

# Driverless Cars Not Proven To Be Safer

There is no proof that driverless cars will be safer than human drivers.

I found myself saying that aloud to a radio ad yesterday. In explaining his support for driverless car experimentation in Michigan, Governor Rick Snyder notes that 94% of accidents are caused by human error. The implied assumption is that driverless cars will be safer.



*There's no proof that driverless cars will be safer than mere human beings.*

That statistic bandied about by driverless car advocates has nothing to do with automated vehicle safety. It derives 2005 to 2007 data in a study released a decade ago - *before* driverless cars were “a thing.”

This is just one of the critical concerning driverless cars I discuss in my most recent article, [Driverless Utopia](#). Besides delving into driverless car safety, the piece also cites new risks driverless cars can introduce, such as vehicular hackability as well as liability issues. As the cover story for the May/June issue of the [Casualty Actuarial Society's Actuarial Review](#), it offers the critical perspective of actuaries. Their rubber-hits-the-road view deserves more attention because actuaries anticipate risk potential when determining insurance rates.

Actuaries who looked into the 93% statistic, which is based on a 2008 National Highway Traffic Safety Administration (NHTSA) study, conclude that 78% of accidents - *not* 93% — are due to human error. The article dives into the actuarial analysis even more.

## Driverless Reality

We don't know how safe driverless cars are — for several reasons. These are:

- **There is no national clearinghouse tracking data regarding driverless car safety.** Basic information, such as fatalities and accidents related with automated technology, is not publically available in one place. Actuaries want driverless car manufacturers to share data so insurers can anticipate the risk insurers cover. That is not happening.
- **The lack of apples-to-apples comparisons between driverless cars and human driven conventional vehicles in similar scenarios.** Existing research considers different issues. And the conclusions vary. Further, driverless car experiments are taking place in near perfect driving conditions where accidents are less likely anyway. Also, since automated cars cannot handle inclement weather or a quick Bambi crossing, imperfect humans who take the wheel can still be at fault.
- **The pass off risk between automated systems and human drivers is huge for determining safety and liability.** That point of transition, when automated vehicular technology senses danger and mere humans have to take control is fraught with problems.

The first automated vehicle technology fatality in the United States took place in 2016 when a Tesla hit a truck moving across a highway. It appears the driver did not take control of the vehicle soon enough. Getting to the why not only reveals the complexity of fault but the difficulty in determining it. The National Transportation Safety Board and NHTSA conducted separate investigations. One emphasized that the technology did not alert the driver in time. The other stressed that the driver was not responsive enough. (See [my article](#) for more details.) (A similar fatality took place last month in [California](#).) [A fatality in March](#) reportedly occurred because the Uber-affiliated car did not detect the female pedestrian walking at night in Tempe, Arizona. It also appears the back-up driver was distracted. Still under investigation, the video is available [here](#). (Warning: it's quite graphic.)

- **Driverless cars might decide who dies.** [One study](#) shows the cars favor saving younger people rather than the elderly.

Finally, as [my first driverless car article](#) notes, if driverless cars are safer than human drivers, it is likely because the car will be programmed to follow traffic laws - to the letter. Lower the speed and the accidents decline, even when people are driving.

## Parting Thoughts

I'm not against driverless cars. However, I am troubled by rhetoric that presumes driverless cars will be safer without sufficient proof. The logic that driverless cars will be safer because human

error is the primary cause of accidents is faulty and misleading.

The safety issue might not matter anyway. In the next 10 to 15 years, I believe the average consumer will be depending on taxi-like automated vehicles, figuring that cars are risky no matter who - or what - is driving them.

