

Should Automakers Be Responsible for Accidents?

Automaker enterprise liability would have useful incentives that driver liability law misses.

◆ BY KYLE D. LOGUE

Motor vehicles are among the most dangerous products sold anywhere. Automobiles pose a larger risk of accidental death than any other product, except perhaps opioids. Annual auto-crash deaths in the United States have not been below 30,000 since the 1940s, reaching a recent peak of roughly 40,000 in 2016.

And the social cost of auto crashes goes beyond deaths. Auto-accident victims who survive often incur extraordinary medical expenses. Those crash victims whose injuries render them unable to work experience lost income. Auto accidents also cause non-trivial amounts of property damage—mostly to the automobiles themselves, but also to highways, bridges, or other elements of the transportation infrastructure. Finally, serious motor vehicle accidents often cause severe noneconomic injuries—that is, “pain and suffering.” According to some estimates, such noneconomic harms amount to more than twice the magnitude of the aggregate economic damages caused by auto accidents.

All of this may be about to change. According to many auto-industry experts, the eventual transition to driverless vehicles will drastically lower the economic and noneconomic costs of auto accidents.

Why might this be so? Humans are bad drivers. People have bad judgment, slow reflexes, inadequate skills, and short attention spans. They drive too fast. They drive while intoxicated or sleepy or distracted. According to the National Highway Traffic Safety Administration, roughly 94% of auto accidents today are attributable to “driver error.”

The hope is that computers can do better. Fully driverless

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vehicles, sometimes referred to within the industry as “Level 5s” to distinguish them from vehicles with levels of partial autonomy, would not suffer from the problems that plague human decision-making in the driving context. These vehicles thus promise to be substantially safer than the human-driven alternative.

How should the automobile tort/insurance regime be redesigned to take into account the emergence of driverless vehicles? I propose to replace our current auto tort regime (including auto products liability law, driver-based negligence claims, and auto no-fault regimes) with a single comprehensive automaker enterprise liability system. This new regime would apply not only to Level 5s, but to *all automobiles* made and sold to be driven on public roads.

My basic argument is that while current negligence-based auto liability rules could in theory work to provide optimal accident-avoidance incentives, in practice they do not. The current system requires courts and drivers to evaluate benefit–cost tradeoffs they are not equipped to make. Also under the current system, much of auto-accident costs are offloaded onto medical and dis-

ability insurers or taxpayers. By contrast, under an automaker enterprise liability system, responsibility for those costs would be placed on the parties in the best position to reduce and insure them: vehicle manufacturers. In addition, automakers would be induced to charge enough for cars to fully internalize the costs of automobile accidents. Further, if auto-insurance contracts—and auto-insurance premium adjustments—could be deployed to improve driving habits, auto manufacturers would be induced to coordinate with auto insurers to achieve these deterrence gains. Moreover, to the extent that Level 5s reduce the cost of accidents, they would be cheaper to purchase than conventional vehicles, which would provide a natural subsidy to encourage (and potentially accelerate) their deployment.

EVALUATING THE DETERRENCE IMPLICATIONS OF CURRENT AUTO TORT LAW

Existing automaker liability law is primarily a negligence-based regime. Under current law in most U.S. jurisdictions, individuals who suffer harm caused in an automobile crash can recover from the automaker in tort if they can prove that the harm resulted from negligence (or a lack of reasonable care) on the part of the automaker in designing or constructing the vehicle. Alternatively, auto accident victims can invoke modern product liability doctrine and argue that a “defect” in the vehicle’s design, manufacturing process, or warnings caused the harm. And in most jurisdictions, the definition of a product defect likewise requires a showing of negligence.

A negligence-based liability rule would induce automakers to take efficient care, provided the following two assumptions are true:

- Automakers are aware of the law and respond rationally to it.
- Courts perform a thorough and accurate benefit–cost analysis in their determinations regarding what constitutes automaker negligence or what counts as a design defect.

