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**Testimony of Ian Adams
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**U.S. House Committee on Financial Services
Subcommittee on Housing & Insurance
"The Impact of Autonomous Vehicles on the Future of Insurance"
May 23, 2018**

Chairman Duffy, Ranking Member Cleaver and members of the Subcommittee,

My name is Ian Adams, and I am associate vice president of state affairs of the R Street Institute, responsible for coordinating R Street's outreach and engagement at the state and local level, as well as our research into next generation transportation. I am also an attorney at Orrick, Herrington & Sutcliffe LLP, where I advise clients on matters at the intersection of law, business and public policy with a focus on highly-automated vehicle technologies and insurance.¹

I appreciate the opportunity to testify and the work done by this committee to examine issues pertaining to both the future of transportation and the future of related insurance product offerings.

R Street is a nonpartisan, nonprofit public policy research organization based here in Washington, D.C. Through our research and outreach, we seek to promote free markets and limited, effective government at both the state and federal level, with a particular focus on issues that might be considered relatively low salience and high complexity. We have a commitment to work with broad coalitions and, wherever possible, to build support for pragmatic market-oriented proposals that can earn bipartisan consensus. As one notable example of that commitment, R Street is a part of the Self Driving Coalition for Safer Streets, a group of civic organizations and businesses dedicated to bringing the vision of fully self-driving vehicles to America's roads and highways.²

¹ <https://www.rstreet.org/team/ian-adams-2/>

² <http://www.selfdrivingcoalition.org/about/mission>

R Street's research into autonomous vehicles stems directly from our insurance project, which has been a core part of our mission since we opened our doors six years ago. Annually, we publish a "report card" evaluating the regulatory environment for insurance in each of the 50 states.³ Our work seeks to highlight the crucial role that competitive private insurance markets play in sending price signals that allow society to better evaluate, mitigate and manage risk. It is in no small part thanks to the risk-based insurance rates produced through private competition that America has significantly safer roads and workplaces today than it did 50 or 100 years ago. The prospect of lower premiums has offered strong incentives for employers, automakers and drivers to opt for safer behavior and safer processes.

However, such price signals can be muted or deliberately distorted where underwriting and ratemaking decisions are subject to explicit government-imposed price controls, as is the case in many states that require administrative "prior approval" before a rate may be used.⁴ As policymakers grapple with the opportunities and challenges posed by autonomous vehicles, they should always be mindful of the need for risk-based pricing and the types of regulatory environments best able to facilitate such outcomes. Encouraging flexible product development, deployment and pricing will be vital if consumers are to understand both the safety and financial benefits of autonomous vehicles.

Insurance in the Autonomous Vehicle Era

Role of insurance: As is true today, the role of insurance in an era dominated by highly automated technologies will continue to be to provide financial certainty to the owner and operator of a vehicle in the event of an accident, theft or other damage to that vehicle. This will remain true regardless of how such vehicles are deployed or what entity is responsible to pay insurance premiums.

However, in a world of autonomous vehicles, insurance may play additional roles as well. For example, using data shared by vehicle developers, insurers could provide real-time modifications to a vehicle's activity based on risk management models. Which is to say, while insurers historically have championed safety modifications for drivers and vehicles alike, automated systems may allow them to act proactively to modify how these systems behave.

Pricing of insurance policies: Insurance pricing will depend largely on the loss experience that autonomous vehicles have on the road, as well as the scope of the coverages considered necessary for those vehicles, which may differ from those that are standard today. It remains to be seen what access insurers will have to data related to vehicle operation, how deployed autonomous vehicle systems change over time and how existing regulatory structures will respond to near real time product and pricing demands.

Insurers will need to be able to access data related to autonomous vehicle operation if they hope to create products that meaningfully reflect risk. While we do not believe that compulsory access to such

³ <https://2o9ub0417chl2lg6m43em6psi2i-wpengine.netdna-ssl.com/wp-content/uploads/2018/04/126-1.pdf>

⁴ <https://www.rstreet.org/wp-content/uploads/2015/10/RSTREET43.pdf>

data is appropriate, there are strong incentives for autonomous vehicle developers to share vehicle information with insurers for risk management purposes. It also is important regulators not adopt policies that would meaningfully hinder insurers from being able to obtain data vital to underwriting, rating and claims-settlement practices.

Autonomous vehicles are likely to present meaningfully different approaches to operation based on what software they run. As we already see today, it is likely that vehicles will be updated on an ongoing basis. For that reason, at bottom, it is vital that insurers have maximum flexibility to develop rates for these vehicles. In practice, including both the pace at which such rates are rolled out and the rating factors that insurers are allowed to consider.

For their part, regulators also will confront evolving and unfamiliar datasets. Existing regulatory approaches to both product underwriting and rating will be stressed, as systems designed to assess risk based on the characteristics of a driver are confronted by loss experience driven – at least in part – by automation. Any regulatory structure unable to account for the behavior of the vehicle as much, if not more, than its operator, will fail to present consumers with vital price information.