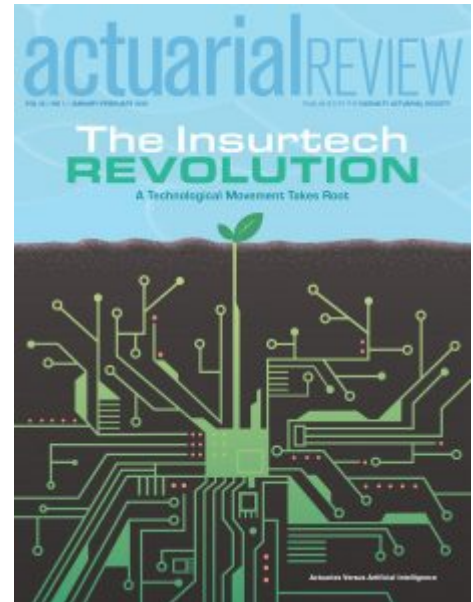
And since the cars will be in a constant state of technological improvement for at least the next couple decades, they will be too costly for average consumers to own, insure, maintain and repair. Already, minor fixes, such as replacing a driver's side mirror, costs more than the typical \$500 insurance deductible due to all the connecting sensors.

My hope is Americans and public policy makers will demand greater transparency from technology companies. Automated vehicle technology is just one more area where consumers should know more.

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## **Insurtech Revolution Will Transform the Business of Insurance**

The Insurtech Revolution is here.



*The Insurtech revolution is here.*

My most recent [Actuarial Review](#) article, “The Insurtech Revolution,” cuts through the buzz and highlights areas where insurtech is likely to transform the insurance industry.

Insurtech is like any quickly emerging development. There is a lot of activity, confusion and a dash of hype.

That’s why my first question to most sources was this: “What is the difference between technological innovation and insurtech?” They agreed it was a good question. The evolving broad definition of insurtech risks becoming too general to be useful. The article includes an important sidebar that further defines the term. I hope will encourage more informed insurtech conversations.

*This is certain:* insurtech is not a Reese’s Peanut Butter Cup. Insurtech does not merely stuff new technology into insurance. Rather, insurtech is a cottage industry coming into its own. At its best, insurtech challenges insurers to re-think what insurance could look like and how it should be delivered and serviced in a digital economy.

My concern is that the most cautious insurance professionals among us will be too quick to write off insurtech as a fad. Or even worse, they will choose denial or ignore it to their peril. Insurance professionals must pay attention to insurtech because it will affect their jobs.

*Make no mistake:* insurtech will be transformative. It is not just about technology, but new concepts that make sense in a digital world. For example, the insurtech approach means *out* with reactionary customer service and *in* with initiative-driven customer experience. (To learn the difference, click [here](#).)

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***“...insurtech is not a Reese’s Peanut Butter Cup  
...(it) does not merely stuff new technology into insurance.”***

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Meanwhile, its emphasis on artificial intelligence and other smart technologies will change and eliminate jobs. Insurtech companies offering insurance can, for example, prefill personal information through an Application Programming Interface (API), simplifying the application process practically

down to a few digital taps.

By programming a rules engine, artificial intelligence is already performing critical functions, such as statistical calculations and ensuring accurate and meaningful customer information.

## **Insurtech Revolution: Annmarie's Take**

After watching technology change the insurance industry for 30 years, here are some personal observations about The Insurtech Revolution:

- 1) **Insurtech companies risk operating under false assumptions.** A technological improvement in one industry is not necessarily easily translatable to the insurance domain. The transactions, responsibilities and public accountability differ from banking, as an example.
- 2) **Insurtech companies are in love with their beloved technology, but insurers love real results.** Understand the real problems the insurance industry is facing. Offer solutions using insurance industry lingo. Save that technological deep dive for those who want to go there.
- 3) **Insurance companies are not threatened by insurtech competitors**, also known as “disruptors,” which have garnered an overabundance of media attention. Peel back the artificial intelligence, APIs and novel approaches to coverage – and you have the excitement and struggles of a new insurance company. In three years or less, Flo, the gecko and/or other insurers will be using the insurtech bells and whistles that make sense. And they will be doing it better. By that time, we'll also know if the “disruptors” are profitable.

The Insurtech Revolution is here. Please check out [my article](#) and offer comments below.

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## **[Actuaries Forging Non-Traditional Career Paths - Part 1](#)**

My latest [Actuarial Review](#) article profiles property-casualty actuaries forging non-traditional career paths.



*Actuaries forging non-traditional career paths.*

To write the article, I went through a list of members of the [Casualty Actuarial Society](#) who are not working for insurance companies or serving as consultants. This list features about 3 percent of the CAS's membership.

