

FUTURE FELLOWS

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From Pandemics to Cyberattacks: An Introduction to Silent Risks

By Layla Trummer, ACAS, Candidate Liaison Committee

One of the exciting parts about working as a P&C actuary is that the work is constantly evolving. With each new emerging risk or large event, the industry learns more so that we can charge an appropriate price for the risk we are assuming. Adequate pricing ensures the solvency of the insurance industry, but what happens when an exposure is not explicitly included or excluded from coverage? These “silent” exposures have the potential to cause significant losses. Two timely examples of silent exposures are silent cyber and silent pandemic risk.

Silent cyber is a peril in which cyberattacks cause losses in traditional lines of business. These lines of business are not designed to cover cyber-related losses yet cyberattacks are not explicitly excluded (nor included) as a covered peril. A similar definition applies to silent pandemic risk, where contract language is ambiguous with regards to pandemics and could trigger claims. Silent cyber and silent pandemic risks are not to be confused with affirmative cyber (which refers to the cyber line of business) and affirmative pandemic covers (contracts that specifically cover pandemic risk).

Cyber risk increases as more devices become interconnected through the internet, and pandemic risk increases as the world becomes more interconnected through travel and global supply chains. Exposures that used to be isolated are now correlated, making diversification more difficult. Portfolios have higher levels of risk aggregation when a single cyberattack, or a single pandemic, impacts multiple policies.

Commercial property lines are most exposed to both silent cyber and silent pandemic risks. Silent cyber can lead to higher losses for both

physical property damage and business interruption. For example, an IT system safeguarding the control room of an industrial plant could be the target of a cyberattack leading to a system failure resulting in an explosion. For pandemic risk, contract language for physical damage definitions could be ambiguous with regards to whether it is a covered peril that could trigger business interruption claims. Property is not the only line where silent risks are already present, however. Consider a professional liability claim where an IT provider could be liable for losses stemming from silent cyber exposures if the provider is deemed negligent in providing a secure network. Or consider a directors & officers liability claim emanating from inadequate disclosures during a pandemic.

Silent exposures are very hard to quantify and therefore difficult to price, so the insurance industry has largely excluded silent exposures by using specific contract language. Following the SARS outbreak in 2003, many insurers added exclusions to standard policies for losses triggered by viruses or bacteria. For silent cyber, the turning point event was the Petya/NotPetya ransomware attack in 2017. This is one of the largest examples of silent cyber losses to date, with silent cyber accounting for around \$3 billion in insured losses (whereas affirmative cyber only accounted for around \$0.3 billion in insured losses). Following this event, a market exclusion was adopted for silent cyber and the industry shifted to write separate policies specifically designed for cyber exposures. Silent exposures still exist however, since not 100% of policies are able to exclude it for various reasons.

Both silent cyber and silent pandemic risk

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Associates Voting Rights: A Brief History

CAS Fellows to vote on ACAS suffrage this summer

By Sarah Manuel, ACAS, MAAA

The question of whether Associates should be allowed to vote was posed in the last three membership surveys (2018, 2013 and 2008), and the percentage of members that believe that Associates should be allowed to vote has increased with each survey:

Respondents in favor of ACAS voting rights	2008 Survey	2013 Survey	2018 Survey
All Respondents (ACAS and FCAS)	59%	68%	77%
FCAS Only	48%	62%	68%

In 2009 the CAS set up an Associate Rights Task Force, based on the results of the 2008 membership survey. The task force recommended that CAS Associates (1) be granted the right to vote five years after earning their designation, and (2) be granted the right to serve on the board of directors five years after earning their designation. In 2011 the CAS Board of Directors approved putting the measures to a vote of the Fellows, since the changes would require amending the CAS Constitution and Bylaws. With 61% of voters (812 Fellows) voting no, the measure did not meet the two-thirds majority required to amend the CAS's governing documents.

Growing support

As shown in the table above, support for Associate voting rights has increased steadily from 2008 to 2018. In 2019 candidates for the CAS Board of Directors and the candidate for CAS President-Elect were asked whether they supported ACAS voting rights. Of the eight candidates for board seats, four did not support ACAS voting rights, three did support ACAS voting rights and one didn't have a strong opinion on the issue. The nominee for CAS President-Elect did support ACAS voting rights. While voters considered the positions of candidates on a variety of issues, including a CAS/SOA combination, it is interesting to note that of those who were subsequently elected, three did not support

ACAS voting rights and one did.