For instance, in California, it is currently the case that private passenger auto policies have a prescribed hierarchy of rating factors that must be adhered to. The three most important mandatory rating factors are, in order of weight and significance: driver safety record; annual miles driven; and years of experience. An autonomous vehicle's insurance policy must account for and weigh factors that have limited relevance to the actual risk profile of the vehicle. In other words, California law mandates that certain autonomous vehicles be subject to insurance products that are irrationally priced.

Provision of Insurance – Individual versus Fleet Coverages

The frequently cited SAE Levels of Automation provide policymakers and the public with a tool to understand the capabilities of the systems installed on vehicles.⁵ Some vehicles are more capable than others at performing tasks without requiring the attention or intervention of a driver. Of course, the distinctions between systems' capabilities have direct bearing on the risk profile of the technologies as they are deployed, but they will also play a large role in determining what sort of model for deployment developers will choose to employ.

Personal vehicle ownership – and, thus, private passenger automobile policies – may still be broadly viable in the context of Level 3 technologies. If experience with Level 2 systems is indicative of future Level 3 systems, loss frequency is likely to decrease while the financial severity of losses is likely to increase. Systems employed to date have contributed to improvements in driver and passenger safety, but have a mixed track record of cost savings. There is much that autonomous vehicle developers could do improve the cost profile of their systems by using conscious vehicle engineering choices and mass autonomous vehicle production. What all of this will mean for the premiums paid by operators of highly

⁵ https://www.sae.org/standards/content/j3016_201609/

automated systems remains unclear – though we are optimistic that costs will align with favorable safety outcomes.

Level 4 and 5 technologies are more often envisioned operating in fleets, particularly in the context of ridesharing companies. Rather than private passenger auto policies, fleet operators would need commercial property and casualty coverages to cover both the physical assets and any liability their operation might pose to the lives or property of third parties. Initially, this coverage would likely need to be procured in the relatively unregulated excess and surplus lines market. However, as fleets proliferate and become larger, we expect a level of standardization for commercial line autonomous vehicle fleet policies to develop. In that context, commercial autonomous vehicle fleet coverages are likely to become admitted coverages subject to greater underwriting and rating scrutiny.

One clear benefit of the ultimate shift toward an admitted product line would be that policyholders will have recourse to guaranty associations in the event of a solvency issue with an insurer. This might prove particularly important in the event that a state moves away from the negligence-based liability system that we see today toward a model based on strict product liability. Yet, it will also mean that state insurance regulators will retain greater control of product pricing and approval – which, in some jurisdictions, may result in the perversion of cost signals.

Ultimately, conventional knowledge suggests that if Level 4 and 5 vehicles operated in fleet contexts result in meaningfully better safety outcomes vis-à-vis crash frequency, we should see significant cost savings. However, without loss experiences borne out in reality, this assumption must be understood as speculative.

The Future of Automobile Liability

Until there is a clear reason to change course, we believe that an approach to civil liability based on negligence and not strict or product liability is the best way forward when it comes to autonomous vehicle technology. We have three reasons for this, two legal and one practical:

- 1) A fault with an AV's technology does not automatically indicate a lack of due care – as would be the case with a product liability system;
- 2) The human/vehicle interface lends itself to a shared liability scenario based on the nature of control;
- 3) Excessive liability could seriously retard the development and deployment timeline of these vehicles. In a mixed-fleet environment, we believe these concerns are particularly pronounced.

What's more, insurers have a history of responding to negligence claims in a way that consumers are generally satisfied with. Moving away from that situation, to one in which developers are tasked with marshaling a response would be challenging.

Affirming Jurisdiction

While it is the case that some states handle product approval and pricing better than others, the U.S. system of state-based insurance regulation established by the McCarran-Ferguson Act of 1945 remains strong. Toward that end, the federal government must do its part to ensure that design, safety and performance standards for autonomous vehicles remain clearly within the remit of its authority – and its authority alone. Likewise, the federal government should affirm that insurance considerations will remain the province of state regulators. Confusion or ambiguity on this point will complicate the already dizzying set of issues confronting the industry when it comes to adapting to the arrival of autonomous vehicles.

Conclusion

In closing, I'd like to again emphasize that what action can be taken prospectively to ensure that there is no lag between regulatory capabilities and product necessity should be pursued. With respect to product approval and pricing in the mixed-fleet era that confronts us in the near term, this is particularly important. The shortcomings of such systems are already well documented.

Likewise, it is vital that policymakers avoid potentially disruptive modifications to existing systems used to apportion liability without first gaining a better understanding of the effects that such a modification would have on consumers, insurers and developers.

While obstacles remain, the promise of autonomous vehicles is profound. At R Street, we believe that private insurance, as an effective tool for signaling the relative safety of modes of transportation via price, is well positioned to aid in the adoption and proliferation of the technology.