In the article, I cover four actuaries who have one thing in common: they were all inspired by their families to seek uncharted career territory. The article features:

- **Sharon Carroll** who applies her actuarial experience to improve management of hospital expenses to achieve work/family balance.
- **Bill Wilt** who started a new company that publishes unique insurance-related research.
- **Robert Anderson** who, with his wife's encouragement, became an in-house actuary to develop fresh approaches to insuring a major corporation.
- **Mike McMurray** who runs a minor league baseball team due to him and his wife's shared passion for the game.

The article also includes advice to property-casualty actuaries who also want apply their actuarial skills in non-traditional work settings.

This is part 1 of a two-part series in Actuarial Review that covers actuaries forging non-traditional career paths. The November/December issue of *Actuarial Review* will also feature more property-casualty actuaries who are taking the career path less traveled.

I hope you will check it out.

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# Flood Insurance Requires Vision by Congress



*Encouraging private carriers to offer flood insurance requires vision.*

Creating a public/private partnership for flood insurance requires vision by Congress.

That's my conclusion after writing my latest *Actuarial Review* article, [Legislative Levee](#).

Unfortunately, there is little time for overall vision when Congress must approve the reauthorization of the National Flood Insurance Program (NFIP) by September 30th. Since my article crystallizes many of the issues concerning flood insurance, my hope is it will encourage greater public policy discussion.

Right now, most homeowners and small businesses can obtain flood insurance only through NFIP. That's because, in general, private insurers could not profitably offer flood insurance when the NFIP got started in 1969.

Congress began the NFIP not only to provide flood insurance, but to meet specific congressional objectives that are sometimes contradictory. The idea behind the NFIP is to make coverage for weather-related flooding both affordable and available for homeowners, renters and small businesses. Public policy objectives also include reducing the taxpayer burden when the federal government needs to help victims suffering from flood losses.

While criticism of the NFIP abounds, keep in mind that for the past five decades, the NFIP has been better than nothing. Private insurers were also kept out of the market starting in the 1970s. That's because federally backed home mortgages require purchasing flood insurance from the NFIP when these properties are in a flood zone.

## **New Developments Inspire Insurers**

But now, there is a sizable amount of homeowners insurers that want to offer flood insurance again. The inspiration stems from significant recent developments. Not only do new weather and insurance models show promise of revealing profitable customers, but can also improve upon the NFIP's more general approach to developing premiums. Reinsurers looking to diversify their portfolios are also willing to back insurance companies.

The implications of introducing private insurers into a market dominated by the NFIP are vast. That's why changing how consumers can obtain flood insurance requires vision. The potential of Americans being able to have coverage for flooding regardless of cause in and of itself would be a big advantage. Too many Americans simply do not realize they need flood insurance. (This fails a congressional objective of ensuring as many Americans as possible are covered for external flooding.)

One major reason for misunderstanding stems from the maps the Federal Emergency Management Agency (FEMA) produces. (FEMA is the NFIP's governing agency.) Too many Americans falsely believe their properties are safe if they are not in a FEMA flood zone. However, most homes can fall victim to external flooding for a myriad of reasons. For example, while not in a FEMA flood zone, my first home's basement flooded when too much rain saturated the ground around my house.

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***Too many Americans simply do not realize they need flood insurance.***

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In the United States, flood insurance requires vision because entry of the private market would likely change the NFIP's role. In short, the NFIP could become the market of last resort, thus limiting the agency's ability to meet congressional mandates.

Currently, the NFIP relies on "profitable" policyholders to help subsidize other customers and reduce the NFIP's \$24+ billion debt to the United States Treasury. If the NFIP loses enough of those policyholders to private insurers, the agency would be hard pressed to meet its congressional mandates.

At the same time, the benefits to customers, including paying rates truer to their actual risk of flooding and being fully covered for flood damage, are too tempting to ignore. The private insurance market could also expand the population of covered property owners. That would help meet the congressional directive of making sure Americans who need flood insurance would have it.

If the NFIP cannot meet its mandates, taxpayers are likely to pick up the costs of paying down the debt to the United States Treasury. (That would kill one congressional directive.) The insurance industry has made it clear it has no interest in subsidizing rates as they do in some states for auto insurance.