In its November 2019 meeting, the board reviewed results from a Member Advisory Panel (MAP) survey that found that there was considerably more support for Associate voting rights than there was in a similar 2013 survey. Based on the MAP and the membership survey results, the board directed the CAS Executive Council to develop proposals for amending the Constitution and Bylaws to expand ACAS rights.

The plan for 2020

In February 2020, the CAS Board approved a plan to put forth a constitutional amendment that would give Associates the right to vote five years after earning ACAS. This August Fellows will vote once again on whether to approve voting rights for Associates. As mentioned before, in order to pass, proposed Bylaws amendments need an affirmative vote of two-thirds of the Fellows voting. If the Fellows who vote in the upcoming election have the same opinions as the Fellows who expressed their views in the membership survey, then the measure would just barely pass. However, there may be selection bias in the elections — remember that 48% of the membership approved

ACAS voting rights in 2008, but only 39% voted Yes on the measure. Voter participation may also have an impact; roughly 2,100 Fellows responded to the membership survey and the number of FCAS who vote in elections has averaged about 1,700 over the last four years. (Notably, about 1,950 FCAS voted in the 2019 elections.)

Making voices heard

I support Associate voting rights for a few reasons. First, Associates are members of the CAS and are affected by the outcomes of elections, and therefore deserve the right to participate in those elections. Second, Fellows are no more qualified to vote in non-exam matters than Associates; the

upper-level exams don't have membership issues on their syllabi, so having passed all of the exams doesn't improve the value of one's opinion on those issues. Third, career Associates are valuable members of the CAS. They contribute substantially to the profession through their professional work and their volunteer efforts within the organization. Their input is valuable, and the CAS should treat it that way. **ff**

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Planning for Big Changes and Reacting to a Bigger Change

By Rachel Hunter, FCAS

The year 2020 was supposed to be a very big one for me. In 2015 my husband and I committed to a five-year plan to take a break from working and go sailing around the world for a couple years. Deciding to take this step was pretty major for us, but also very natural. We had already purchased a previously owned 36-foot Hallberg-Rassy that had much of the equipment used for crossing oceans. We were encouraged at a cruising seminar to pursue the opportunity to travel around the world and not to wait until retirement. Others attending the seminar with us said, “Why wait? You’ve got the boat. You’ve got the money. You’ve got your health,” and delaying the plans to cruise the world meant those could all change. In fact, we purchased our boat from a man who, sadly, was unable to follow his plans due to illness.

We set about on our five-year plan, identifying systems and equipment to upgrade or replace on the boat as well as skills to learn. We considered the potential financial and career impacts of taking a mid-career break and concluded that the benefits far outweighed the risks. We’d both demonstrated management skills and felt that, even at our age, we could be re-hired somewhere after two years away from the workplace. I even began telling my employer and coworkers about my plans a few years ago so they could understand my passion outside of work. With my tenure at the company and my relationship with my workplace, I felt it was best to share my plans because I believed those I worked with did not question my commitment to my work so wouldn’t hold it against me when involving me in exciting work.

In February 2019, we had the old standing rigging on our boat replaced and got more hands-on experience with the mechanics. In October 2019, we went on a training expedition on a larger sailboat and spent 10 days going from New Caledonia to Brisbane. Early in 2020, my husband and I were talking to employers about resigning from our jobs and the need to hire our replacements. We planned to move onto our boat in June.

I worried about risks that could derail my sailing plan both before and after it began. We were anxiously monitoring the real estate market and had our realtor assess what we needed to do

As much as we had thought through the risks, we never planned for anything that would result in global shutdowns like this.

to get our house ready for sale. I was thinking about the possibility that a family member’s health might cause me to delay the trip or that I might develop a lack of confidence around my preparedness. We were ready to monitor the weather and the political climate and alter our plan to go through the Panama Canal and instead head west to Polynesia.

On March 2, my company announced that our Seattle office would encourage work from home due to COVID-19 transmission risk. Within two weeks, it was mandatory in all company offices worldwide. At first, we

continued to pack up our house separating things for storage and for donation, but as we realized we were unable to take the boxes anywhere, we slowed down. We finally determined that, because of uncertainties and the need to decide no later than July, it was just better to shift the plan to next year. As much as we had thought through the risks, we never planned for anything that would result in global shutdowns like this.

