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IN THIS ISSUE

- 8 Thinking Critically as a Regulator in a Checklist World**
By Philip Talerico, CPA, CFE, ARM, MCM | Baker Tilly LLP
- 14 Parametric Insurance: A Captivating Solution**
*By Andrew Provines, FCAS, MAAA and Karl Goring, FCAS, MAAA
Milliman*
- 21 Market Briefing - 3Q 2023 - Mid-Year Recap and U.S. Insurance Industry Invested Assets as of Year-end 2022**
By Edward Toy | Risk & Regulatory Consulting, LLC
- 30 PwC NAIC Meeting Newsletter Summer 2023**
By PricewaterhouseCoopers, Reprint
- 54 Mark Your Calendars for Upcoming SOFE Career Development Seminars**



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The questions are on the following page. Good luck!

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Thinking Critically as a Regulator in a Checklist World

Multiple Choice and True or False Questions — Submit Answers Online

1. The education theory defines critical thinking as "a mode of cognition using deliberative reasoning and impartial scrutiny of information to arrive at a possible solution to the problem."
 - a. True
 - b. False
2. Which of the following is not one of the 10 steps within the critical thinking road map?
 - a. Identify the problem
 - b. Consider different perspectives
 - c. Avoid conclusions
 - d. Reflect and learn
3. A checklist approach to task completion is designed to provide situational processes to be performed and include outlines of the necessary steps that ensure everyone follows a different process consistently.
 - a. True
 - b. False
4. Which of the following list correctly the five broad set of related skills that characterize critical thinking?
 - a. (1) Break down a problem into parts, (2) Recognize and account for biases, (3) Collect and assess limited evidence, (4) Adjust and reevaluate one's thinking in response to what was learned and (5) Form a reasoned assessment to propose a solution to a problem.
 - b. (1) Break down a problem into parts, (2) Recognize and account for biases, (3) Collect and assess relevant evidence, (4) Adjust and reevaluate one's thinking in response to what was learned and (5) Form a reasoned assessment to propose a solution to a problem.
 - c. (1) Break down a problem into parts, (2) Eliminate outside information or experiences, (3) Collect and assess relevant evidence, (4) Adjust and reevaluate one's thinking in response to what was learned and (5) Form a reasoned assessment to propose a solution to a problem.
 - d. (1) Break down a problem into parts, (2) Recognize and account for biases, (3) Collect and assess relevant evidence, (4) Avoid reevaluating one's thinking in response to what was learned and (5) Form a reasoned assessment to propose a solution to a problem.
5. Is the need for critical thinking skills is eliminated completely by the use of a checklist approach to task completion?
 - a. True
 - b. False



Parametric Insurance: A Captivating Solution

Multiple Choice and True or False Questions — Submit Answers Online

6. What is another name of a parametric policy?
 - a. Index-risk
 - b. Index-price
 - c. Index-based – Correct Answer
 - d. Index-loss

7. What market is parametric policies mostly used?
 - a. Health insurance
 - b. Property catastrophe insurance
 - c. Life insurance
 - d. Homeowners insurance

8. Parametric policies have a term of one year?
 - a. True
 - b. False

9. Model risk is mitigated using four-lines of defense principle.
 - a. Quick payout
 - b. Predetermined Amount
 - c. Set trigger point
 - d. Minimal basis risk

10. One of the advantages of a parametric policy is that it can help improve cash flow.
 - a. True
 - b. False



Market Briefing - 3Q 2023 • Mid-Year Recap and U.S. Invested Assets as of Year-end 2022

True or False Questions — Submit Answers Online

11. In 2022, US insurer long term invested assets increased from \$7.2 trillion to \$7.3 trillion.
 - a. True
 - b. False

12. Common stock holdings of P&C insurers increased by 50.6 billion.
 - a. True
 - b. False

13. The most significant increase in Bonds were bonds that had a maturity of greater than 10 years.
 - a. True
 - b. False

14. Collateral Loans have seen a significant percentage increase in exposure over the last ten years.
 - a. True
 - b. False

15. Increased inflation has NOT been a principal driver for increased market volatility.
 - a. True
 - b. False



PwC NAIC Meeting Newsletter Spring 2023

Multiple Choice and True or False Questions — Submit Answers Online

16. Key provisions in INT 23-01, relating to negative IMR, include which of the following?
 - a. Limitation relative to surplus
 - b. Minimum RBC.
 - c. Separate accounts.
 - d. All the above.

17. Highlights from the most recently proposed revisions to the Principles-based bond proposal project included:
 - a. Residuals – definition
 - b. Residuals – assumptions
 - c. Residuals – valuation
 - d. Residuals – duration

18. The fundamental accounting issue INT 23-03 addresses is how to account for a consolidated tax in separate company financial statements.
 - a. True
 - b. False

19. The Climate and Resiliency Task Force was presented with information on:
 - a. The increase in global temperatures and its subsequent effects on rising sea levels and other catastrophic perils.
 - b. A study on inclusive insurance as well as a review of climate risk disclosures
 - c. The occurrence of atmospheric river storms in western states.
 - d. All the above

20. Regarding Asset Adequacy Testing, lower net yield assumptions are lower than comparable companies with similar asset portfolios.
 - a. True
 - b. False



Thinking Critically as a Regulator in a Checklist World

By Philip Talerico
CPA, CFE, ARM, MCM
Baker Tilly LLP

In starting this discussion regarding critical thinking as regulators in a world designed [potentially] to limit it; I wanted to provide a few quotes that resonated with me as I considered what critical thinking is and means and searched to determine what others thought it was and includes. Here are three that I want to share with you:

"Critical thinking is the most important factor with chess. As it is in life, you need to think before you make decisions."

Hikaru Nakamura,
Chess Grandmaster

"Standardized testing is at cross purposes with many of the most important purposes of public education. It doesn't measure big-picture learning, critical thinking, perseverance, problem solving, creativity or curiosity, yet those are the qualities great teaching brings out in a student."

Randi Weingarten, President

"I don't want people to say, 'Something is true because Tyson says it is true.' That's not critical thinking."

Neil deGrasse Tyson, Astrophysicist and Author

These three quotes demonstrate, the remainder of this article will discuss, that critical thinking is an essential skill that can be developed and cultivated and is necessary to challenge even the most reputable sources.

Critical Thinking. What is it, and can it be developed?

In education theory, critical thinking is a mode of cognition using deliberative reasoning and impartial scrutiny of information to arrive at a possible solution to a problem. Critical thinking encompasses both a set of logical skills that can be taught and a disposition toward reflective open inquiry that can be cultivated. Critical thinking is characterized by a broad set of related skills, usually including the ability to: (1) Break down a problem into parts to reveal its underlying logic and assumptions, (2) Recognize and account for one's own biases in judgment and experience, (3) Collect and assess relevant evidence from either personal observations and experimentation or by gathering outside information, (4) Adjust and reevaluate one's thinking in response to what was learned and (5) Form a reasoned assessment to propose a solution to a problem or more accurate understanding of the topic at hand.



Applying the skills required for critical thinking would be most effective through the roadmap outlined via these ten steps:

1. **Identify the Problem:** Clearly define the issue or problem that needs to be addressed. Understand the context and any specific challenges associated with it.
2. **Gather Information:** Collect relevant data, facts, and information about the problem. Use a variety of sources to ensure a comprehensive understanding.
3. **Analyze the Information:** Evaluate and examine the information gathered. Look for patterns, relationships, and potential biases. Identify key factors and variables that may impact the problem.
4. **Identify Assumptions:** Determine the underlying assumptions or beliefs influencing your thinking and the information presented. Assess the validity and reliability of these assumptions.
5. **Evaluate Evidence:** Assess the quality and reliability of the evidence supporting various viewpoints or potential solutions. Look for logical reasoning and consistency in the evidence.
6. **Consider Different Perspectives:** Explore different viewpoints and perspectives on the problem. Consider diverse opinions and alternative approaches.
7. **Draw Conclusions:** Draw logical and well-supported conclusions based on the analysis and evaluation. Consider the implications and potential outcomes of each conclusion.
8. **Generate Solutions:** Brainstorm and generate potential solutions or strategies to address the problem. Evaluate each solution based on its feasibility, effectiveness, and potential risks.
9. **Make Informed Decisions:** Use critical thinking to make well-informed decisions based on the conclusions and potential solutions. Consider the available resources and constraints.
10. **Reflect and Learn:** Reflect on the outcomes and learn from the experience after implementing a solution. Assess what worked well and what could be improved in future situations.



The process of developing critical thinking as a skillset begins through actions. At Baker Tilly, we subscribe to the learning philosophy that follows the 70/20/10 model, which begins with the understanding that a large part of an individual's learning occurs outside the classroom setting. Specifically, the 70/20/10 learning model assigns 70% of an individual's learning from experience-based learning, i.e., hands-on experience, 20% from relationship-based learning, i.e., interactions and feedback, and 10% from formal learning, classroom, webinar, seminar type learning events.

With 70% of an individual's learning coming from experience, I would suggest starting your critical thinking development journey through **questioning assumptions**, which can be accomplished through asking basic questions. As you receive the answers to your questions, **reason through logic**: follow the logic chain and ensure the answers to your questions support the initial assumptions and goals of the original thought. Finally, **diversify thoughts** to avoid bias, whether through collaboration with those involved in the discussion or seeking other voices/opinions available from other perspectives.

Checklists approach.... Good or Bad

The checklist approach is not inherently a bad thing. A checklist approach to task completion is designed to provide standard processes to be performed and include outlines of the necessary steps that ensure everyone follows the same process consistently. The idea is checklists assist with reducing errors and improve accuracy by breaking down large tasks into smaller steps with guidance for completing the steps. These are good goals and outcomes to set, and checklists have been proven to, efficiently guide users to necessary information, and inspire thought.

Where a checklist approach would limit effectiveness and impair the ability to apply and develop critical thinking skills is when the checklist approach is applied without question. When performing tasks or procedures that are typically completed through a checklist, we should question the initial assumption as to whether this checklist and its approach is the most effective or efficient way to address the overall problem. Taking on this assumption challenge will ensure we are considering all possible perspectives and data points, support the continued use of the checklist by confirming it is appropriate or identifying ways it should be updated, and allow individuals to learn more regarding the checklist's purpose and how it adequately addresses the initial problem we set out to solve. This same assumption questioning can occur as an individual works through the checklist steps, ensuring we are applying the checklist in the most efficient way to provide its greatest value.



Critical Thinking as Insurance Regulators – Now and the Future

Within insurance regulation, we apply critical thinking more than we may imagine. Below is an example of how we demonstrate each of the five skills of critical thinking we provided earlier in this article:

(1) Break Down Problem into parts

The Risk Focused Examination process is seven "parts" designed to address the problem that an insurer may no longer remain solvent.

(2) Account for biases

When we issue examination observations or issues of non-compliance we support it with industry standards, outcomes caused via non-compliance, and quantify the impacts.

(3) Collect and assess relevant evidence

Risk assessment worksheets within Risk Focused Analysis requires the accumulation of financial trends of other characteristics of risks to be reasoned and investigated.

(4) Adjust and reevaluate based on what's learned

Occurs when a potential inherent risk on our examination Exhibit CC is considered previously addressed as well as when we apply judgement to the residual risk assessments calculated during Phase 4.

(5) Form a reasoned assessment

We prepare reasoned assessments of an insurers solvency through the completion of Insurer Profile Summaries, Examination Planning Memorandums, Summary Review Memorandums, and Phase 7 Reports.