## **Flood Insurance Requires Vision**

These are just some reasons why developing a private/public partnership for flood insurance requires vision. My article digs deeper into the public policy objectives for the NFIP, which also must be understood when contemplating a great infusion of private insurers into the external flood market.

There are also several unknowns pertaining to private insurers offering flood coverage. For starters,



the profit margins are unclear. Potentially subsidizing risks could mean lowering the profit incentive. The new weather models are largely untested by homeowners and renters insurers in the United States. If major flooding events continue, it could turn out that private insurers will have to raise rates to a point where insurance becomes unavailable once again for too many consumers.

There is also the regulatory conflict. Congress primarily controls the NFIP. Allowing politics to affect the NFIP has led to premium inequities and delay for meeting financial goals. The NFIP could also more greatly benefit from the new weather and insurance models to compete against private insurance companies. However, the agency lacks the agility that private insurers enjoy because it is dependent on congressional timing. Private insurers would be regulated by state insurance regulators, who have much more insurance experience than Congress.

Simply supporting private insurers to compete against the NFIP does not answer all the public policy considerations that led to the agency's existence in the first place. The NFIP and insurers would be playing the market game with different rules and requirements.

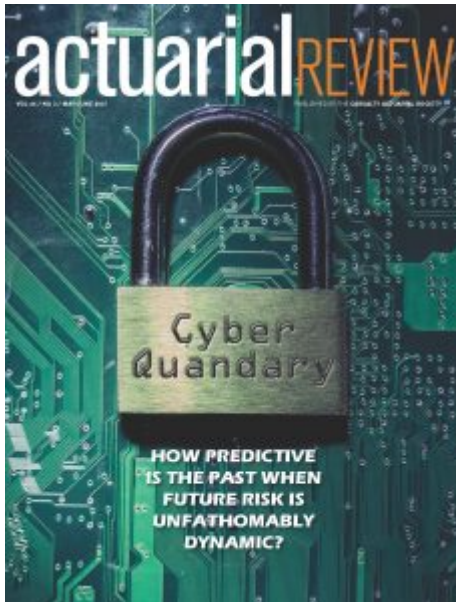
That's why flood insurance requires vision to ensure public policy objectives are met as private insurers enter the market. Unfortunately, given the September 30th deadline to reauthorize the NFIP, there is little time for big picture conversations. The nation will likely witness a wait-and-see approach that supports an experiment to realize how private insurers benefit policyholders and taxpayers.

This promises to be messy, but the flood insurance situation is already that way.

To read my article on Hurricane Sandy's effect on the NFIP, please click [here](#).

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## **[New Developments in Cyber Insurance Address Growing Needs](#)**



*There are many new developments in cyber insurance.*

Before the WannaCry worm began disrupting institutions all over the world last week, cyber insurers have been preparing for the rise in ransomware. This is among new developments in cyber insurance.

Insurers are also focusing on other cyber challenges, such as increasing risk from the connectivity of the Internet of things. As I point out in my recently published *Actuarial Review* article, [Cyber Quandary](#), actuaries developing solutions to support the growing appetite for cyber insurance.

The article focuses on the latest developments in cyber threats and insurance, including emerging risks, market changes and innovative actuarial solutions. While emerging actuarial developments continue to progress, however, underwriting judgment still rules the day.

This is not surprising. Cyber insurance modeling is still very much in its infancy. It took more than a decade for personal auto underwriters, who tend to rely on experience and judgment, to adopt results from modern analytics.

After covering new developments in cyber insurance for the past three years, I marveled at how much cyber risk and insurance have changed. Consider the following:

- Americans, **once alarmed by headline-making data breaches** from department store credit cards, have accepted the likelihood of being breached thanks to hacks to health care insurers, internet sites and the federal government. Perhaps we feel helpless that we can't do much about it.
- **Ransomware is growing more popular.** As we are seeing with the WannaCry worm, bad actors find it profitable to hold information hostage - and they prefer payment a la Bitcoin.
- The **Internet of Things**, which increases cyber vulnerability, **was not yet part of the household lexicon** three years ago. While offering convenience, every connectivity point can be a weak link hackers can exploit. Consumers and businesses must take potential vulnerabilities from the Internet of Things more seriously.
- **Cyber insurance**, which centers on addressing costs from data breaches, **includes new coverages**, including manufacturing disruption due to greater connectivity.