Under those assumptions, the negligence-based regime would incentivize efficient automaker care levels—i.e., investments in crash–risk reduction—because automakers would avoid negligence-based liability if they make all cost-justified design and warning changes.

A negligence-based automaker liability regime can also create incentives for efficient driver care-levels. A negligence-based regime would leave accident costs on victims and their insurers if the automaker is not negligent. That would induce drivers to drive carefully so as to minimize their own risk of uncompensated accident losses. Thus, an efficiently and accurately applied negligence-based automaker liability rule can produce efficient incentives for both automakers and drivers to take care to avoid auto accidents.

There are obvious problems with this rosy picture, however. First, consider the effects on automaker care levels if we relax the assumption that courts accurately apply negligence-based

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standards. If judges and juries are not very good at doing the complex and information-intensive analysis, the outcomes of courts' negligence determinations become highly uncertain. This can produce incentives for automakers to both over-invest and under-invest in auto safety. The incentive to over-invest can arise when manufacturers expect courts to set the standard of reasonable care (or a non-defective design) inefficiently high. The incentive to under-invest can arise if courts rely too much on custom within the industry as their source for what constitutes reasonable care because industry custom can lag what is a truly efficient level of safety.

A second problem with a negligence-based auto products liability regime has to do with driver care levels. For a negligence-based regime to efficiently incentivize drivers to drive carefully, the tort system must impose on drivers the risk of accidents that are not cost-justifiably preventable by the manufacturer. But drivers simply are not aware of the tort law rules that apply to them or the product liability rules that apply to automakers. Moreover, even when drivers do know about accident risks and legal rules, they may not respond rationally to that information or may externalize those risks to insurance companies. Because of these facts, the ability of a negligence-based auto products liability regime to optimize driver care levels is substantially undermined. Legally imposing costs on drivers would not—or at least may not—have the desired deterrence effect on driver care levels.

The final deterrence problem with a negligence-based auto products liability regime would exist even if judges and juries were good (accurate and unbiased) at applying benefit-cost standards. In fact, this problem results *because* automakers would expect accurate application of the negligence-based rules. The problem involves the effect of a negligence-based automaker liability rule on the number of vehicles sold or, in the language of deterrence, the effect on automaker “activity levels.” Even an efficiently safe car (one with no defects whatsoever) that is driven carefully by its human or algorithmic driver poses some residual risk of crashing. This residual risk will tend to be ignored or externalized by automakers under a negligence-based product liability regime because automakers are not liable for them under a negligence liability standard. The result is that the number of cars sold may be higher than the social-welfare-maximizing level, even ignoring the effect of automobile emissions on the environment, because the price of vehicles does not include this cost of unpreventable auto accidents.

To summarize, under our current negligence-based automaker liability regime, there are reasons to be concerned that automaker and driver care levels may be too low and activity levels too high.

Driver liability law / In a majority of U.S. states, if someone is injured or suffers property damage as a result of a driver's negligent operation of an automobile rather than as a result of automaker negligence, the victim may recover from the negligent driver under standard common-law principles of tort. The victim must demonstrate that the harm to her was a result of the

driver's failure to do something that a reasonable driver would have done under the circumstances, or the driver's doing something that a reasonable driver under the circumstances would not have done.

Negligence-based driver liability law can have beneficial deterrence effects on driver care levels (that is, how safely people drive) if we make the following assumptions:

- Drivers are well informed about accident risks (and how their behavioral changes affect those accident risks).
- Drivers are well-informed about the rules of tort law.
- Drivers internalize those risks (rather than externalize them to insurers, for example).
- Drivers process the information about those risks rationally (without any systematic cognitive biases).
- Courts are good at applying benefit-cost-type negligence-based liability rules.

If all of these assumptions are true, drivers would have adequate incentive to drive with efficient care in terms of driving speed, safe braking and passing practices, smart-phone usage (or non-usage), and the like. This is so because, by taking efficient care in driving, drivers would avoid liability for the accidents that nevertheless occur.