Checklists are and will likely remain an essential tool used by regulators in the regulatory oversight of domiciled insurers. This makes sense, considering checklists are designed to guide execution, ensure consistency, and reduce errors. If used appropriately, these checklists should support the application and development of critical thinking skills within regulators.

An easy example of how checklists support critical thinking within the regulatory oversight of insurers is the use of Exhibit E – Audit Review Procedures to evaluate the insurer's audit function during Phase 1 of a risk-focused examination. This checklist informs examiners of the information necessary to evaluate the audit function, guides the examiner in assessing the audit function, and ensures that the conclusion of the assessment is reasoned, supported, and demonstrates the impact the assessment has on how and which risks the examiner needs to consider.



We could share additional examples of checklists and critical thinking within insurance regulatory oversight in this article. The point to walk away with is that checklists, if appropriately considered, should facilitate critical thinking by removing barriers to relevant information, providing expectations and guides for execution, and allowing the performing regulator to complete the task and think critically.

So, what does the future hold regarding critical thinking and its importance. Specifically, how will technology, including Artificial Intelligence (“AI”), impact the development of critical thinking as a skill? Will technology include biases or be void of them, and how will we develop critical thinking within examiners and analysts in this current environment. The impact of AI and the way we work appears to be here to stay. The power of AI, such as ChatGPT, to accumulate information not only quickly but in a form that allows us to act efficiently can impair our ability to develop critical thinking skills and increase the importance of the users of this technology having critical thinking skills.

Imagine an examiner/analyst asking AI how to determine if an insurer’s Enterprise Risk Management (“ERM”) function is appropriate and using what is provided as a framework to evaluate the domiciled insurer’s ERM function for appropriateness. The AI probably accumulated a defined ERM framework from a source like the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) ERM Framework, a widely accepted baseline for an adequate ERM function. Now consider that the insurer this examiner/analyst is reviewing writes \$150 million in direct written premium, is not part of a larger holding company system, and began business within the last three years. The examiner / analyst; trusting the AI source which by all accounts is a good description of an adequate ERM function and assessed this insurer based on these standards; concluding ERM was inadequate. Had the examiner/analyst applied critical thinking following the receipt of the AI information; they may have determined that the resources necessary to establish an ERM framework in compliance with COSO are not available for the insurer under review; nor are they necessary. The examiner / analyst through critical thinking could have questioned the assumption, “is the COSO ERM Framework adequate representation of the ERM needs of this insurer” thus creating a more effective use of the COSO framework as a guide, and a more reasonable assessment and accurate conclusion.



Wrap up and Conclusion!

Critical thinking is a skill set that should be viewed as a necessity as we evaluate what makes a good regulator. The great news is this skill can be developed and honed through experiential learning and feedback / self-improvement. This assessment is becoming more evident as we have access to technology that provides information for performing evaluations more efficiently than ever and in a manner that makes it difficult to determine what is real and what is not. Checklists and their use are not inherently bad and establish an expectation for consistency, information relevance, and completion guides. An effective checklist completed with critical thinking skills will result in the best possible outcome and the highest degree of value to our purpose.

About the Author

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Parametric Insurance: A Captivating Solution

By Andrew Provines, FCAS, MAAA
and Karl Goring, FCAS, MAAA
Milliman

Captive insurance is the most popular form of alternative risk financing¹ due to the myriad of benefits, both economic and noneconomic, that it can achieve. Among these benefits is the ability of the captive insurance company to write policies that typically aren't available in the commercial market. Many companies are faced with unique or hard-to-place risks that a standard indemnity policy may not cover. Some of these unique risks can more easily be addressed through existing policy forms. For example, in the post-COVID-19 world, some captives are incorporating pandemic business interruption risk into their captives² However, for other more unusual risks, there is no clear-cut solution.

Trying to draft a policy for these unusual risks, along with getting regulatory approval, can be difficult. These risks may be novel to both auditors and captive regulators, who may be wary to approve a policy that has no obvious history of risk transfer. However, there may be one underutilized solution to insure these gaps in coverage—parametric policies.

What is a parametric policy?

According to the National Association of Insurance Commissioners (NAIC),³ parametric insurance (sometimes also referred to as “index-based” insurance) is defined as a “type of insurance contract that insures a policyholder against the occurrence of a specific event by paying a set amount based on the magnitude of the event, as opposed to the magnitude of the losses in a traditional indemnity policy.” What does this mean exactly? In a traditional indemnity policy, the loss amounts eventually paid to the claimant following the occurrence of a claim are usually not known with certainty. There is typically a claim adjustment process that often includes litigation that could delay the final settlement of a claim for several years. With a parametric policy, the loss payout is predetermined prior to the issuance of the policy. There are then certain measurable metrics, called the “trigger(s),” that need to be met for the payment to be made. Once all conditions of the trigger have been met, the parametric policy pays out the predetermined loss amount to the policyholder. There are two necessary criteria for determining the trigger: 1) it must be independently and objectively measurable, and 2) it must be able to be modeled.⁴ Some parametric policies may have more than one trigger that must be met before payout occurs, or may have several triggers depending on the situation, such as a gradation in payout based on the intensity of a storm.

These parametric policies can often be more easily explained through a non-insurance example—sports betting. Take horse racing, for example. At the racetrack, you can buy a ticket with a bet that a certain horse will win the race. The amount you spent to purchase this ticket would be analogous to the premium paid in a parametric policy. The ticket will display the amount the purchaser will win if the selected horse wins the race. This payout is predetermined prior to the race and is typically based on odds, or probabilities, just like an insurance contract. The trigger in this example would be simple—if the selected horse wins the race, the trigger is met and a payout occurs; otherwise, there is no payout. The only difference between this simple example and a parametric policy is that, with a parametric policy, the predetermined payment is related to reimbursing a loss.



Insurance examples of parametric policies

How can a captive use a parametric policy to help complement its traditional indemnity policies and bridge any gaps in coverage? Historically, parametric policies have been primarily used in the property catastrophe market. A popular example of a trigger is a specified measure of wind speed in a hurricane that when modeled causes a certain loss (i.e., the estimated loss at that wind speed would be the payout). If, and when, a hurricane occurs, and the specified wind speed is attained, then the parametric policy would immediately pay out the losses to the policyholder, helping to quickly improve cash flow in the wake of the hurricane. Another popular trigger in the property catastrophe market is the magnitude of an earthquake. Once the specified magnitude is reached, the policy would pay out. Because many of the triggers in the property catastrophe market are objective and determinable, it is easy to see why parametric triggers are popular. Furthermore, the immediate payout helps eliminate any concerns about post-loss cash flow.

Continuing with the property catastrophe market, another popular form of parametric contract is the industry loss warranty (ILW). An ILW is a type of index-based policy in which the trigger is based on the total industry insured loss experience for a particular event.⁵ The trigger is typically a specified dollar amount that the industry (rather than the policyholder) must incur from a particular event in order to pay out. Oftentimes an ILW with an industry loss trigger will be coupled with a policyholder-specific trigger specifying a loss that the policyholder must also incur to generate a payout. So, for these dual-trigger contracts, both the industry losses and the policyholder-specific losses must reach their specified thresholds in order for the policyholder to receive a payout.

While parametric policies are most often used in the property catastrophe market, they are not limited as such. Parametric policies can cover any type of objectively measurable event that causes a loss and can be modeled. For example, construction companies could define a trigger such as a number of days with precipitation. Rain and snow can delay projects and can lead to lost income on other projects that were not undertaken due to the delay. A captive whose parent is in the construction industry can use historical company data, along with economic data and weather data, to model and determine the appropriate payout and trigger for this type of parametric policy.

For many in the retail industry, the COVID-19 pandemic brought about store closings and lost sales. Rather than the company purchasing pandemic business interruption coverage through a traditional indemnity policy, the retail captive could write a parametric policy where the trigger is a predetermined decrease in sales due to a pandemic. While many retail businesses were forced to close due to government restrictions, the parametric policy would be able to provide cash flow to help the company stay afloat and pay its employees.



For the healthcare industry, a wide variety of triggers could be utilized. For example, a certain percentage decrease in market share for a medical device or pharmaceutical manufacturer could be a trigger, and the payout could be determined based on the lost income due to this decrease in market share. This type of trigger can also apply to many of the other popular industries that use captives, such as the manufacturing, energy, and technology industries.⁶

Figure 1: Examples of triggers



Overall, parametric policies can incorporate unique coverage in a way that traditional indemnity policies cannot. They can function as a funding tool in all areas of potential loss, and can provide an immediate influx of cash following the activation of the trigger.

Now that we have a better understanding of parametric policies and have gone through a few examples, let's take a deep dive into the fundamental differences of them from the traditional indemnity policies that your captive may write.

Comparing to a traditional indemnity policy

Both parametric and traditional indemnity insurance policies exist for the purpose of reimbursing a loss event. However, the manners in which the policies reimburse these losses are fundamentally different. We've previously dissected the parametric trigger and gone through a few examples. But what is a trigger for a traditional indemnity policy? The trigger may not be as transparent, but it is relatively simple and something with which all captives are familiar—the occurrence of a claim!

When a claim occurs for a traditional indemnity policy, the trigger is met, and the claimant is able to recoup the actual loss amounts (subject to policy terms). As mentioned above, in a parametric policy, once the specified trigger(s) have been met, then the policy pays the predetermined amount, which may or may not reimburse the full loss amount. This brings up one of the key downsides to parametric policies—basis risk. Basis risk is the risk that the payout from the policy is not perfectly correlated with an insured's actual losses (i.e., the payout from the policy does not fully reimburse the actual losses sustained from an event).⁷ In the event that the payout from a parametric policy is less than the actual loss amounts, the results can be devastating, particularly in the wake of a catastrophe. The captive would need to utilize its capital and surplus in order to pay out claims, which may or may not be sufficient.



An example of this would be the instance where the captive purchases an ILW with an industry trigger. If the captive experiences significant losses, but the industry trigger is not met, then the captive may have insufficient funds to pay the policyholder.

However, in some instances, basis risk can also be beneficial for the captive. In the same ILW example, were industry losses to exceed the threshold but the captive sustained minimal losses, then the captive would over-recover on the policy. This recovery would help to build additional surplus (or provide a dividend to the parent). The existence of basis risk is where the dual trigger contract, with both an industry trigger and an insurer-specific trigger, may be useful. The insurer-specific trigger helps mitigate basis risk, whereas the industry trigger protects against moral hazard (the event in which the insurer may overstate losses to receive a payout).

While basis risk is a potential drawback to parametric policies, parametric insurance also has benefits. Arguably, one of the most important benefits that parametric policies have over indemnity policies is that they completely remove the claim adjustment process. Claim adjustment costs can be expensive, particularly for longer-tailed lines of business. The administrative costs of keeping claims open for years and years can add up. With a parametric policy's immediate payout, a captive can evade this process and can also improve cash flow in the event of a loss. Policy terms are another benefit of parametric insurance, as they can be written on a multiyear basis,⁸ allowing the parent the ability to tailor coverage uniquely for the risks of the captive.

Figure 2: Parametric vs. indemnity policies

	Parametric Policy	Indemnity Policy
Trigger	Specified Threshold Attained	Occurrence of a Claim
Payment	Predetermined Amount	Recovery of Actual Losses Incurred
Basis Risk	Need to Correlate Index With Losses	Minimal
Moral Hazard	Minimized With a Dual Trigger/Modeling	Minimized With Deductibles/Exclusions
Claim Adjustment Process	Quick Payout	Can Be Long, Expensive Process
Policy Term	Multiyear	Single Year

Now that we've provided the benefits of incorporating a parametric policy into your captive, how does your captive go about pricing this policy? That is where the actuary comes in.