- Two-and-a-half years ago, cyber insurance began growing in popularity. However, predicting losses was difficult due to the lack of historical data. Even as historical data becomes available, it has limited application due to the changing nature of risks. **Actuaries are finding new methods** and using non-traditional data **to enhance predictability**.

Meanwhile, there are other areas that deserve attention. These include:

- **Lack of policy standardization.** This makes it difficult for businesses to know exactly what coverage they need and what they are getting for their premium dollar.
- **Cyber hygiene and risk management neglect.** There are still too many companies — and people — who underestimate how basic security measures, such as updating software, can make a difference.
- **Personal lines insurers are slow to offer consumer cyber coverage.** I've been clamoring for this since my first cyber insurance article. Carriers can enhance their value propositions by offering consumers this vital coverage. There's always subrogation!
- **Preventing a cyber 9-11** and dealing with it if it comes, remains a great concern. Whether cyber terrorists compromise the Internet or utilities or God knows what else, all of us should prepare.

While there are many new developments in cyber insurance, I expect more to come. In the future, there will be more cyber insurance products that address specific industry concerns, additional options for small businesses and greater dependence on analytics for pricing and market segmentation.

To read my other cyber insurance articles, please click [here](#).

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**[For Insurance, Predictive Modeling Will Surpass Human Judgment](#)**



*Predictive modeling will surpass human judgment.*

Predictive modeling will surpass human judgment and lead insurers to adapt a data and analytics insurance business model. This is according to sources in my recently published covering the latest in predictive modeling.

Published in the March/April issue of *Actuarial Review*, [Predictive Prudence](#), also covers how the new business model works, impediments limiting predictive modeling to reach full potential and data ethics.

Despite continual issues with data quality, information accessibility and regulatory considerations, predictive modeling is already demonstrating its power for guiding executive decision making, sources explain. As property-casualty insurance companies grow smarter in addressing predictive modeling barriers, some forward-moving carriers are already finding that predictive modeling can provide probability insight for decision-making and encourage measurable accountability.

Transitioning from a human judgment-based decision making to one based on models is not easy. The idea that predictive modeling will surpass human judgment is a threat to employees comfortable with traditional approaches. It is not surprising that internal pushback is a major reason why many insurance companies struggle to adapt to the new business model to remain competitive.

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***The idea that predictive modeling will surpass human judgment is a threat...***

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This article is part III in my series on the latest in predictive modeling. I am thrilled to see it spur discussion on [Actuarial Outpost](#). The intent of three part series was to update actuaries on predictive modeling applications for varying lines and purposes. The first article covers [growing data availability](#). The second one discusses the great [modeling experimentation](#) taking place for applications.

Here's the summary of the three articles:

1. **More data is available.** Ensuring data quality and obtaining enough of the right data to answer a question continues to be a growth area, especially for some commercial lines. Additional data is still needed.
2. **There are hundreds of potential models.** Actuaries and other quantitative professionals are experimenting with different ones to determine which will provide the most insight.
3. **Classic predictive modeling** through generalized linear modeling and decision trees are finding new applications. Concurrently, models beyond those, such as neural networks and gradient boosting, remain in the experimentation phase. There are traces of evidence that such models are being used in the real world.
4. **Predictive modeling will surpass human judgement** as it moves from specific, functional applications. Four years ago, I saw this potential and called it “integrated predictive modeling” in [an article](#) I wrote for the American Academy of Actuaries’ *Contingencies* magazine.

## Modeling Nomenclature

As a professional communicator who writes about actuarial topics and has worked with actuaries for 25 years, I urge the actuarial community to develop and adopt consistent nomenclature. Common nomenclature is unifying and quite practical. It is cumbersome to define terms just to have a conversation.

For example, I reluctantly choose to use the term “advanced modeling” to describe models beyond GLMs and decision trees because other terms are clunky. It’s not a perfect term, I know.

Agreeing upon nomenclature will not only improve communication among actuaries, but the lay professionals that hire and depend on actuaries. Further, classifying models by type or family would also aid discussion.