The assumptions listed above almost certainly do not hold in the real world. While drivers may be generally aware of the broad outlines of the driver liability regime in their state (whether it is fault-based or no-fault), they likely do not understand what the precise implications of that fact are on their chances of being found liable in court for unsafe driving. What's more, the average driver, while generally and vaguely cognizant of the risks of driving, is almost certainly uneducated about the precise levels of risk associated with various aspects of driving—for example, precisely how much the chance of a crash is increased by texting while driving or changing lanes abruptly with no signal. In fact, there is a good chance that most drivers underestimate those risks. Thus, a negligence-based driver liability regime, which relies on assumptions of informed and rational drivers to produce optimal driver care levels, may not produce the deterrence benefits that are predicted by deterrence theory.

How is this pessimistic picture of driver liability law as a system of incentivizing good driving changed by the presence of auto insurance? The answer is complicated. On one hand, automobile insurance has the potential to correct some of these deterrence-related problems. Auto insurers are, unlike most drivers, extremely well-informed about the intricacies of accident law. They employ teams of lawyers whose job is to understand how driver liability laws in each state affect the liability risks of their customers. Indeed, their profitability and their survival as going concerns depend on this expert understanding of the auto liability laws of all sorts. In addition, auto insurers have unparalleled access to enormous amounts of detailed information regarding the crash-risk characteristics of millions of drivers and automobiles. This

is the result of decades of experience providing auto insurance coverage to hundreds of millions of drivers and vehicles, which in turn means pricing millions of auto insurance policies and adjusting millions of auto-crash claims over the years. No other institution or organization has the same amount of driver-specific and automobile-specific data as the auto insurance industry.

In addition, recent innovations in “telematics” (which combines telecommunications, data science, and automotive technology) have increased auto insurers’ ability to gather and analyze risk-relevant driver and vehicle data. With this new and emerging technology, not only do insurers have access to information regarding how drivers’ past auto-claims and traffic-ticket histories affect their riskiness as drivers, they also have the ability to gather information on the effects of a range of specific driving behaviors on auto-crash risks. For example, a number of insurers currently gather information about drivers’ braking, acceleration, speeding, turning, and cornering behaviors. Once these driver-specific data are combined with data gathered by insurers and others (including NHTSA) about what factors cause auto accidents generally, it becomes possible for auto insurers to link specific driving behaviors of particular drivers with premium discounts.

All of this information is to varying degrees already being taken into account by many auto insurance companies in the pricing of their insurance policies. For example, policy discounts are offered to drivers with good safety records as well as for vehicles with particular safety features. In addition, insurers are now offering discounts if drivers will improve their driving ability—for example, if they will take defensive driving classes. Because of the telematics revolution, auto insurers are even able to adjust premiums on the basis of the specific driving behavior of individual drivers. For example, some insurers give discounts for a range of driver-care-level factors such as wearing seatbelts, driving at moderate speeds, limiting late night trips, and avoiding aggressive braking. Also, the advances in telematics have made “pay as you go” auto insurance, under which premiums are a function of the number of miles driven, more accurate—and thus more prevalent—than ever before. Driving-behavior-sensitive auto insurance premiums—which take into account both good and bad driving choices (i.e., driver care levels) and, critically, the number of miles driven (i.e., driver activity levels)—would incentivize risk-reducing driving behavior more than even the most sophisticated government regulator could hope to do.