The role of the actuary

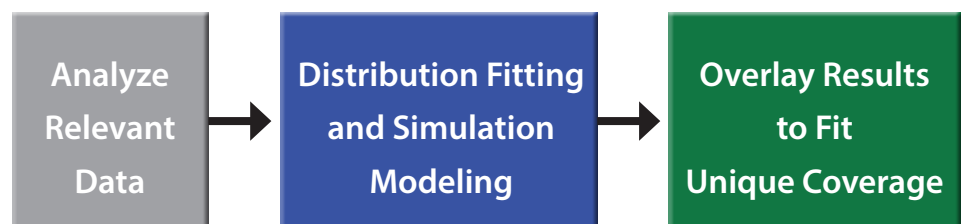
For pricing traditional indemnity policies written by your captive, your actuary most likely relies on historical claim and exposure data. The actuary would typically build historical data triangles, estimate losses using commonly accepted actuarial techniques, and project losses for the upcoming year.

However, for parametric policies, standard actuarial techniques might not be sufficient. As parametric policies are meant to bridge gaps in your captive's insurance program, the events set to trigger them are commonly low-frequency and high-severity. They may also be events that may not necessarily have required the filing of a claim in the past (e.g., nontraditional coverage), but have the potential for an economic loss (such as lost sales due to COVID-19).

In many instances where historical information is insufficient, an actuary typically relies on some form of simulation modeling to replicate scenarios of the proposed index. For the property catastrophe market, in which parametric policies are most popular, the actuary will typically utilize the results of a catastrophe model. For other types of triggers, the actuary would need to be provided with some type of information related to the index. For our construction example above, the actuary can be provided with historical weather information and internal financial projections related to weather events. In the retail and healthcare scenarios, the actuary can be provided with internal financial projections, coupled with external economic indices. In other instances, actuaries can research similar coverages, products, or other external information to derive a loss distribution from which a simulation can be run. The more relevant and accurate the data, the better the distribution. Basis risk will also be minimized.

Once a distribution is derived, the actuary can simulate the real-world scenarios and deliver results to tailor-fit the coverage needed, whether it is simply the expected loss or a stop-loss policy based on a higher probability level (e.g., a payout if the losses exceed the 90th probability level).

Figure 3: Actuary Role



Following the results of the simulation and addressing the coverage parameters, the actuary can help develop the policy and coverage forms to be filed with regulators.



Conclusion

Captives are well known for financing unusual and hard to place risks. No matter what industry your captive is in, parametric policies can be utilized to bridge coverage gaps that are difficult to insure with a traditional indemnity policy. While basis risk is a potential downside to parametric insurance, it can be mitigated through dual triggers and modelling by the actuary. Parametric insurance can also be extremely beneficial in the wake of an economic loss, as the policies payout quickly and remove the claim adjustment process, helping to improve cash flow. If you have unusual or hard-to- place risks, reach out to your actuary to see whether a parametric policy is the solution!

Footnotes

¹ Marsh 2019 Captive Landscape Report.

² Captive Insurance Times (March 2, 2022). Pardon the interruption. Retrieved April 21, 2022, from https://www.captiveinsurancetimes.com/specialistfeatures/specialistfeature.php?specialist_id=350&navigationaction=features&newssection=features.

³ NAIC (February 24, 2022). Parametric Disaster Insurance. Retrieved April 21, 2022, from https://content.naic.org/cipr_topics/topic_parametric_disaster_insurance.htm.

⁴ Swiss Re (August 1, 2018). What is parametric insurance? Retrieved April 21, 2022, from https://corporatesolutions.swissre.com/insights/knowledge/what_is_parametric_insurance.html.

⁵ Artemis. What are industry loss warranties (ILWs)? Retrieved April 21, 2022, from <https://www.artemis.bm/library/what-are-industry-loss-warranties-ilws/#>.

⁶ Marsh 2020 Captive Landscape Report.

⁷ Hall, C. (May 8, 2021). What is basis risk in insurance and why should I care? FloodFlash. Retrieved April 21, 2022, from <https://floodflash.co/what-is-basis-risk-in-insurance-and-why-should-i-care/>.

⁸ Brettler, D. & Gosnear, T. (January 9, 2020). Parametric Insurance Fills Gaps Where Traditional Insurance Falls Short. Insurance Journal. Retrieved April 21, 2022, from <https://www.insurancejournal.com/news/international/2020/01/09/553850.htm>.



About the Authors

Current Responsibility

Karl Goring, FCAS, MAAA is a principal and consulting actuary with Milliman. He joined the firm in 1999. He works primarily for Bermuda based clients.

Professional Work Experience

Karl has more than 30 years of industry experience in property and casualty loss reserving, pricing, and financial modeling. He has experience in the evaluation of liabilities for property and casualty insurance and reinsurance companies. He has performed regulatory reserve reviews of insurance and reinsurance companies. Karl's wide range of experience includes international insurance and the London market. He has also experience performing due diligence assignments.

Karl has worked extensively on property and casualty consulting assignments, with particular emphasis in the Bermuda market. These assignments cover loss reserving, ratemaking, captive planning, feasibility studies, and reinsurance structure analysis.

His expertise includes developing models for pricing and reserving for difficult casualty lines and developing simulation models for analyzing reinsurance structures. His clients include multiline property and casualty insurers, selfinsurers, captive insurers, and reinsurers.

Karl has been working on consulting assignments for participants in alternative capital markets and the insurancelinked securities space. His assignments have included portfolio valuations, contract review, and postevent catastrophic event loss reserving.

Andrew Provines, FCAS, MAAA is a consulting actuary with the Boston office of Milliman. He joined the firm in 2017.

Professional Work Experience

Andrew's experience in property and casualty actuarial work includes loss reserving, ratemaking, and data analysis.

While still relatively early in his career, Andrew has gained considerable experience in the alternative risk market. Andrew supports the ongoing actuarial needs of numerous clients, ranging from property and casualty insurers to captives, self-insurers, and public entity risk pools. Examples of Andrew's multi-faceted actuarial career include:

- Supporting the reserving and pricing functions for many captives, self-insurers, and public entity risk pools
- Assisting in the issuance of statements of actuarial opinion
- Providing funding estimates and developing pro-forma financial projections for potential captive insurers
- Researching the differences in laws and regulations pertaining to the taxation of captives and other alternative risk options
- Reviewing rate filings for multiple state insurance departments
- Developing and performing simulation modeling in areas such as reserve and funding variability, stress testing, and risk transfer analyses

Market Briefing - 3Q 2023 • Mid-Year Recap and U.S. Insurance Industry Invested Assets as of Year-End 2022

By Edward Toy | Risk & Regulatory Consulting, LLC

Introduction

We have just passed the mid-year mark for 2023. Compared to year-end 2022, the 30-year Treasury is yielding one basis point higher, while the 10-year is up nine basis points, and the 1-year is up 71 basis points. The Treasury yield curve is inverted (short-term yields are higher than long-term yields) by 162 basis points, as compared with year-end 2022 when the degree of inversion was 89 basis points. Through the first half of 2023, the S&P 500 index is up 15.9%. This is after being down 19.4% for the full-year 2022. Oil prices, as represented by the benchmark West Texas Intermediate, are down 12.4%. Overall, market volatility increased in the spring with the failure of several banks, though it has settled back down somewhat as of late. Before going into greater detail on market activity, it is useful to remind ourselves of U.S. insurance company invested assets.

[The data for insurance company investments was all based on Financial Statement Data submitted to the NAIC and acquired via SNL, which is a unit of S&P Global. Market data was acquired via the Federal Reserve Bank of St. Louis.]

U.S. Insurer Invested Assets

(\$ in 000s)	Insurance Industry		Life Insurers		P&C Insurers		Health Insurers	
	2021	2022	2021	2022	2021	2022	2021	2022
SHORT TERM INVESTMENTS								
ST Investments & Cash Equivalents	290,837,436	307,428,380	114,875,654	119,102,959	137,986,621	137,879,596	37,975,160	50,445,825
LONG TERM INVESTMENTS								
Corporate Bonds	2,627,809,843	2,686,993,923	2,112,851,313	2,140,868,179	442,369,216	468,856,533	72,589,313	77,269,212
Bank Loans	89,404,313	107,746,655	67,890,982	88,663,413	19,282,188	16,905,130	2,231,144	2,178,111
Government Bonds (incl Municipals)	878,369,765	873,980,038	404,311,781	392,516,263	425,482,628	432,346,766	48,575,357	49,117,009
Agency CMBS	74,600,359	68,140,589	44,499,656	39,234,299	28,177,544	27,067,571	1,923,159	1,838,719
Agency RMBS	234,056,795	228,473,646	126,447,514	108,820,187	85,750,177	93,807,323	21,859,104	25,846,136
Agency ABS	22,124,461	22,366,565	13,385,718	13,410,359	8,097,352	8,286,816	641,390	669,390
Non-Agency CMBS	209,004,196	211,642,748	151,446,609	155,725,368	48,249,244	45,861,595	9,308,344	10,055,785
Non-Agency RMBS	93,358,039	101,345,086	71,050,404	76,100,280	19,276,256	21,863,980	3,031,379	3,380,826
Non-Agency ABS	470,593,353	501,939,115	363,347,707	390,908,569	91,254,566	93,336,252	15,991,081	17,694,294
Hybrids	20,621,925	21,815,571	14,984,432	16,435,418	4,978,972	4,805,193	658,521	574,959
SVO Funds	14,060,821	11,543,762	3,184,534	3,933,230	6,598,133	4,756,329	4,278,154	2,854,203
Subtotal Unaffiliated Bonds	4,734,003,870	4,835,987,696	3,373,400,650	3,426,615,564	1,179,516,275	1,217,893,488	181,086,945	191,478,644
Preferred Stock	35,205,853	31,724,341	18,231,916	15,232,707	15,962,729	15,716,683	1,011,209	774,951
Common Stock	560,380,576	500,779,248	41,000,311	33,664,114	508,942,765	458,379,799	10,437,501	8,735,334
Funds reported as Common Stock	59,753,640	38,064,878	6,820,559	4,394,999	35,214,422	19,501,828	17,718,660	14,168,051
Subtotal Unaffiliated Equity	655,340,070	570,568,467	66,052,785	53,291,820	560,119,916	493,598,311	29,167,369	23,678,336
Commercial Mortgage Loans	571,440,221	609,114,888	547,324,164	582,499,083	23,793,542	26,144,776	322,515	471,029
Mezzanine Loans	10,264,068	11,739,776	9,529,625	11,097,754	734,443	642,022	-	-
Residential and Farm Mortgages	69,224,602	86,779,255	66,973,732	84,174,342	2,250,871	2,558,719	-	46,194
Problem Mortgages	2,966,465	2,517,729	2,613,728	2,369,465	352,738	148,264	-	-
Non-Insurer Occupied Real Estate	21,390,505	21,553,868	16,755,647	16,833,288	4,460,273	4,557,146	174,585	163,435
Subtotal Real Estate Related	675,285,861	731,705,517	643,196,894	696,973,931	31,591,866	34,050,928	497,101	680,658
Non-Conforming LT Assets	246,881,779	266,808,499	164,907,850	177,569,603	72,454,621	79,140,000	9,519,308	10,098,896
Affiliated Investments (incl Occupied RE)	883,279,365	867,885,273	339,826,528	374,490,294	499,601,310	449,612,434	43,851,527	43,782,545
Grand Total - Long Term Investments	7,194,790,944	7,272,955,451	4,587,384,707	4,728,941,212	2,343,283,986	2,274,295,160	264,122,250	269,719,078

In 2022, historic trends continued as long-term invested assets grew from \$7.2 trillion to \$7.3 trillion. Within that, unaffiliated long-term invested assets grew from \$6.3 trillion to \$6.4 trillion. Asset growth was represented in Life and Health insurance companies, while invested assets for Property & Casualty (P&C) insurers declined.