Thinking about 2020, I imagine it was supposed to be a big year for many of us. Perhaps you were going to be sitting for your last exam needed for ACAS or FCAS. Maybe you were planning to move or start a new job. In the traditional actuarial behavior of considering risks, few if any of us were expecting the impacts of COVID-19. Some of you were likely well underway with plans you couldn’t put on hold such as expecting a baby or being part way through a home renovation. I’m sure, with your actuarial mindset, you were all contemplating potential risks to your plan. Perhaps you thought you might personally have an illness or other life disruption that got in the way of your plans or that the exam you were hoping to pass would be harder than you thought.

Reacting to a major change like COVID-19 when it feels totally unexpected is hard. At moments I find it so surreal that I wonder if I will soon wake from a dream. Here in my Seattle neighborhood, folks on social media are discussing whether it is appropriate to be mad at joggers who are not giving enough distance when passing others on park paths. I’m seeing neighbors



The author aboard her sailboat.

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A Few Words from the CAS Admissions Staff Actuary, Wesley Griffiths

By Leisha Cavallaro, ACAS

What is your professional background?

I spent 20 years in commercial lines actuarial roles at Travelers Insurance in Saint Paul, Minnesota. Throughout that time, I also actively gave back to this industry through CAS volunteering as well as serving as a member of the Board of Trustees of Gamma Iota Sigma. Now, working at the CAS has brought all of my worlds together so nicely!

How is working at the CAS different than within the insurance industry?

I previously spent my days as an actuary thinking about how to communicate technical information to non-actuaries (whether that be indications, trends, reserve opinions, etc). My focus was on helping the business leaders decide if a strategy was still solid and if we should stay the course, or whether tweaks should be made, given the new analytical insights brought forward.

At the CAS, my role has some similarities. Because I am one of only a few staff actuaries in the office of more than 40, I spend a lot of time working with the non-actuaries on staff to help them understand what actuaries do and how our core programming and services can benefit our key stakeholders. Instead of my customers being insureds, I'm now focused on our candidates, members and employers. I've always been very customer-oriented, so that skillset has positioned me well in this new role.

What is something that surprised you in going from a CAS member to a CAS employee?

What has surprised me most is how small the organization is. I don't say that in a negative way, but it's noteworthy because I came from a company with 30,000 employees, where there were entire departments to handle most things. Being small requires a certain amount of agility from staff to get things done and the ability to juggle multiple tasks while working with a broad cross section of different volunteer leaders in the process.

I've also been so incredibly impressed with how much thought and attention is put into each product, service and communication that is provided to make sure that each of our key stakeholders (students, candidates, members, employers, academics, etc.) are considered and addressed.

What does the Admissions Staff Actuary do?

My role touches all things admissions and education for the CAS. I've only been on the job for a few months, but I've already been exposed to a wide variety of things. From working with authors on syllabus content, engaging with vendors on computer-based testing efforts, to partnering with CAS leadership on a multiyear admissions roadmap, to digging into data underlying our examination process to understand areas for improvement. It's all focused on making sure that our education system meets the needs of our candidates and

their employers both today and into the future.

Could you talk about an initiative you are passionate about within the CAS?

I'm very passionate about the job task analysis that is underway, and how that will be used to set the stage for changes to the education and syllabus in the future.

Think of a job task analysis as a clear description of what people do and know when completing a task. To make sure our credential is preparing our members for what they do on the job, we need to ask our members directly and then do what actuaries do best — analyze the data. We leveraged the views of a group of new Associates and new Fellows to help us design surveys and sent those surveys to all members in late May.

The survey results will help us create a future education blueprint, and thus an exam blueprint; these results will delineate the percentage of exams that should represent content areas based on what is most critical for actuaries in their roles. It's an important foundational exercise for a credentialing organization, and I'm super pumped to have been a part of the process. I learned so much and found it incredibly valuable.

Where do you think the CAS has the greatest opportunity to grow?

I see incredible opportunities for CAS members to continue developing their skillset and influence in the data science field. Actuaries were the first data scientists in insurance; however, they are now seeing competition from others who have more technical skill but, at times, less business context. What may have been a "nice-to-have" skill for actuaries over the past 10 years is becoming table stakes.

Where does the CAS come in? We need to help future actuaries gain these skills through the credentialing process (exams, experiences) and to support existing members in learning new skills through our programming and services.

How has COVID-19 shifted some of the focuses within the CAS?

COVID-19 has forced the CAS to challenge its ways of thinking and doing things. Our core offerings (exams, seminars, meetings, committee work) were all affected in different ways and required pivots.