But here is the problem: under current law and existing market conditions, auto insurers do not have strong incentives to make full use of their comparative advantage at gathering risk-relevant information and pricing their insurance on the basis of that information. The reason is that the amount of coverage currently being provided by auto insurers represents only a fraction (in many cases a small fraction) of the total risks of auto crashes. This is true of first-party auto insurance coverage, which tends to cover only a fraction of the accident risks that any driver faces. It is also true of auto liability coverage because the mandatory minimum amounts

in most states are far less than the maximum harm threatened by an auto accident that results in even one serious injury or death. As a result, many of the costs of auto accidents are currently being externalized to non-auto first-party health and disability insurers who—unlike auto insurers in the telematics age—do not tailor premiums at all based on their insureds’ driving decisions. (To the extent such coverage is provided through government programs funded by tax dollars, there is obviously no premium being charged at all.) Thus, even to the extent that auto insurers do attempt to charge individualized, behavior- and risk-adjusted auto insurance rates (which, as I noted above, they are increasingly trying to do), this incentive is undermined by the fact that auto insurers cover only a fraction of the risks of auto accidents.

There are important ways, however, in which the allocation of auto-accident risks to non-auto first-party insurers has *cost-reducing advantages*. This may seem incongruous with the argument in the previous paragraph, but it is not. While auto insurers are in a good position, through premium discounts, to help optimize driver care and activity levels, auto insurers are not necessarily in a good position to minimize some other costs associated with providing insurance benefits. For example, primary health care coverage provided through auto insurance companies is almost certainly much more expensive than primary health care provided through regular non-auto, first-party health insurers. Although auto insurers, in a sense, specialize increasingly in reducing driver *ex-ante* moral hazard, it is non-auto health insurance companies who specialize in reducing *ex-post* medical moral hazard—that is, excessive or wasteful use of the health care system. My point here is only that the current division of auto-accident costs, allocating so little to auto insurers, may be non-optimal given auto insurers’ potential ability to incentivize better (and less) driving.

To summarize, because of drivers’ lack of accident-risk information and understanding of auto tort law and their susceptibility to cognitive biases, and because of the presence of cost-externalizing private and public insurance coverage for auto-crash risks, there is reason to doubt that the current negligence-based auto tort laws—automaker liability laws as well as driver liability laws—work to optimize driver care and activity levels.

THE AUTOMAKER ENTERPRISE LIABILITY ALTERNATIVE

As an alternative to our current negligence-based auto tort regime, consider the possibility of a comprehensive automaker enterprise liability regime. Under such a regime, anyone who suffers a physical injury or property damage in an automobile accident would be entitled to recover compensation for the losses sustained as result of the accident from the manufacturer of the vehicle. Accident victims would not be required to show negligence on the part of the manufacturer. Nor would they have to prove that the automobiles, or any of the warnings or instructions accompanying the automobiles, are in any way defective or unreasonably dangerous. Crash victims would need to prove only that the harms for which

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they seek compensation “arose out of the use of” a vehicle that was designed and built by the manufacturer from whom compensation is sought. Each automaker would be financially responsible for the losses resulting from any crash arising out of the use of that automaker’s vehicles.

Liability under an enterprise liability regime, however, would not necessarily be limited to auto manufacturers. Liability could also be extended to a range of other enterprises that fall within the design, production, sale, and distribution chain of any given vehicle. The allocation of responsibility among those enterprises, however, would presumably be determined by contracts among the various counter-parties. Those contracts should be enforced so long as the cost of auto accidents is not allocated to parties who are insolvent or judgment-proof.

The types and amount of compensation recoverable under an automaker enterprise liability regime would probably be limited to economic losses—medical expenses, lost income, and property damage. The dearth of pain-and-suffering insurance observed in the marketplace could suggest that limiting compensation to economic losses would be consistent with consumer preferences. And, in any event, not providing compensation for noneconomic harms is a common and reasonable political compromise for alternative compensation regimes.

The compensation regime I am imagining is a *comprehensive* automaker enterprise liability regime. In other words, it would apply to all automobiles sold after the effective date of the enacting legislation, whether driven by humans, computer algorithms, or any combination of the two. One result of the adoption of a comprehensive automaker enterprise liability regime would be an increase in the price of most newly purchased automobiles relative to vehicles purchased before the effective date of the enacting legislation. This would happen because the cost of auto accidents that had been hidden in non-auto first-party medical insurance coverage prior to the enterprise liability regime would be brought into the open through increases in automobile and auto-insurance prices.