(\$ in 000s)	Industry Change		Life Insurers Change		P&C Insurers Change		Health Insurers Change	
	Dollars	Percentage	Dollars	Percentage	Dollars	Percentage	Dollars	Percentage
SHORT TERM INVESTMENTS								
ST Investments & Cash Equivalents	16,590,944	5.7%	4,227,305	3.7%	(107,025)	-0.1%	12,470,665	32.8%
LONG TERM INVESTMENTS								
Corporate Bonds	59,184,080	2.3%	28,016,865	1.3%	26,487,316	6.0%	4,679,899	6.4%
Bank Loans	18,342,341	20.5%	20,772,431	30.6%	(2,377,057)	-12.3%	(53,033)	-2.4%
Government Bonds (incl Municipals)	(4,389,727)	-0.5%	(11,795,518)	-2.9%	6,864,138	1.6%	541,652	1.1%
Agency CMBS	(6,459,770)	-8.7%	(5,265,357)	-11.8%	(1,109,973)	-3.9%	(84,440)	-4.4%
Agency RMBS	(5,583,149)	-2.4%	(17,627,327)	-13.9%	8,057,146	9.4%	3,987,032	18.2%
Agency ABS	242,104	1.1%	24,640	0.2%	189,464	2.3%	28,000	4.4%
Non-Agency CMBS	2,638,552	1.3%	4,278,759	2.8%	(2,387,648)	-4.9%	747,441	8.0%
Non-Agency RMBS	7,987,047	8.6%	5,049,876	7.1%	2,587,724	13.4%	349,446	11.5%
Non-Agency ABS	31,345,762	6.7%	27,560,862	7.6%	2,081,686	2.3%	1,703,214	10.7%
Hybrids	1,193,645	5.8%	1,450,985	9.7%	(173,778)	-3.5%	(83,562)	-12.7%
SVO Funds	(2,517,059)	-17.9%	748,696	23.5%	(1,841,804)	-27.9%	(1,423,951)	-33.3%
Subtotal Unaffiliated Bonds	101,983,826	2.2%	53,214,914	1.6%	38,377,213	3.3%	10,391,699	5.7%
Preferred Stock	(3,481,512)	-9.9%	(2,999,209)	-16.5%	(246,045)	-1.5%	(236,258)	-23.4%
Common Stock	(59,601,329)	-10.6%	(7,336,197)	-17.9%	(50,562,966)	-9.9%	(1,702,166)	-16.3%
Funds reported as Common Stock	(21,688,762)	-36.3%	(2,425,559)	-35.6%	(15,712,594)	-44.6%	(3,550,609)	-20.0%
Subtotal Unaffiliated Equity	(84,771,603)	-12.9%	(12,760,964)	-19.3%	(66,521,605)	-11.9%	(5,489,034)	-18.8%
Commercial Mortgage Loans	37,674,668	6.6%	35,174,920	6.4%	2,351,234	9.9%	148,514	46.0%
Mezzanine Loans	1,475,708	14.4%	1,568,129	16.5%	(92,421)	-12.6%	-	0.0%
Residential and Farm Mortgages	17,554,653	25.4%	17,200,610	25.7%	307,849	13.7%	46,194	0.0%
Problem Mortgages	(448,736)	-15.1%	(244,263)	-9.3%	(204,474)	-58.0%	-	0.0%
Non-Insurer Occupied Real Estate	163,363	0.8%	77,641	0.5%	96,873	2.2%	(11,150)	-6.4%
Subtotal Real Estate Related	56,419,656	8.4%	53,777,037	8.4%	2,459,061	7.8%	183,557	36.9%
Non-Conforming LT Assets	19,926,720	8.1%	12,661,753	7.7%	6,685,379	9.2%	579,588	6.1%
Affiliated Investments (incl Occupied RE	(15,394,092)	-1.7%	34,663,766	10.2%	(49,988,875)	-10.0%	(68,983)	-0.2%
Grand Total - Long Term Investments	78,164,507	1.1%	141,556,505	3.1%	(68,988,826)	-2.9%	5,596,828	2.1%

The increase in long-term invested assets represents relatively modest growth of 1.1%. Life insurer assets, which represent approximately 68% of the total, grew 3.1%, and Health insurer assets grew 2.1%, while P&C insurer assets declined by 2.9%. A significant reason for the decline in P&C insurers, which also impacted Life and Health insurers, was a decline in Common Stock holdings and other equity-related assets. Total Common Stock declined by \$59.6 billion (including \$50.6 billion for P&C insurers). Mutual Funds reported as Common Stock also declined by \$21.7 billion. This was largely driven by the decline in equity markets in 2022, which likely also impacted Investments Reported on Schedule BA and Affiliated Investments, which are dominated by equity-like investments. On the other hand, Bond investments grew by \$102.0 billion and Mortgage Loans, consisting of Commercial Mortgage Loans, Mezzanine Loans and Residential and Farm Mortgages, grew by \$56.4 billion. Notwithstanding any negative pressure on valuations of Investments Reported on Schedule BA, such investments grew by \$19.9 billion. This is partly due to a change in reporting of Residuals that were explicitly included in this category for 2022, as further discussed below.

	Insurance Industry		Life Insurers		P&C Insurers		Health Insurers	
	2021	2022	2021	2022	2021	2022	2021	2022
Bond Portfolio Maturity Score	12.49	12.64	14.38	14.44	8.02	8.43	7.73	8.08
1 or less	9.72%	9.05%	6.88%	6.49%	16.67%	14.80%	15.17%	17.13%
1 to 5	30.12%	30.78%	25.28%	25.94%	41.08%	42.17%	45.61%	42.59%
5 to 10	28.18%	27.08%	27.32%	26.35%	30.29%	28.91%	29.69%	28.10%
10 to 20	15.24%	16.24%	18.36%	19.23%	8.17%	9.52%	5.31%	6.90%
greater than 20	16.75%	16.85%	22.16%	21.99%	3.79%	4.60%	4.22%	5.29%
Greater than 10 year	31.99%	33.09%	40.51%	41.22%	11.96%	14.12%	9.53%	12.18%
Bond Portfolio Credit Score	1.46	1.44	1.52	1.50	1.32	1.30	1.38	1.34
NAIC 1	62.57%	63.27%	56.78%	57.41%	76.88%	77.52%	72.38%	74.25%
NAIC 2	31.64%	31.58%	37.34%	37.21%	17.76%	18.03%	20.63%	20.09%
NAIC 3	3.53%	3.13%	3.78%	3.46%	2.72%	2.21%	4.19%	3.31%
NAIC 4	1.70%	1.50%	1.52%	1.38%	2.08%	1.74%	2.49%	2.08%
NAIC 5	0.41%	0.45%	0.42%	0.48%	0.43%	0.39%	0.20%	0.17%
NAIC 6	0.14%	0.07%	0.15%	0.06%	0.12%	0.09%	0.11%	0.09%
Below Investment Grade	5.79%	5.15%	5.88%	5.38%	5.35%	4.44%	6.99%	5.65%

Bond maturities are not a direct measure of duration but generally are an indicator of possible interest rate risk. In 2022, all three insurer types reported modest upticks on average bond maturities. Most significant were the increases in Bonds held that had maturities of greater than ten years. This is an important consideration given the increase in interest rates in 2022. In 2022, the benchmark 10-year Treasury yield increased by 237 basis points, while the 30-year increased 207 basis points and the 1-year increased by 433 basis points. These increases likely impacted the fair market value of fixed income investments significantly, with many fair market values now reported at less than carrying value. Life insurers were likely more severely impacted given that more than 40% of their Bond holdings had maturities of greater than ten years. While P&C and Health would also have been impacted, their overall portfolios are shorter in duration with percentages on Bonds with maturities of ten years or more in the low teens.

The credit quality of Bond portfolios for all three insurer types were relatively stable and improved slightly in both the weighted average NAIC Designation and the percent of Bonds that were below investment grade.

	Insurance Industry		Life Insurers		P&C Insurers		Health Insurers	
	2021	2022	2021	2022	2021	2022	2021	2022
	(as a percent of Unaffiliated Long Term Assets)							
Total Bonds	75.01	75.50	79.42	78.69	63.98	66.75	82.21	84.75
Corporate (plus Loans)	43.05	43.63	51.34	51.20	25.04	26.62	33.97	35.16
Governments	13.92	13.65	9.52	9.01	23.08	23.69	22.05	21.74
Structured	17.49	17.70	18.13	18.01	15.23	15.91	23.95	26.33
Mortgages and Real Estate	10.70	11.42	15.14	16.01	1.71	1.87	0.23	0.30
Equities (Preferred and Common)	10.38	8.91	1.56	1.22	30.38	27.05	13.24	10.48
Schedule BA	3.91	4.17	3.88	4.08	3.93	4.34	4.32	4.47
	(as a percent of Surplus)							
Equities (Preferred and Common)			13.85	11.41	43.02	40.50	13.65	10.63
Schedule BA			34.57	38.03	5.56	6.49	4.46	4.54

The basic profile of U.S. insurance company investments does not change very much from year to year. However, given the previously noted changes in Common Stock and Mortgage Loans, it is worth noting those changes as a percent of total unaffiliated long-term invested assets. Equities (including Preferred Stock, Common Stock and Mutual Funds reported as Common Stock) declined overall from 10.38% to 8.91%. This was driven mostly by the percentage change for P&C insurers, from 30.38% to 27.05%, and Health insurers, from 13.24% to 10.48%. Equities continues to be very significant as a percent of Surplus (40.50% for P&C, 11.41% for Life, and 10.63% for Health). Mortgage Loans increased as a percent of unaffiliated long-term invested assets and is most significant for Life companies, increasing from 15.14% to 16.01%.

Not apparent in the table above is the continued shift within the Structured Securities category. Within Structured Securities, Commercial Mortgage-Backed Securities ("CMBS") declined from 4.49% to 4.37% and Residential Mortgage-Backed Securities ("RMBS") declined slightly from 5.19% to 5.15%. Meanwhile, Asset-Backed Securities ("ABS") increased from 7.81% to 8.19%. Overall, the percentage increased modestly from 17.49% to 17.70%.

	Insurance Industry		Life Insurers		P&C Insurers		Health Insurers	
	2021	2022	2021	2022	2021	2022	2021	2022
Derivatives	(000s)							
Carrying Value	37,736,738	17,514,973	37,746,812	17,571,469	(5,318)	(58,548)	(4,755)	2,053
Fair Value	49,650,980	7,200,853	49,719,960	7,242,872	(22,753)	(32,725)	(46,227)	(9,293)
Private Placements as % of Bonds			43.40	46.71	30.69	30.18	26.94	28.30
Foreign Bonds as a % of Total			17.51	17.22	8.64	8.13	8.56	8.41
Securities Lending and Repos	96,263,551	97,805,266	83,317,252	84,523,993	10,245,889	10,613,615	2,700,410	2,667,657
Assets Pledged as Collateral	238,725,961	335,213,997	199,441,890	295,069,556	32,802,445	34,304,991	6,481,627	5,839,450

Of significant note is the material change in both the carrying value and fair market value of derivatives positions. Derivatives activity is most significant with Life insurers. While most of the derivatives activity is for hedging purposes, only a small percentage is deemed to be Hedge Effective for Statutory Accounting purposes. This means that most derivatives exposures are held at fair market value. The decline in equity markets likely impacted valuations of equity-related derivatives. Also, a significant percentage of derivatives held are to hedge changes in interest rates. The sudden increase in interest rates as well as the curve inversion likely had significant negative impact on the valuation of many interest rate hedging derivatives.