In the case of exams, we had to cancel the Spring sitting altogether, which was not an easy decision for us to arrive at given how much is at stake for candidates. We immediately turned our attention to the



Exams in Real Life: Exam 6

By Rehan Siddique, ACAS

I have always felt that Exam 5 is the first uniquely actuarial exam, and Exam 6 is the exam that makes you finally feel like an actuary. When you pass Exam 6, you will find yourself vastly more knowledgeable on general P&C insurance regulations, history and financials, and insurance's role in society. At our core, actuaries are meant to be the business professionals who can navigate the mathematical/business complexities of insurance to make it a feasible venture for consumers, producers and governments.

In this article I want to talk about parts of the Exam 6-US syllabus that I believe are relevant to actuaries today. It's easy to start thinking how ridiculous the material is, especially as you are slogging through some wild formulas (looking at you, IRIS ratio 13), but I think it's important to take a step back from the formulas and look at the bigger picture.

History

I love reading about history and can spend hours going down rabbit holes on Wikipedia. Luckily for me, that habit helped me study for this part of the exam. I know it can seem like this section of the exam is simply memorizing and regurgitating bullet points about congressional acts, but once you see how interconnected each of these moments are you will find it easier to discuss them. I doubt many actuaries are citing Supreme Court decisions and congressional acts in their daily work, but having an understanding around the motivations and results of these will give you an appreciation for the current regulatory climate.

Social Impact

As actuaries, we are beholden to more than just the company's bottom line. We have our own set of standards and disciplinary boards that make the morality of our decisions a little less gray. When we do our work, it is important to understand the implications for the company as well as the policyholder. Telematics, wearable technologies and other buzzworthy innovations are all disrupting the insurance industry, and actuaries need to be able to adapt to these changes. It's easy to see how insurers have the power to impact their policyholders' behaviors with their pricing. This part of the exam isn't intended to get you to memorize cause and effect for different scenarios; rather, it is meant to get you to start thinking in a more "actuarial" way. Most of the time, the exam graders will accept an answer if you

can reasonably defend it.

Regulation

Insurance regulators are responsible for safeguarding the interests of consumers. To that end, they will monitor the health of insurance companies and act when there is an increased likelihood that a company will go insolvent and be unable to meet its obligations to policyholders. There are many metrics someone can use to determine an insurer's financial health, but a specific set of metrics are enforced by regulators. Formulas like the IRIS ratios (with their thresholds) and risk-based capital are useful for actuaries to monitor as well as necessary for regulatory compliance. Opining on reserve adequacy is the responsibility of a qualified actuary and also an integral part of regulatory oversight.

Financial Statements

I have only worked in consulting, but I have found myself reading through financial statements many times (even before I started studying for Exam 6). Knowing at least which statements contain the information you are looking for makes sifting through 1,000-page reports much easier. Schedule P and Schedule F are both extremely important for monitoring reserve adequacy and reinsurance dealings/provisions. Actuaries of other companies may look for these when performing competitor analyses. The balance sheet is another section that you may think should only be studied by CPAs. Actuaries who have a role in the reserve-setting process are very interested in the liabilities section due to reserves taking up a majority of those amounts. Those who work in setting the Schedule P reserves need to be aware of the necessary reporting requirements, such as restating things due to qualifying changes. An example of the importance of this section can be found in how certain auto insurers are refunding premiums due to COVID-19. As of now, we don't know how these refunds will be recorded. A reduction in premium versus an expense will have dramatically different results on the insurer's health, and it is important for actuaries to be able to balance the pros and cons for management.

This exam stuffs a lot of information into one syllabus, but the payoff is a candidate who has foundational knowledge on many different areas of insurance. **ff**



From Pandemics to Cyberattacks

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should be placed in affirmative covers to ensure the viability of the insurance industry. Governments around the world are currently relying on the risk expertise of the insurance industry to develop backstops for pandemic risk. For example, as of March 2020, the U.S. Congress is drafting PRIA, the Pandemic Risk Insurance Act, which is inspired by TRIA, the Terrorism Risk Insurance Act, enacted following the World Trade Center event. PRIA will backstop the business interruption insurance market similar to how TRIA

backstops the terrorism insurance market. The cyber line of business currently represents an exciting growth area in the industry with several opportunities for actuaries. The insurance industry is learning together when it comes to cyberrisk, and the need for the risk to be insured is getting increased attention. The P&C insurance industry will continue to evolve, to the benefit of actuaries, because at the right price, any risk is insurable. **ff**

Planning for Big Changes and Reacting to a Bigger Change

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reaching out for help getting groceries or offering help with errands to those who are worried about exposure to the virus. I can't go out to eat, but I'm able to order home-delivery from some of the finest restaurants in town. I can still get the latest batches of beer from my favorite local breweries — some offering the ability to just drive up and pop the trunk for them to put the growlers back there with no contact. And I'm extremely lucky that I can still go out on my sailboat and continue to get her ready for the big trip. I've got an extra year to prepare; maybe that means I'll learn celestial navigation before I go instead of during the trip.

