This is the most controversial level as driver attention is imperative yet the driver can be severely distracted due to the autonomous nature of the vehicle. The concern is that the driver will not be able to take back control in an emergency.

Level 4: This means that the vehicle can operate in a fully autonomous fashion with no interaction with the driver but only in certain environments. For example, it can be totally autonomous on the highway, but not in the city. Because of the challenges inherent in the human/machine interface, many in the industry are attempting to skip the lower levels and achieve level 4.

Level 5: This is when the vehicle is fully autonomous in all driving conditions. However, some have indicated that there still needs to be some form of human override.

When the concept of the AV was introduced, there was concern in the insurance industry that there would no longer be a need for certain insurance products. It is now understood that just the opposite will occur. The need for

adequate, comprehensive and fairly priced insurance will increase. This is not only the case on the personal front, but also on the commercial liability front as vehicle and technology manufacturers assume liability for the performance of their products.

As a practical matter, the need for insurance will be present at each level of autonomy—including the fully autonomous Level 5 vehicles. Because the vehicle mix will include autonomous and non-autonomous vehicles for some time, in collisions between autonomous and non-autonomous vehicles, liability will have to be determined. Did the computer fail, or did the "driver" of the AV err, or was the non-AV driver at fault? Beyond this traditional analysis of fault, the question of where responsibility lies will no longer solely be determined by witnesses and police reports. While initially many companies manufacturing AVs vowed to take full responsibility for accidents, they are quickly revising their positions to cover only technological failures of their own systems. Will consumers have to prove that it was the vehicle's technology and not themselves who created the accident? Additionally, what happens when a consumer inadvertently fails to, or did not know to, or was not notified to, download corrective software and that results in a vehicle failure?

There are many, many confounding questions related to insurance. Let me paint a picture of one:

Consider the fact that I will be able to program my vehicle to stop at my favorite coffee shop on the way to work. In my case, being from Massachusetts, the choice will be obvious—Dunkin Donuts over Starbucks. While in the Bay State, that may be considered a moral decision, for most of us it's clearly a matter of preference. But what about the moral decisions? For example, on the way to work my autonomous vehicle has detected a stalled semi-trailer truck in front of me and has determined, with mathematical precision, that there is physically no way that my vehicle can stop in time. However, it <u>can</u> move me out of that lane in time to avoid the truck. Imagine two choices, it can go left into a bike lane where a young, recently married couple, expecting their first child, are riding to work. Or it can go right where on the sidewalk is an elderly man, late 80's or early 90's, slowly hobbling along in his walker. Which way will the autonomous vehicle go? More importantly who will program that decision? Like my choice of Dunkin over Starbucks, will I be responsible for programming my own moral decision into the vehicle? Or will the manufacturer or software provider? Or will the insurance

company have a hand in the decision, or even underwrite policies based on which choice is embedded? More importantly where will the liability for that decision lie? And wherever that liability lies, who will insure it and what requirements will the insurer place on those being insured?

Like human drivers, with every mile driven the autonomous vehicle will be required to make thousands of potentially life altering decisions on a nearly instantaneous basis. But unlike human drivers, those decisions are pre-determined, algorithmic, removed from the instant at which they are made, and subject to external forces. This opens up significant questions related to insuring these vehicles.

As I mentioned, we have many more questions than answers, but the following are some of the concerns that we have:

There will be vehicles with wide disparities in technological prowess that will share the roads with low-tech vehicles. How will insurers consider these factors in pricing?

By necessity, the AV will be gathering tremendous amounts of personal data as they take us from place to place. Will there be liability for privacy violations? Will insurers be subject to privacy constraints, or will they use such information to establish premium charges? Who will own and who will have access to the tremendous amount of pre-crash data that will be available in an autonomous vehicle?

Communication based technology is increasingly subject to cyber security threats. Who will be responsible for the inevitable hackers, and even terrorists, who take control of autonomous vehicles and create mayhem?

Even considering today's miraculous technology, who among us hasn't had a cell phone malfunction at an important time, or experienced a software glitch on a laptop that wreaked havoc on our project? Will there be performance standards established and how will those standards impact insurance costs?

Insurers often require compliance with local motor vehicle operating compliance laws. Will there be vision tests for autonomous vehicles such as those

required of humans at the DMV? Who will set the requirements for an autonomous vehicle's ability to "see" and respond to its surroundings? We've already seen an autonomous Uber vehicle fail to see and properly respond to a pedestrian with tragic consequences.

Even with level 5 vehicles, if they are equipped with steering wheels and pedals, will the occupant be expected to take control in catastrophic situations? Keeping some human controls in the vehicle is controversial because of the incredibly complicated human/machine interface. But will keeping them in allow the shifting of liability to the driver? Or will taking them out prevent the driver from avoiding a disaster?