Theoretical deterrence benefits / Under a comprehensive automaker enterprise liability regime, because automakers would be responsible for all of the economic costs of auto accidents associated with their vehicles, they would be forced to internalize those costs. As a result, there would be beneficial deterrence consequences for automaker and, potentially, driver care and activity levels.

First and most obviously, automakers would have a strong legal and financial incentive to develop and implement cost-justified auto-safety innovations, whatever those might be. That is, if an automaker determined that there was some new brake design (such as a new computer-assisted automatic braking system) or some new guided cruise control mechanism that would reduce overall accident costs relative to its costs of development and implementation, then enterprise liability would reward them for

implementing those innovations and punish them for not doing so. In addition, there would be no incentive to stick with existing industry customs or consumer expectations if such customs or expectations were lagging behind proven safety innovations. And there would be no incentive to *over*-invest in safety features that are likely to impress a court or jury in a negligence-based lawsuit (such as a design defect lawsuit) but that, in actuality, provide less additional accident-risk reduction than they cost to produce.

Second, enterprise liability would force the price of automobiles to reflect the full expected costs of auto accidents. That cost internalization, in turn, could result in a scale of automotive manufacturing and sales that would be closer to the social optimum than is currently the case because drivers would—in deciding whether to purchase a vehicle—be more likely to consider something closer to the full social costs of that decision. In other words, auto enterprise liability could push us in the direction of optimal manufacturer activity levels—the optimal number of vehicles being sold. If that were to happen, it would be a clear improvement—in terms of overall efficiency—over the existing negligence-based automaker liability regime.

What would the implications of auto enterprise liability be for fully driverless vehicles? If Level 5s have lower expected accident costs relative to human-driven vehicles, then they would also have a substantially lower enterprise liability “tax” relative to human-driven vehicles (including perhaps partially driverless vehicles) made and produced after the new regime is adopted. Thus, the adoption of a comprehensive automaker liability regime would, under present assumptions, strongly incentivize and reward auto manufacturers to proceed, as quickly as is feasible, with the development and distribution of Level 5s.

If an enterprise liability regime is likely to have deterrence benefits on the automaker side, what about its deterrence effects on driver behavior? First, enterprise liability would create strong legal and financial incentives for automakers to develop and adopt the most cost-effective ways of warning drivers about crash risks and of instructing drivers about how best to avoid certain types of accidents. This effect flows from the fact that enterprise liability makes automakers responsible for all of the economic costs of their vehicles’ accidents. If an automaker could actually reduce the frequency or severity of accidents in its vehicles by altering the wording, design, or placement of warnings or instructions, it would have an incentive to do so. On the other hand, if some new or revised warning would be more likely to confuse or annoy drivers than to educate them, the automaker would be incentivized under enterprise liability not to add that sort of unhelpful warning—even if it would have gotten the automaker “off the hook” under a more traditional negligence-based warning-defect standard. Automakers would do whatever works best to reduce accident costs. Thus, in the transition to Level 5s, automakers would be incentivized to warn and instruct optimally regarding both the risks and the appropriate uses of intermediate driverless technology such as guided cruise control.

In addition, enterprise liability could incentivize automakers to restructure the ways that automobiles are insured and sold in order to improve driver care and activity levels. Under an enterprise-liability regime, automakers would have an incentive to shift contractually much of the expected costs of auto accidents to auto insurers. This somewhat counterintuitive result flows from the fact that auto insurers have a comparative advantage with respect to monitoring and regulating driver care and activity levels. If automakers could get auto insurers to take on somewhat more of the risk of auto accidents, the insurers would have a strong incentive to help drivers reduce expected accident costs. That is, because of competition for customers in the insurance industry, auto insurers would be incentivized to use the tools at their disposal—including individualized, driving-behavior-sensitive, risk-adjusted insurance premiums—in ways that would tend to encourage better driving habits and perhaps less driving, especially by high-risk drivers.