## Another Article Coming!

In the coming months, I will also be publishing a piece in *Actuarial Review* describing how actuaries are addressing cyber insurance.

*Question: Do you think predictive modeling will surpass human judgment for insurance decision-making? Please let me know by commenting below.*

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# [Personal Auto Pricing Since Great Recession](#)

Many changes have taken place since the Great Recession, forever altering the personal automobile insurance pricing cycle. My latest [Actuarial Review](#) article, which is already attracting positive feedback, takes an in-depth look into what has affected personal auto insurance premiums since 2008.



The article, called, [“The New Cycle of Pricing Personal Auto”](#) covers several pertinent factors including:

- The relationship between frequency and employment.
- The curious sudden accident uptick in frequency by miles driven in the 4<sup>th</sup> quarter of 2014.
- The gradual increase in costs per claim (severity).
- A marked increase in driver distractions not just from cell phones but infotainment systems.
- A growth of driving while under the influence of marijuana and accident increase in states where use is legal.
- Auto manufacturers’ safety features reducing the frequency and severity of accidents.
- Big data and predictive modeling transitioning from a unique pricing strategy to a common insurance business practice.
- Low interest rates.

I am unaware of any other article that comprehensively looks into the auto insurance pricing cycle since the Great Recession. Thanks to James Lynch from the Insurance Information Institute for his assistance. Enjoy!

What do you think has most affected the auto insurance pricing cycle?

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***Like what you see?  
Then follow me by clicking the button  
on the bottom right hand side of this post.***

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# [Don't Underestimate the Dodd-Frank Act's Property-Casualty Insurance Impact](#)

The Dodd-Frank Act's property-casualty insurance impact is greater than many in the industry realize.

It's full title, The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, introduced the most far-reaching federal regulation the property/casualty insurance industry has ever seen.

While the regulatory focus of The Dodd-Frank Act has been on a relatively few insurers that either have



*The Dodd-Frank Act Greatly Affects the Property/Casualty Insurance Industry*

subsidiary banks or are considered systemically important financial institutions (SIFIs), the act is poised to affect the entire property/casualty industry. This is explained in my recently published *Actuarial Review* article, [Demystifying the Regulatory Web: Dodd-Frank and Its Complex Impact](#).

My article takes a rare, comprehensive and journalistic look into The Dodd-Frank Act's property-casualty insurance impact, including the ramifications of its resulting regulatory web. During my research, I could not find one article that updates the multiplicity of Dodd-Frank's impact on insurers.

As I wrote the piece, I became convinced that The Dodd-Frank Act's property-casualty insurance impact is greatly underestimated. (Life insurers are also affected.)

And after spending countless hours on the article, I could not put my finger on anything that substantially makes the insurance industry and its customers better off. If anything, federal regulation is onerous and hardly transparent. States, which have been regulating insurance for 150

years, have much more transparent processes. So does the National Association of Insurance Commissioners (NAIC).

Dodd-Frank requires its brainchild, the Federal Insurance Office (FIO) and the Federal Reserve System (Fed) to work with the NAIC at the International Association of Insurance Supervisors' (IAIS). Since then, transparency has dimmed. Formerly open meetings have been closed. In one instance, a presidential appointee told a congressional subcommittee he was barred from attending an IAIS working group meeting.

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***“...I could not put my finger on anything that substantially makes the insurance industry and its customers better off.*”**

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To further complicate matters on the international stage, the Fed, FIO and the NAIC, known as “Team USA,” have different missions that sometimes conflict with one another.

The federal rule making process also lacks the kind of transparency states offer. Information access to reporters is also very limited. Federal agencies provided me with plenty of documents to wade through, but subject matter experts were not available for questioning. This disturbs me greatly.

I also wondered how the activity of one large U.S. insurer’s London-based banking subsidiary could justify Dodd-Frank’s introduction of federal insurance regulation and monitoring.

Ironically, both federal agencies depend greatly on the NAIC even as their activities seem to overlap the organization’s historic role. In some cases, the Fed and the NAIC are on separate regulatory tracks to address the same concerns.