Moreover, AVs offer the promise to provide mobility to people with disabilities. What will happen if a blind person is in an AV in a crash? What type of insurance will be offered to cover this scenario?

Will there be an effort by manufacturers of the hardware and software to avoid strict liability for design or manufacturing defects that caused a crash? As they have demonstrated in the past, auto manufacturers have always tried to dispute their responsibility. In fact, in the few tragic AV crashes to date, manufacturers have attempted to avoid responsibility for the crashes. Especially at the lower levels of AV, will individual drivers find themselves pitted against both another injured party who filed a claim and their car's manufacturer as it disclaims liability?

Because so many AV accidents will require an inquiry into a consumer's "fault," and because this may become a more nuanced question in the era of the AV, fair pricing will require even more oversight to ensure that safe policyholders are ensured fairly priced insurance. Moreover, it will require rigorous oversight of the claims process, because the difference between the coverage available as a result of a car manufacturer's product liability compared with that available if a driver is deemed to have caused the accident could have life altering impacts on innocent victims of future accidents. And these determinations will involve more and more complicated liability questions than exist today, especially in the event of catastrophic accidents.

Let's be clear, "fault" will not be eliminated with the autonomous vehicle. The search for truth and justice in such circumstances will require the full powers

of the civil justice system. This is not the time to take away consumer's legal rights. The right to challenge corporate mistakes and reckless profit-driven conduct, in an impartial judicial forum with all the procedural protections of the civil justice system, starting with trial by jury, and including the strict liability of hardware and software manufacturers, will be essential with the advent of the AV.

As vehicle and technology manufacturers do take responsibility for product failures, strict liability must remain the norm. And should commercial liability insurance come into play, the consumer must be made whole immediately while the various business entities battle over responsibility.

How will the price of insurance be moderated in the face of very expensive technology? Even today, the sensing devices placed in inexpensive plastic bumpers are significantly increasing the cost of even the simple low-speed fender bender. What will happen when the entire vehicle is covered in critically important sensing devices? Will the manufacturers of these devices ensure that they contain proprietary technology so that there will be no competitive marketplace for repair parts? If so, insurers will be forced to increase their prices while the monopolistic manufacturers line their pockets with overpriced repair parts.

The pricing of insurance is overseen by state laws, and, to varying degrees, insurers have to get pricing approval from state regulators. Theoretically, that is based in part on demonstrable costs associated with various vehicle features. Will car companies share critically important performance data with the insurers so they can price insurance based on protective performance? Will that information be made available to the public? Will the public then be able to comparatively assess the different technologies? Will insurance companies base pricing on the effectiveness of different technologies?

It is too early to know the full financial, economic or social impacts of AVs, but insurance coverage will remain an essential protection in the era of driverless vehicles. For consumers, the pricing of insurance, always a significant concern, could change dramatically with the AV. As such we appreciate this Subcommittee's opening the door to addressing the future of AV insurance. Our expectation is that the insurance costs paid directly by consumers will go down as the liability shifts, from auto insurance to the manufacturer's/software developer's

product liability insurance or other commercial insurance. In addition, as the fleets become safer and accident rates go down, additional savings should occur.

We also need to consider the role of the federal government. Elsewhere in Congress members are considering what is called the AV START Act (S. 1885). This bill has some serious shortcomings that, if passed as is, will have a dramatic impact on auto insurance. For example, right now the bill allows potentially millions of vehicles to be sold that are exempt from safety standards; there are no provisions that insure the maintenance of occupant protection levels; minimum performance levels have not been established for the various safety features; strong protections against cybersecurity threats are absent; and, the full disclosure of post-accident performance data is not being made available to the public (including insurers). Without these basic safety considerations, insurers will just be guessing at the risk levels associated with the introduction of AVs—or be solely dependent on manufacturer performance claims.

Most importantly, at both the federal and state level, significant investments must be made in the regulator's ability to test and evaluate AV performance. The voluntary standards that the current administration is favoring simply won't work as a means of regulating one of the most sophisticated products in history.

We also need to be aware of the potential of a new form of "redlining," which would favor motorists who can afford more expensive cars with expensive technology and discriminate against those who cannot by refusing to sell them insurance, or adding surcharges to the price of insurance. For insurance to work, it must be made available to all.

Strengthened consumer protections against excessive insurance premiums will become even more important as insurance companies price the risk of automated vehicles – particularly since state insurance regulators often lack the authority (or desire) to bar abusive rates and practices.

Finally, while we have asked more questions than we have answers for, what is clear is that robust, thoughtfully regulated, and fairly administered insurance markets will be absolutely critical to the introduction of the autonomous vehicle. We look forward to developing answers to these questions and helping insure that the autonomous vehicle will live up to its enormous life-saving potential.