In recent years, there has been increased focus on two different asset types held by insurers, Collateral Loans and Residual tranches of Structured Securities. Collateral Loans are reported on Schedule BA. While these investments still reflect less than one percent of invested assets across the insurance industry, their lack of transparency and concerns about valuation of the underlying assets has led to significant regulatory concern. The NAIC's Statutory Accounting Principles Working Group recently noted for emphasis and clarity that, to qualify as a Collateral Loan, the underlying assets must be eligible to be admitted assets. Other factors that have been discussed are that the fair market value of those assets must be at least equal to the value of the Collateral Loan and that this must be documented.

Also, the Statutory Accounting Principles Working Group added a new line item for Residual tranches of Structured Securities. These are often legally structured as debt securities but represent the equity risk in a Structured Security. These were reported for the first time in 2022 in Schedule BA and were previously reported in Schedule D as Bonds by most U.S. insurers. There are also some Residuals that are structured as Common Stock. Guidance has been clarified, but the expectation is that the total exposures are likely underreported to some degree.

(000's) New Data Collection beginning 2022	Insurance Industry		Life Insurers		P&C Insurers		Health Insurers	
	2021	2022	2021	2022	2021	2022	2021	2022
Collateral Loans								
Affiliated	9,656,948	11,844,349	8,372,771	10,925,699	679,771	489,395	604,406	429,255
Unaffiliated	7,480,816	6,656,176	6,593,296	6,015,176	886,985	638,222	535	2,777
Residuals								
Affiliated	n/a	8,163,410	n/a	3,182,761	n/a	4,771,871	n/a	208,779
Unaffiliated	n/a	3,564,512	n/a	2,532,121	n/a	829,889	n/a	202,501

Historic Trends

Historically, there has been regular focus on Credit Risk within insurance company portfolios. From the perspective of Bond holdings, exposure to this risk appears to have leveled off. There was a modest uptick in the industry's percentage holdings of below investment grade bonds in 2020 to 5.9% of the total, likely due to rating agency downgrades. This leveled off in 2021 at 5.8% and declined in 2022 to 5.1%. This is compared with the peak in 2009 of 6.0%. Bonds with a NAIC 2 Designation also leveled off in 2021 and held steady in 2022 at 31.6% of Bonds. NAIC 2 Designations have been growing steadily since at least 2006 when it was 18.5% of Bond holdings.

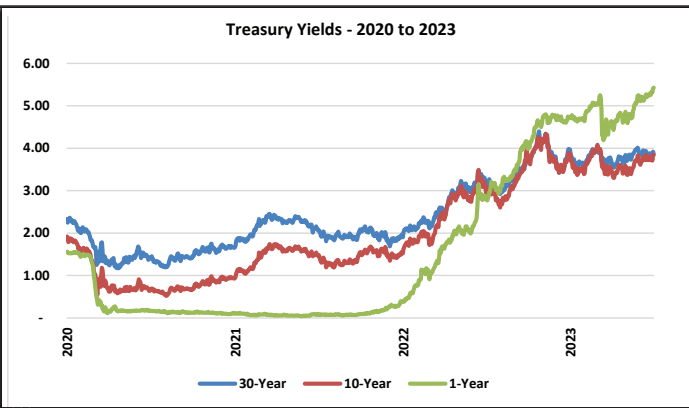
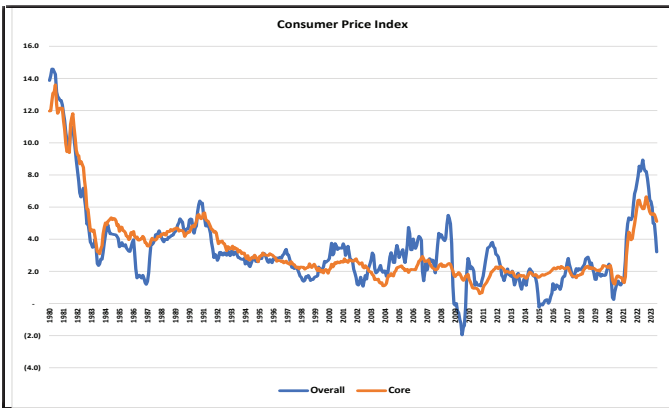
As a counterweight to the gradual increases in Structured Securities and Mortgage Loans, investments in Government Bonds, consisting of several different subcategories, has continued to decline. In 2011, Government Bonds accounted for 25.0% of total Bonds. By the end of 2022, this was only 18.1%.

While there have been swings in interest rates over the last 15 years, the Bond maturity profile of the three insurer types has not changed significantly. There have often been concerns expressed that insurers have been taking on significantly greater interest rate risk in a search for yield. Increases in longer maturity bonds have been incremental and gradual. Life companies have been lengthening maturities and by the end of 2022 had 41.2% of Bonds with maturities of ten years or greater. This is compared with lower levels in 2008 of 30.4%. While there are other variables besides maturity that impact actual duration, a ten-year bond is likely to have a duration of around eight years, and a 30-year bond will have a duration of as high as twenty years or more. It is important to consider the various metrics for maturity or duration of an insurer's bond portfolio in the context of that company's liabilities. For Life insurers, the gradual lengthening of maturities may be appropriate, as liabilities have historically been longer in duration than what is available for invested assets. While a duration of twenty years means a 100 basis points increase in market yields will result in a decline in fair market value of as much as 20%, this may not be an issue or concern if the insurer can hold the bond until maturity. P&C and Health companies are expected to keep shorter duration portfolios. Their shorter duration and somewhat less predictable liability needs mean there is less of an ability to absorb market value volatility.

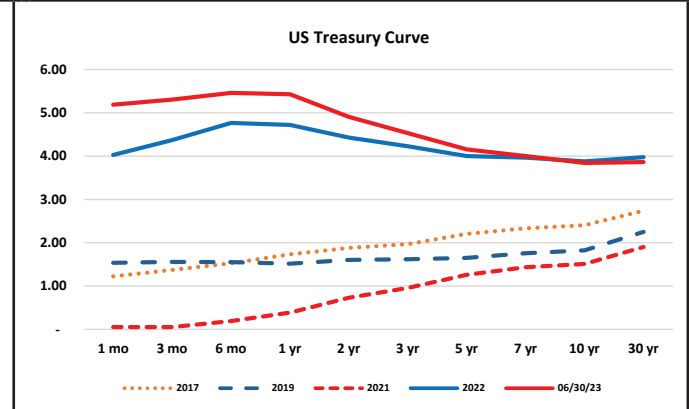
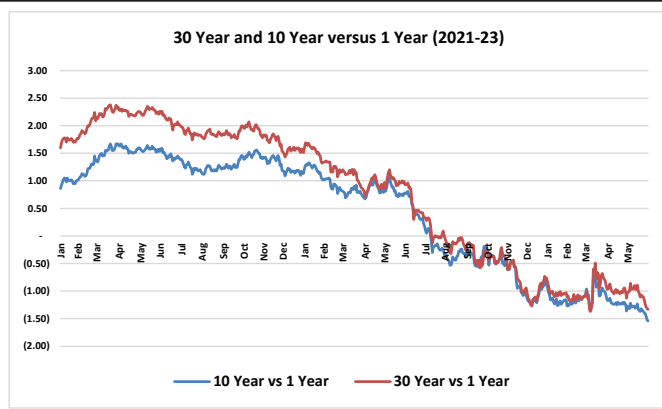
The U.S. insurance industry's derivatives activities, which are mostly among Life insurers, increased to \$3.1 trillion in notional value in 2022. This has been increasing steadily since at least 2006 when the reported number was \$495.4 billion. While a significant metric of activity, this does not represent a measure of risk or exposure. Most of the activity is also used for hedging purposes, although only a small percentage is deemed to be Hedge Effective for Statutory Accounting purposes.

Markets (through June 30, 2023)

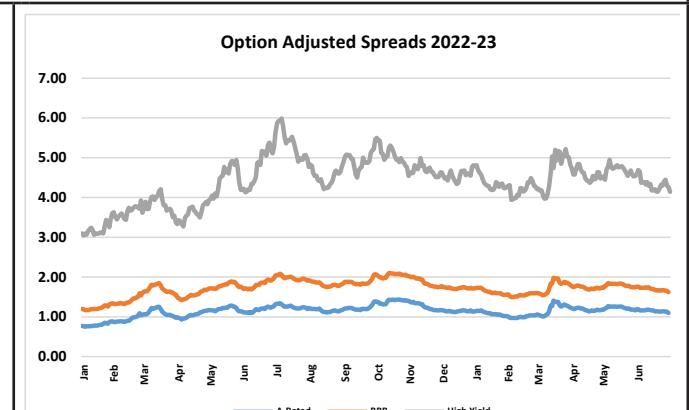
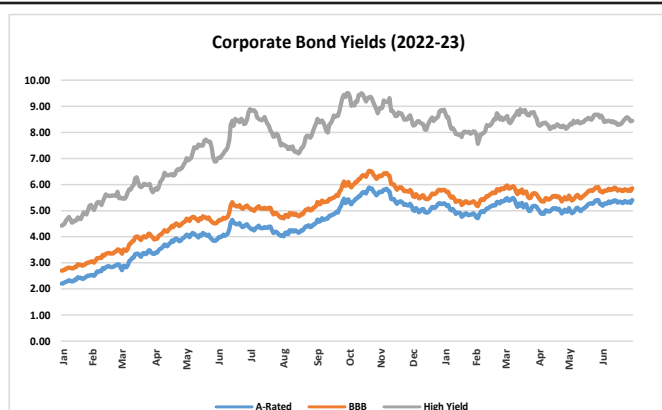
A principal driver for increased market volatility in 2022 through the first half of 2023 has been increased inflation beginning at the end of 2021 (see Market Briefing, January 12, 2023, "Market Recap for 2022 and Potential Impacts on Insurer Investments"). Inflation, as measured by the Consumer Price Index ("CPI") peaked at 9.1% in June 2022, with Core Inflation, which excludes Food and Energy, peaking at 6.6% in September 2022. Since then, both measures have declined as the Federal Reserve Board (the "Fed") dramatically increased interest rates. The June CPI data was reported on July 12th at 3.1% for the overall rate and 4.8% for the core rate (versus May data of 4.0% and 5.3%, respectively). This was also compared with the forecast from the Federal Reserve Bank of Cleveland that was an overall inflation rate of 3.2% and core inflation of 5.1%. Both measures are still above the Fed's target level of 2.0%.