What does this mean for how auto insurance would be sold? Auto insurance under an enterprise liability regime might be sold in the same way it is today. An individual auto purchaser, in other words, might pay the automaker for the vehicle itself and then purchase a separate auto insurance policy at the same time from a separate auto insurance company. However, given that automakers ultimately would be responsible legally for the auto-accident losses paid by the auto insurers, there would be strong incentives for contractual coordination between automakers and auto insurers. Individual auto manufacturers might even be induced to partner with particular auto insurers in an effort to offer the best, most competitively priced combined product of vehicle and vehicle-insurance coverage.

Another way that enterprise liability could improve driver care and activity levels is through its effect on how automobiles are sold. For example, the introduction of an enterprise liability regime might push the automotive industry in the direction of lease transactions rather than outright sales because leasing would make it easier for automakers to enforce the terms of the auto insurance policies sold by an insurer that is contractually partnered with the automaker. Under a lease arrangement, for example, if a driver became uninsurable (because of bad driving behavior and/or increased claim payouts) or if the driver simply stopped paying her premiums, there might be a provision in the lease empowering the automaker to reclaim the vehicle.

In addition to favoring leasehold arrangements, the introduction of enterprise liability might create market pressure on auto manufacturers to sell vehicles to commercial purchasers rather than individual consumers. These commercial purchasers, in turn, would either lease the vehicles to individual drivers or perhaps make them available through ride-share arrangements. Automakers would be incentivized to choose commercial purchasers who are financially responsible and would be incentivized to purchase efficient auto insurance contracts to cover the enterprise liability payouts. Such a trend toward commercial fleets would be con-

sistent with already existing market trends toward ride-sharing companies.

I am not suggesting that comprehensive automaker enterprise liability would necessarily result in auto-lease arrangements replacing individual sales or ride-sharing replacing driving. Rather, once automakers are made legally responsible for the cost of auto accidents (or for most of those costs), they will have an incentive (and the ability) to structure automobile distribution markets in ways that are more efficient.

CAVEATS, CONCERNS, AND CONCLUSIONS

This description of an automaker enterprise liability regime is only a rough outline of an idea, a jumping-off point for further discussion. The actual design of such a program would require empirical research into a range of topics, including whether shifting to enterprise liability would actually, and not just theoretically, produce substantial deterrence benefits.

Among the questions to be answered would be these:

- Under any real-world version of an automaker enterprise liability regime, how long would automakers' responsibility for insuring their vehicles remain in effect? Would it be for the useful life of the vehicle or for some period of time—say, 10 years? If for some period of time, who would be responsible for covering the accidents arising out of the later use of the vehicle?
- What would the precise relationship be between an automaker enterprise liability regime and state mandatory insurance/financial responsibility laws? Presumably, rescission of coverage by the insurer because of excessive accident experience or the failure to pay premiums would result in a suspension of driving privileges, but how would that be enforced?
- Furthermore, if an auto enterprise liability regime were adopted, would all vehicles manufactured and sold before a given date be exempt? Or would older vehicles made before the new law goes into effect be transitioned into the new regime over time? If older vehicles were fully exempted from the new regime, how would we deal with the resulting potentially large price differential between new vehicles (which would be priced with full accident costs internalized into the purchase price) and used vehicles (which would not be)? What role could increased mandatory minimum levels of auto insurance play in assisting with that transition?
- In addition, given that the transition to an automaker enterprise liability regime would almost certainly increase the “experienced” price of autos and driving, how would low-income families be expected to afford access to auto ownership, which has been shown to foster upward mobility?

All of these are fair questions and would need to be considered before auto enterprise liability were seriously considered. R