Meanwhile, Dodd-Frank directs the FIO to look into coverage discrimination issues, which is old hat for state regulators. For example, the agency choose to evaluate auto insurance discrimination when state regulators and research organizations have been considering the claims of consumer groups for decades.

All parties express commitment to working together, but communication has been challenging.

The FIO has the primary role of monitoring the industry and one direct regulatory role to develop international cover agreements. Through its monitoring efforts, the FIO identified new regulatory opportunities for insurers.

Meanwhile, it’s been seven years since the enactment of Dodd-Frank and the Fed still has a lot of rule making to do. Besides going through that arduous process, the Fed is also working to appreciate the deep magic of insurance. This includes the role of actuarial opinion, which is part of the special sauce that makes individual companies competitive.

### **State vs. Federal Regulation**

Federal intervention has reintroduced the time-honored question of whether states or the federal government should regulate insurers. Labor groups have long advocated for federal regulation for workers’ compensation. There are pros and cons to both approaches. If the federal government regulates insurance, one benefit would be regulatory consistency across state lines.

Certainly the international community, including Europe, prefers the approach of central governance for the United States. This difference in regulatory approach between central authority



and state authority is not merely an academic discussion. The Jeffersonian notion of states rights to prevent the oppression of centralized authority was a direct reaction to the European central authority model that goes back to at least the Roman Empire.

Based on other topics I have covered, the United States needs to be very careful with taking euro-style approaches when the downsides most likely outweigh the benefits. There are fewer insurance companies operating in Europe partly due to regulatory burden.

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***“The federal rule making process also lacks the kind of transparency states offer.”***

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Some argue that state-based regulation is a key reason why the United States has the largest insurance industry in the world. While imperfect, the state regulatory model allows for greater innovation and flexibility. Under a truly federal regulatory model, for example, could Texas continue to allow employers to opt out of workers' compensation?

By digging deeply into the details of Dodd-Frank's implications for property/casualty insurers, my hope is the article will be informative and thought provoking.

I am grateful to the Casualty Actuarial Society for giving me the opportunity to provide a comprehensive look at Dodd-Frank. The Fed's media staff provided very useful congressional testimony. The NAIC, the Property Casualty Insurance Association of America and the American Academy of Actuaries all provided the necessary support to complete my article.

How do you see The Dodd-Frank Act's property-casualty insurance impact?

***If you like what you see, follow me!***

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## **Legionnaires Disease Deserves More Attention**

Often, a new disease breaks out that has doctors and public health professionals



*Legionella Under the Microscope.  
U.S. Centers for Disease Control  
(CDC).Public Domain.*

puzzled and worried. In 2014, it was Ebola. This year, it is the Zika Virus.

There are also potentially fatal illnesses that are preventable and yet, the Centers for Disease Control and Prevention is seeing cases on the rise. One such example is Legionnaires Disease.

My article, [Insurance Implications of Legionnaires Disease](#), published by the AmWins Group's *The Edge*, provides an update on illnesses related to legionella bacteria, along with prevention tips, symptoms and the liability concerns. I hope you find it helpful.

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## [For Actuaries and Underwriters, Times Are a-Changin'](#)



The days of actuaries and underwriters applying their crafts through separate roles and responsibilities are on the way out, as my recent *Actuarial Review* article, [Pricing Adjustment](#), explains.

To be successful in the future, actuaries need to spend more time learning to appreciate the demands underwriters face. Underwriters also need to embrace predictive modeling to appreciate its potential for pricing and marketing, experts say. Surveys show too that insurers are frustrated when their actuaries and underwriters hold to their traditional roles and work against each other.

Embracing a new approach is always easier said than done. It's only human nature to resist change. Companies like Liberty Mutual, however, are learning that having actuaries and underwriters work more closely together boosts return on investment

Liberty's national insurance specialty section integrates underwriters and actuaries into functional teams. The results so far have been positive, placing the insurer in a better position to address underwriting challenges while encouraging communication and understanding.

Underwriting is not the only area where actuaries should become more familiar. Past articles I have

written also explain how [actuaries and statisticians can complement each other](#) and why [actuaries and information technology professionals need each other](#).

The bottom line is the actuarial role is a-changin'. Successful actuaries will embrace new ways to work with other professions to deliver better results.

Happy reading!