I'm writing this in May and believe that when this newsletter is published, we will have more information. But with that information, we will probably be processing even more unknown considerations we aren't even thinking about today. We should find ways to accept the uncertainty around the impacts of COVID-19 and choose how we will adapt and manage. I find it very helpful to first recognize the uncomfortable feelings I'm having and what unknowns are impacting me the most. I recognized that I needed to create certainty around

We should find ways to accept the uncertainty around the impacts of COVID-19 and choose how we will adapt and manage it.

whether I would be able to leave on my sailing trip this summer and decided that, rather than wait until June to decide, I should just postpone it to next year. I felt better after I did that, but there are still many things I don't know. I can't know when restrictions will let up or when I can visit friends and family or how my workplace will operate in the fall. I can't be sure that the COVID-19 restrictions will even clear up by next summer, but I can adjust my plan for now to have my

sailing trip start next year.


Just as my plans were impacted, I know that cancellation of the Spring Exams was a huge impact to CAS candidates. I am glad that the CAS has already communicated their plans to adjust their exam offerings in Fall 2020 and Spring 2021 to try to minimize the impact of the lost Spring 2020 sitting. This gives candidates a grasp on how to start adjusting plans even while still grappling with a lot of uncertainty and disruption. I have faith that we can all get through this and I hope that each of you has found positive ways to manage your personal situation. Best of luck on your Fall Exams! **ff**

A Few Words from the CAS Admissions Staff Actuary

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Fall sitting to make sure that an infrastructure is in place to offer exams, whether it be in the traditional format or through a remote option, should we continue to be affected by the pandemic. Our new partnership with Pearson VUE, a pioneer in the computer-based testing industry, will position us very well in the future to respond to emerging situations like this.

What do you like to do in your free time during quarantine and what did you do before quarantine?

Great question! Where have the last few months gone? I've been remodeling my main floor, including the kitchen, since the holidays. It's not 100% done as I paused the work during the quarantine, but I'm very close. So, putting my house back together has been a big focus of mine. I have two dogs, so I do a lot of walking in the neighborhood in Saint Paul. Yard work has also kept me busy and, sadly, so has a lot of binge-watching shows. I am thankful that the Minnesota weather has finally turned — now I can get outside more and enjoy the spring and summer seasons. 

Calling All ACAS! Your Input Needed for Job Task Analysis

CAS Associates have a unique opportunity to influence the direction of CAS basic education. This summer the CAS is conducting a job task analysis (JTA) survey that seeks to define the key competencies required of CAS Fellows and Associates.

The JTA survey asks you to describe what you do and know when performing your day-to-day actuarial work. Assessment, education and research experts will use survey responses to validate the task and knowledge statements required for CAS Associates. Survey responses can have a direct impact on future updates to the CAS's credentialing curriculum.

To access the JTA survey, visit <https://bit.ly/2MKnBDK>. Complete the survey no later than June 22, 2020, at 9:00 p.m. EDT. The survey should take about an hour to complete; you may save and return to complete the survey over multiple sessions. All responses will remain anonymous. As a thank you for your input, you can enter a raffle to win one of five \$50 AmEx gift cards.

For any technical difficulties or authentication concerns, please email CAS Staff Actuary Wes Griffiths at wgriffiths@casact.org and include "2020 JTA" in the subject line.

Don't miss this rare chance to influence the future of CAS basic education.

Candidate Liaison Committee Mission

The Candidate Liaison Committee communicates with CAS candidates, collectively and individually, who are taking CAS examinations. The committee informs candidates as to appropriate courses of action available to them. Through periodic communication, this committee informs candidates of results of examination administrations, actions taken on complaints received regarding examination questions and reasons for syllabus and examination changes being implemented. Communication encompasses existing policies and procedures as well as changes being considered. The committee should advise the CAS and its committees of the interests of the candidates regarding matters that come before the CAS and its committees. Candidates may contact the Candidate Liaison Committee at the CAS office address. The Casualty Actuarial Society is not responsible for statements or opinions expressed in the articles, discussions or letters printed in *Future Fellows*.

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