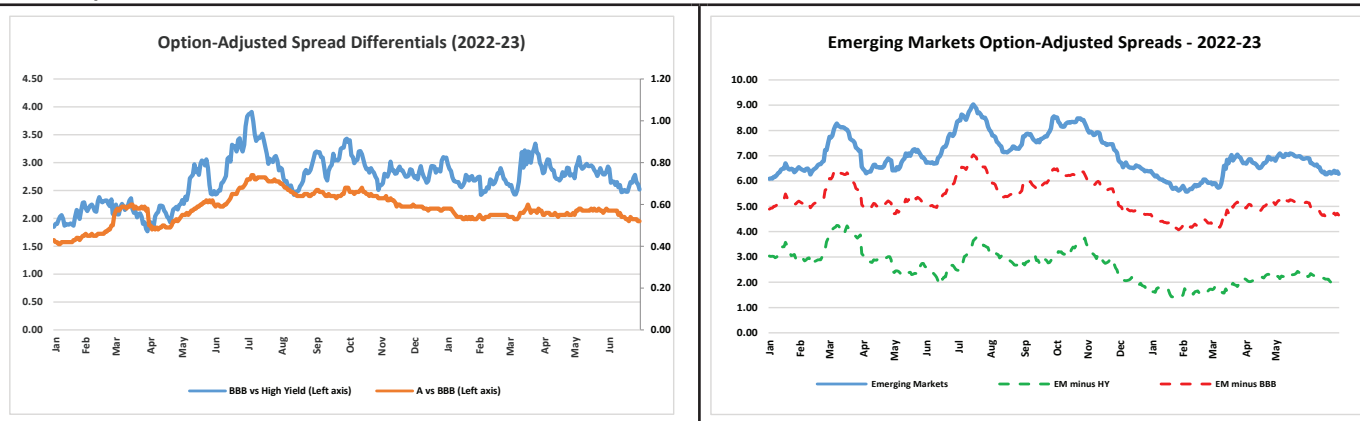
As the Fed increased interest rates by raising the target range for Federal Funds, short-term interest rates rose dramatically. While longer term interest rates in the marketplace also rose, the increase was not as significant. In comparison with year-end 2021, the 1-year Treasury yield has increased by 504 basis points. Over the same time period, the 10-year Treasury yield has increased just 232 basis points and the 30-year Treasury yield has increased 196 basis points. Since year-end 2022, the 1-year is up 70 basis points, but down 4 basis points for the 10-year and down 11 basis points for the 30-year. Longer term Treasury yields have not increased to the same degree because of expectations that the U.S. economy could enter a recession in either 2023 or 2024.



The result is that longer term Treasury yields are lower than shorter term Treasury yields, or an inverted yield curve. The degree of inversion depends on which two data points are used. The difference between the 30-year and the 10-year versus the 1-year is currently about 160 basis points. This is the most significant inversion and, having gone negative in July 2022, is the longest period that an inverted yield curve has lasted in recent memory. The anomalous nature of the curve inversion has impacted valuations in many market areas, most notably for interest rate related derivatives as mentioned earlier. The fair market value of fixed income investments has also been significantly impacted. The negative pressure on valuations is much more pronounced on longer term assets than short-term assets.

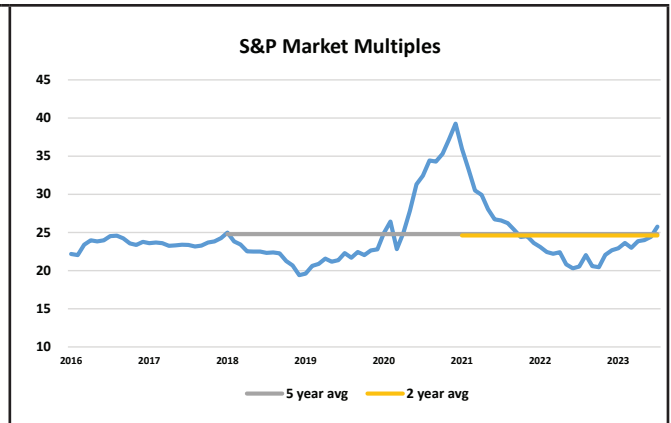
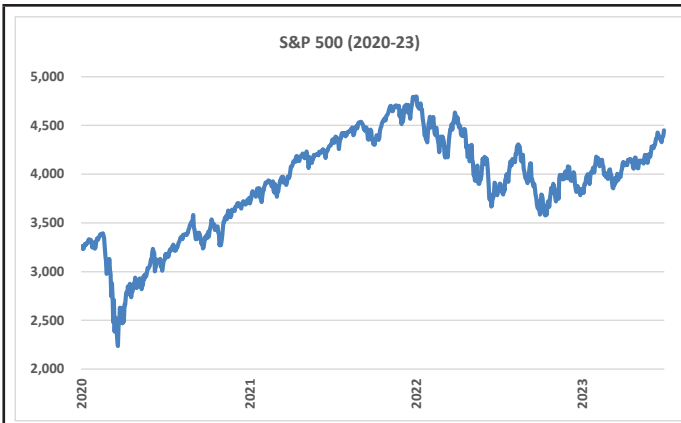


U.S. insurance company fixed income investments consist primarily of different kinds of risk assets, therefore Treasury yields are not entirely indicative of the potential market impact. Corporate bond yields are all significantly higher than they were at the end of 2021. The benchmark index for A-rated corporate bonds is yielding 330 basis points higher than at the end of 2021, while BBB-rated bonds are up 326 basis points and high yield bonds are up 409 basis points. In comparison with year-end 2022, A-rated corporate bonds are up slightly by 13 basis points and BBB-rated by 6 basis points, while the high yield index is down 43 basis points. These yields reflect option adjusted spreads for each of those credit quality indices. Option adjusted spreads are up for all three indices increased since year-end 2021, but spreads on high yield bonds have been expectedly very volatile over that time period, peaking at 600 basis points in July 2022 and more recently at 500 basis points in March 2023, before settling in at the current level of 414 basis points.

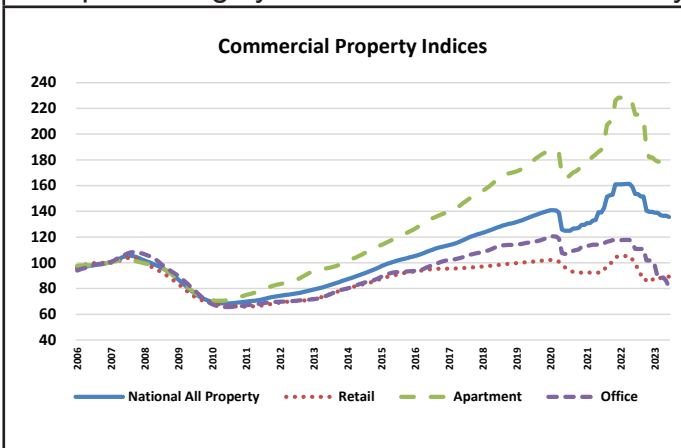


As concerns about the economy and markets vary over time, this is reflected in the differential between different categories of risk assets. The differential in option adjusted spreads between A-rated corporate bonds and BBB-rated corporate bonds are generally higher than they were at the end of 2021 and slightly lower than they were at the end of 2022, after peaking in July of 2022. The differential in option adjusted spreads between high yield bonds and BBB-rated bonds have followed a similar pattern, but with significantly greater volatility, peaking at 400 basis points in July 2022 and more recently at 340 basis points in March 2023, before settling in at the current differential of 250 basis points.

We continue to also monitor Emerging Market bonds as an example of a “cusp” asset. Emerging Market bonds are an asset that investors frequently reach for to gain better fixed income investment yields when concerns about market conditions are not high, but quickly move out of when those concerns rise. Emerging Market bond indices include bonds that cross over from weak BBB-rated to strong BB-rated categories. In the comparison with more traditional corporate bond indices, Emerging Market bond indices currently have an option adjusted spread that is about 628 basis points. In the comparison with high yield indices, the differential is higher than it was at the end of 2022 by about 55 basis points.



Equity markets have been also very volatile since 2020. The S&P 500 index was up 16.5% in 2020 and up 26.9% in 2021, but down 19.4% in 2022. Thus far in 2023, the S&P 500 index is up 15.9%. Equity values are reflective of recent earnings performance of the index components, but also expectations for future earnings and therefore expectations for the economy in the near term. There are differing opinions on the possibility of a recession in the near term and, if one does come to pass, how serious it would be. This was a principal driver of the weakness in 2022, but may also be indicative of expectations for earnings in 2023. An additional driver is the level of interest rates and expectations for interest rates going forward as this affects discount rates used in the valuation of Common Stock. Reflecting on equity valuations, the current market multiple is roughly in line with the five and two-year averages.



As previously noted, investments in commercial real estate related assets, primarily through Commercial Mortgage Loans is a significant asset class for Life insurers, and a small but growing asset class for P&C insurers. The value of commercial real estate assets is known for being very idiosyncratic. Still noteworthy are broad market indices which peaked in 2022 after a rapid recovery from the COVID-19 induced downturn in 2020. Since the end of 2022, concerns have increased significantly

over valuations. This is the result of two main drivers. First, there are significant concerns about the future of Office property valuations as Work-From-Home dynamics have taken hold for at least now and reported occupancy rates for major city Central Business Districts are at low levels of approximately 50%. Second, the problems within the banking sector and the likely prospect of increased regulation are expected to lead bank lenders to be more conservative. This is in addition to more general concerns of a weaker economy and higher interest rates. Over the last twelve months, the Green Street Property Index has declined 11.5%, and the Office sector has declined nearly 30%.

Closing Thoughts

After an extended period of low interest rates and generally low market volatility from 2008 to 2019, the last three and half years have presented a very different environment and different challenges for U.S. insurance company investments and investment practices. Thus far, 2023 saw a spike in volatility in March due to failures in the banking sector (see Market Briefing, May 9, 2023, “A New Banking Crisis?”), but has generally settled in without too much difference from year-end 2022. This includes increased concerns over the financial sector and commercial real estate values. To the extent that higher interest rates had a negative impact on the fair market value of fixed income investments and certain derivatives exposures, this has not improved materially. Consensus over whether the U.S. economy will experience a “soft landing”, as inflationary pressures moderate, vacillates from one announcement of economic data to the next.

The underlying dynamics may have changed at least for the foreseeable future with (1) higher interest rates, (2) concerns over financial institutions, and (3) weaker valuations for commercial real estate properties and possible increases in defaults for Commercial Mortgage Loans. We recommend that insurance regulators consider how insurance companies may be adjusting to the new realities.

While higher interest rates and investment yields are beneficial to new investment allocations, there may be a material impact on the fair market valuations of existing holdings that were purchased before 2022. If the fair market value of these holdings is materially lower than current carrying value, this will likely have an impact on liquidity considerations and planning.

Investments in Financial Institutions are significant given that the sector has been one of the largest issuers of bonds for many years. While there may not be recognizable concerns about default, this will also impact valuations.

It has been reported by different analysts of the sector that a significant amount of Commercial Mortgage Loans is maturing over the next 12 to 18 months. With valuations weakening, especially for Office properties, and possibly more conservative bank underwriting standards, property owners may have difficulty refinancing significant balloon payments.

About the Author

Edward Toy is a Senior Manager at Risk & Regulatory Consulting, LLC who performs investment and risk management consulting services for state insurance departments. He has extensive knowledge of insurer investments and investment strategies, and how they fit within regulatory guidance. Ed’s professional experience in investments includes 25 years as an analyst, trader, and portfolio manager across multiple asset classes and investment strategies. Prior to his employment with RRC, he served as Senior Technical Policy Advisor, Capital Markets & Macro Prudential Surveillance at the NAIC. His responsibilities included working with state insurance regulators in the development of tools for oversight of the insurance industry as they relate to investment portfolios and coordinating with other NAIC staff and state insurance regulators on matters impacting financial/solvency regulation of insurers and capital markets. While at the NAIC, Ed also founded and served as Director of, the Capital Markets Bureau.



PwC NAIC Newsletter

Summer 2023

The National Association of Insurance Commissioners met in Seattle, Washington for the Summer National Meeting. This newsletter contains information on activities that occurred in meetings from April 29, 2023 to August 28, 2023. For questions or comments on this Newsletter, please feel free to contact us at the address given on the last page.

In this issue

<i>In this issue</i>	<i>1</i>
<i>Executive summary</i>	<i>2</i>
<i>Executive Committee</i>	<i>3</i>
<i>Special Committee on Race & Insurance</i>	<i>3</i>
<i>Innovation, Cybersecurity, and Technology Committee</i>	<i>3</i>
<i>Statutory Accounting Principles Working Group</i>	<i>4</i>
<i>Risk-based capital</i>	<i>9</i>
<i>Valuation of Securities Task Force</i>	<i>10</i>
<i>Blanks Working Group</i>	<i>10</i>
<i>Financial Stability Task Force and Macroprudential Working Group</i>	<i>11</i>
<i>Climate and Resiliency Task Force</i>	<i>12</i>
<i>Principles-based reserving</i>	<i>12</i>
<i>Life Actuarial Task Force</i>	<i>14</i>
<i>International Insurance Relations (G) Committee</i>	<i>16</i>
<i>Appendix A</i>	<i>18</i>
<i>Contacts</i>	<i>24</i>

Executive summary

- The Statutory Accounting Principles Working Group (SAPWG) adopted revisions to SSAP 26R, SSAP 43R, and other SSAPs as part of the principles-based bond definition project. Revisions to SSAP 21R addressing residuals and debt securities that don't qualify as bonds have not yet been finalized; however, adoption of the principles-based bond definition allows reporting entities to begin assessing the impact on their investment portfolios. The revisions are effective January 1, 2025.
- SAPWG adopted INT 23-01 which will allow negative IMR to be admitted up to 10% of adjusted capital and surplus if certain criteria are met. The INT will be automatically nullified on January 1, 2026 as it is meant to be a short-term solution. SAPWG directed the formation of an ad hoc technical subgroup to work on a long-term solution.
- SAPWG exposed two interpretations (INT 23-02 and INT 23-03) related to the Corporate Alternative Minimum Tax (CAMT) introduced with the Inflation Reduction Act. INT 23-02 addresses third quarter reporting and would require disclosure of whether an entity has determined it is an applicable corporation, whether it expects to be liable for CAMT, and the estimated CAMT impact if it has determined a reasonable estimate. INT 23-03 would be effective for year-end 2023 and addresses accounting for the CAMT. The proposed accounting is generally based on current guidance in SSAP 101 and will vary depending on the structure of tax sharing agreements, if applicable.
- SAPWG proposed expanding the definition of residual interests beyond debt securities to include investments in partnerships, joint ventures, and LLCs (i.e., SSAP 48 investments). The change would result in reclassification of these investments within Schedule BA which would result in the new residual tranche RBC factor being applied.
- SAPWG deferred action on the previously proposed nullification of INT 03-02 related to modification of an existing intercompany pooling agreement. The nullification was proposed to be effective for year-end 2023.
- SAPWG re-exposed changes to SSAP 21R which would change how collateral adequacy is measured for admittance purposes on collateral loans backed by investments that would be in the scope of SSAP 48 if held by the reporting entity. If revisions are adopted, they are expected to become effective immediately.
- The RBC Investment Risk and Evaluation Working Group adopted a C-1 RBC factor of 30% for residual tranches (which is consistent with the charge for traditional equity securities) and an additional 15% sensitivity test for year-end 2023. This will be replaced by a 45% charge applied beginning with year 2024 with a consideration of positive or negative adjustments based on additional information that may indicate to the working group that 45% is not appropriate. The working group also continued to discuss its work on developing an approach for determining RBC charges specifically for CLOs.
- The Life RBC Working Group adopted changes to align the CM6 and CM7 RBC factors for non-performing commercial and farm mortgages with the factors for Schedule A and Schedule BA investments in real estate. The working group also exposed a proposal related to the RBC for repurchase agreements.
- The Valuation of Securities Task Force (VOS/TF) received comments on a controversial proposed P&P Manual amendment authorizing the procedures for the SVO's discretion over NAIC designations assigned through the filing exemption process. The proposal will be revised based on comments received which raised varied concerns, including lack of transparency and the potential for the challenge process to introduce capital uncertainty over many investments.

- The Blanks Working Group adopted proposals to add additional instructions related to investment income disclosure changes adopted by SAPWG, and to modify the instructions for the footnotes and Schedule DB to reflect changes to SSAP 86 adopted by SAPWG related to excluded components. The working group also exposed a proposal to split Schedule D, Part 1 into two sections for issuer credit obligations and for asset-backed securities related to the SAPWG bond project. The working group deferred a proposal to add a new financial statement footnote to the Life annual statement to obtain information for the new C-2 RBC mortality risk charges.
- The Life Actuarial Task Force adopted several updates to the Valuation Manual including reducing the reporting lag for the VM-51 mortality experience data collection process from two years to one year beginning in 2025, allowing alternative hedge treatment for variable annuities with index credit hedging programs, and reducing the governance requirements for variable annuity products not subject to complex modeling.

Executive Committee

During the Summer National Meeting, the Executive Committee received a status report on model law development efforts including the Mortgage Guaranty Insurance Model Act (#630), which was adopted by the Financial Condition (E) Committee on July 19, 2023.

Special Committee on Race & Insurance

The Special Committee on Race and Insurance (now organized into workstreams by product line) heard updates on the progress of each workstream. The Property & Casualty Workstream discussed potential bias in marketing, access to insurance, underwriting, rating, and claims handling. The Life Workstream plans to develop a resource guide for regulators on improving access and understanding in underserved communities. The Health Workstream plans to hold meetings on benefit design relating to preventive care and mental health coverage, the evolution of the federal Affordable Care Act (ACA) Section 1332 waivers, and innovative programs and initiatives that promote health equity. It is also finalizing a collaborative space on NAIC Connect to share information on removing barriers to health insurance for historically disadvantaged communities.

Innovation, Cybersecurity, and Technology Committee

The Innovation, Cybersecurity and Technology Committee heard comments on the exposure draft of the [Model Bulletin on the Use of Algorithms, Predictive Models, and Artificial Intelligence Systems by Insurers](#). Comments focused on the language on third-party oversight, definitions, costs, and governance expectations.

In addition, the committee received the following significant reports from its working groups:

Cybersecurity Working Group – The working group presented a draft of a cybersecurity response plan. This plan, designed to assist states in responding to cybersecurity incidents at regulated entities, is now open for review. It serves as a starting point and is expected to evolve over time.

Big Data and AI Working Group – The working group has been conducting surveys to understand the risk and exposure from the use of AI/ML and to inform a regulatory approach for overseeing and monitoring this activity. The working group discussed the results of the recent home insurance survey which showed that claims, fraud detection, and marketing are the among the most common uses of AI, with more use in underwriting than was seen in the recent private passenger auto survey. Additionally, there was a presentation on generative AI, explaining its workings, capabilities, risk mitigation, and examples of its use in the insurance industry. During the Q&A, the focus was on consumer protections, data reliance, upskilling, and how AI language services can help underserved markets.

Privacy Protections Working Group –The working group continues to discuss the development of the Insurance Consumer Privacy Protection Model Law (#674) and is engaging with industry to discuss current consumer data practices. They also heard updates on state and federal privacy legislation and discussed the sections on Marketing, Consumer Notices, and Opt-Out/Opt-In in the draft of Version 1.2 of Model #674. The group also highlighted the need for an extension to continue drafting the model law due to the volume of comments received.

Innovation and Technology Working Group – The working group is focused on understanding the current innovations and technologies used by regulators, insurers, and third parties. They have scheduled a meeting on August 29th to discuss how regulators can support the insurtech community. Additionally, a regulators-only session is planned for September to share updates from two states on their use of technology to enhance regulatory processes.

Statutory Accounting Principles Working Group

Significant actions taken by the SAP Working Group are summarized below. (Appendix A to this Newsletter summarizes all actions taken by the Working Group.) Comments on exposed items are due September 29 unless stated otherwise.

Newly adopted guidance

SSAP 7 - Net Negative (Disallowed) IMR (INT 23-01): After the Spring National Meeting, the Working Group exposed INT 23-01 as a short-term solution to the negative IMR concerns expressed in agenda item #2022-19. At this meeting, the Working Group adopted INT 23-01 and directed the formation of an ad hoc technical subgroup to work on a long-term solution. Key provisions of the INT include:

- **Limitation relative to surplus**: Admitted amount is limited to 10% of the reporting entity's general account adjusted capital and surplus. Similar to the goodwill limitation, surplus is adjusted to exclude goodwill, EDP equipment and operating system software, deferred tax assets, and admitted net negative IMR.
- **Minimum RBC**: To apply this INT, reporting entities must have greater than 300% authorized control level RBC after adjusting total adjusted capital to remove any goodwill, EDP equipment and operating system software, deferred tax assets, and admitted net negative IMR.
- **Derivatives limitation**: Negative IMR that resulted from allocating losses to IMR from derivatives that were reported at fair value prior to termination cannot be admitted unless reporting entities have documented historical evidence that equivalent gains were treated the same way (i.e., realized gains deferred to IMR as a liability).
- **Separate accounts**: Negative IMR in a separate account shall only be admitted after all negative IMR in the general account has been admitted. The limitation relative to surplus is based on the general account and is the aggregate amount that can be admitted across the general account and any separate accounts.
- **Reporting – special surplus**: An amount equal to the admitted net negative (disallowed) IMR shall be allocated from unassigned funds to an aggregate write-in for special surplus funds.
- **Note disclosure attestation**: Reporting entities that admit negative IMR will be required to attest to several statements related to compliance with various policies (e.g., investment, derivative use plans) and that asset sales were not compelled by liquidity pressures.

Principles-based bond proposal project (#2019-21): The Working Group adopted revisions to SSAP 26R, SSAP 43R, and other SSAPs which were exposed at the Spring National Meeting. The adopted revisions were unchanged from the previous exposure including their January 1, 2025 effective date; however, proposed revisions to SSAP 21R which address debt securities that do not qualify as bonds and residuals

have not yet been adopted. Refer to Significant exposures/discussions below for additional information on the proposed revisions to SSAP 21R. While revisions to SSAP 21R remain open it should not prevent reporting entities from beginning to assess the impact on their investment portfolios as the principles-based bond definition is included in the adopted revisions to SSAP 26R.

SSAP 43R – CLO Financial Modeling (#2023-02): The Working Group adopted revisions to add collateralized loan obligations (CLOs) to the financial modeling guidance and to clarify that they are not “legacy securities.” The methodology to model CLOs is still being developed by VOS/TF, but guidance that permits the SVO to model CLOs has been adopted and will be followed once CLOs begin to be financially modeled. Refer to the Valuation of Securities Task Force summary for additional details.

SSAP 34 – PIK Interest Disclosure Clarification (#2023-13): Earlier in the year, the Working Group adopted changes to SSAP 34 which introduced a requirement to disclose any deferred interest and cumulative amounts of paid in kind (PIK) interest included in the current principal balance. At the Summer National Meeting the Working Group adopted additional revisions to SSAP 34 which clarified how the amount should be calculated and added a practical expedient. The clarification focuses on the treatment of disposals (e.g., repayments or sales) and directs reporting entities to apply any disposals to PIK interest outstanding before reducing the original par value. The practical expedient allows reporting entities to calculate the cumulative amount of PIK interest by simply subtracting the original principal or par value from the current principal or par value. This disclosure is required for year-end 2023 reporting.

Significant exposures/discussions

Principles-based bond proposal project (#2019-21): The Working Group exposed additional revisions to SSAP 21R. The revisions to SSAP 21R address accounting and reporting for debt securities that do not qualify as bonds (as defined in SSAP 26R) and residual tranches or interests. Highlights of the most recently proposed revisions include:

- **Residuals – definition:** The residual definition was updated to refer to SSAP 48 in addition to SSAP 43R due to the proposed revisions to SSAP 48 included in agenda item #2023-12 (see below for additional details).
- **Residuals – admittance:** Residuals are permitted to be admitted assets if debt securities from the same securitization qualify, or would qualify, as admitted assets. The debt securities will only qualify as admitted assets “if the underlying collateral primarily qualify as admitted invested assets.” These revisions prevent a residual from being admitted when a debt security in the same structure, with presumably less risk relative to the residual, is non-admitted.
- **Residuals – measurement:** The exposure proposes that residuals initially be measured at cost and subsequently be measured at the lower of “adjusted cost” or fair value. This is in contrast to the prior exposure which would’ve required subsequent measurement at the lower of amortized cost or fair value. “Adjusted cost” is essentially the initial cost reduced by any cash flows received attributable to the residual. After adjusted cost is reduced to zero, subsequent cash flows received will be recognized as interest income.

Proposed nullification of INT 03-02: Modification to an Existing Intercompany Pooling Arrangement (#2022-12): NAIC staff continued to recommend nullification of INT 03-02, but at the recommendation of NAIC staff, SAPWG deferred action. The deferral was made to give NAIC staff the opportunity to further discuss the issues raised by interested parties with both regulators and interested parties. With deferral, the previously exposed proposed effective date of year-end 2023 remains unchanged.

SSAP 21R – Collateral for Loans (#2022-11): Since the fall, discussion of this agenda item has been focused on collateral loans which are backed by investments that are required to be measured using the equity method being applied to audited financial statements (i.e., investments in the scope of SSAP 48 or SSAP 97). At the Summer 2023 National Meeting, the Working Group deferred adopting revisions to SSAP 21R which require the proportionate audited equity valuation (i.e., equity method) to be used for the

comparison of the adequacy of the pledged collateral. During the meeting, it was observed that most of these investments follow investment company accounting which effectively results in the proportionate audited equity valuation equaling fair value. However, this relationship is not present for investments in entities that do not follow investment company accounting. The revisions were re-exposed with an accelerated comment deadline of September 12, 2023. Comment letters are expected to focus on the requirements for other than investment companies, including potential alternatives to the use of the equity method.

New Market Tax Credits / Equity Investments for Tax Credits (#2022-14): Between the Spring and Summer National Meetings, the Working Group exposed revisions to SSAPs 93 and 94R and received comments at an interim meeting. The Working Group exposed additional revisions to the SSAPs at the Summer National Meeting. Highlights of the exposure include:

- **SSAP 93 Scope:** The scope of SSAP 93 is expanded beyond low-income housing tax credits to include all tax credit programs and tax investment structures.
- **SSAP 93 measurement:** Revisions to SSAP 93 adopt, with modification, the proportional amortization method from ASU 2023-02, *Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method*. Notably use of the proportional amortization method is required rather than an election, and a practical expedient allowed under U.S. GAAP was rejected.
- **SSAP 93 adoption:** Consistent with ASU 2023-02, revisions to SSAP 93 will be adopted on a retrospective basis.
- **SSAP 93 admissibility – expected utilization:** Revisions introduce an admissibility test which requires assessment of the reporting entity’s ability to utilize the future stream of tax credits to determine whether all or a portion of the tax credit investment will be non-admitted.
- **SSAP 93 admissibility – other requirements:** At initial investment, reporting entities must obtain a clean fund level tax opinion on the validity of the credits and structure of the underlying program and investment fund. Annually, reporting entities must obtain U.S. GAAP or U.S. tax basis audited financial statements on the investment fund.
- **SSAP 94 Scope:** The scope of SSAP 94 is expanded to include all state and federal tax credits whether purchased or allocated, except for tax credits allocated from SSAP 93 investments.
- **SSAP 94 measurement:** Tax credits received are recorded at face value with losses realized immediately and gains deferred until the value of the tax credits utilized exceeds the initial acquisition cost of the tax credits or other specified criteria are met.
- **Tax credit reporting:** Tax credits utilized in the year purchased or allocated are reporting in the income statement as an offset to federal taxes, state premium tax, or state income tax, as applicable. State tax credits that cannot be utilized in the year purchased or allocated are reported as other-than invested assets gross of any related state tax liabilities. Federal tax credits that cannot be utilized in the year purchased or allocated are reported as deferred tax assets in accordance with SSAP 101.

SSAP 51R, 59, and 61R - New C-2 Mortality Risk Note (#2023-03): The Working Group deferred action on a new financial statement note related to the Life Risk-Based Capital Working Group’s project to modify C-2 RBC mortality risk charges.

Residuals in SSAP No. 48 Investments (#2023-12): On May 16, 2023, the Working Group exposed proposed SSAP revisions to clarify the scope and reporting for investments that represent residual interests that are not captured in the scope of SSAP 43R. SSAP 43R was previously revised to require all residual interests in the scope of SSAP 43R (i.e., loan-backed and structured securities) to be reported on

Schedule BA as of December 31, 2022; however, that revision did not address residuals that can exist in other investment structures such as partnerships, joint ventures, or LLCs (i.e., SSAP 48 investments). The proposed revisions to SSAP 48, and conforming changes to SSAP 43R, require potential residual interests to be evaluated based on the substance of the investment held rather than its legal form. Because SSAP 48 investments are already reported on Schedule BA the proposed revisions will not impact measurement of the residual interests, but rather it's classification within Schedule BA. Despite the classification changes not impacting measurement of these investments there will be impacts to RBC due to new RBC factors being established for residual interests for 2023 (refer to Investment RBC summary for additional details). At this meeting, comments were received, and the agenda item was re-exposed with a shortened comment period ending September 12, 2023 with the goal of this item being adopted before year-end 2023.

INT 22-02 Third Quarter 2022 through First Second Quarter 2023 Reporting of the Inflation Reduction Act - Corporate Alternative Minimum Tax (CAMT) & INT 23-02 Third Quarter 2023 Inflation Reduction Act - Corporate Alternative Minimum Tax (CAMT): On May 16, 2023, SAPWG adopted a proposal to extend INT 22-02 to remain effective through second-quarter 2023. A separate interpretation (INT 23-02) was proposed to provide guidance for third-quarter 2023. INT 23-02 proposes additional disclosures will be required for third-quarter 2023, including whether a reporting entity has determined it is an “applicable corporation”, and if an applicable corporation whether it expects to liable for CAMT in 2023. If the reporting entity has determined a reasonable estimate of the CAMT impact, then it would also be disclosed. The comment period for this item will end on September 12, 2023. A separate interpretation (INT 23-03T) addressing accounting for the CAMT beyond the third quarter was also exposed at the Summer National Meeting; see below for details.

INT 23-03T Inflation Reduction Act - Corporate Alternative Minimum Tax (CAMT): The Working Group exposed INT 23-03T which addresses accounting for the CAMT introduced with the Inflation Reduction Act. The INT identifies the fundamental statutory accounting issue is how to account for a consolidated tax in separate company financial statements. Highlights of the INT include:

- **Entity categories:** Annually, each reporting entity will fall in one of three categories: i) nonapplicable reporting entities, ii) applicable reporting entities, or iii) applicable reporting entities with tax sharing agreement exclusions. Reporting entities that reasonably expect to be an applicable corporation in the current reporting period are applicable reporting entities and those that do not are nonapplicable reporting entities.
- **Nonapplicable reporting entities:** These entities are not required to calculate or recognize a payable for CAMT.
- **Applicable reporting entities with tax sharing agreement exclusions:** If an applicable reporting entity is a party to a TSA that meets certain requirements, then it is not required to calculate, or recognize CAMT in its current or deferred tax computations. The TSA requirements are:
 - The reporting entity is excluded from charges for any portion of the group’s CAMT,
 - The reporting entity is not allocated any portion of the group’s CAMT credit carryover, and
 - The reporting entity reasonably expects or has knowledge that the parties liable for the CAMT payables under the TSA are meeting their obligations.
- **Applicable reporting entities - TSAs:** These entities need to consider CAMT in current and deferred tax computations based on the terms of its TSA, if one is in place.
- **Applicable reporting entities – current and deferred tax:** Reporting entities shall accrue the CAMT owed as a separate return filer or in accordance with the TSA, if applicable. Upon accruing CAMT, reporting entities shall initially recognize a corresponding DTA which represents the indefinite

tax credit carryover that can be used to reduce regular tax in future years when the regular tax liability is in excess of the CAMT tax liability. Due to the consolidated nature of the CAMT, the INT eliminates the requirement of SSAP 101, Exhibit A paragraph 8.3 that would require a theoretical separate entity calculation of the CAMT in order to admit the DTA.

- Statutory valuation allowance for CAMT credit carryforwards: Determination of a statutory valuation allowance depends on whether the reporting entity is part of a consolidated tax return group or a separate tax return filer. Separate return tax filers must complete a statutory valuation allowance assessment in accordance with SSAP 101 but may assess the CAMT DTA separately from the non-CAMT DTA. Entities that are part of a consolidated tax return group shall utilize the CAMT credit carryforward that it is allocated after the group has considered the need for a valuation allowance.
- Statutory valuation allowance for regular tax DTAs: Similar to U.S. GAAP, reporting entities are allowed an accounting policy election as to whether to consider or disregard CAMT when evaluating the need for a valuation allowance on regular tax DTAs.
- Admittance and offset against existing gross DTLs (11.c): The INT generally follows the approach in SSAP 101 with a couple notable exceptions. First reporting entities with the highest levels of RBC are not required to take the CAMT into account in calculating the “with and without” tax liability per paragraph 11.b.i. Second, CAMT tax credit carryforwards that do not qualify for admission under paragraphs 11.a or 11.b are allowed to be offset against applicable DTLs without performing detailed scheduling.
- Transition and effective date: The INT is effective for 2023 year-end reporting and allows reporting entities to account for modifications to TSAs as if they were applicable for all of 2023 if they are filed prior to the end of 2023 and the domiciliary regulator has confirmed they have no objections to using the new/amended TSA while under review.

Asset Valuation Reserve and Interest Maintenance Reserve (#2023-14): This item was added to the SAPWG maintenance agenda and exposed as an overall concept for a long-term project to bring the IMR/AVR currently residing in the Annual Statement Instructions into SSAP 7. While this agenda item isn't proposing specific SSAP revisions it did identify several discussion topics that are expected to be part of the broad project, including:

- Absolutes in allocating between IMR and AVR: A separate agenda item (#2023-15) was exposed to address this topic.
- Bond IMR/AVR allocation: For bonds in scope of SSAP 43R, all realized gains/losses are reviewed and potentially bifurcated between AVR and IMR; however, for bonds in the scope of SSAP 26R gains/losses are allocated in their entirety to either AVR or IMR.
- Delineation of non-interest / interest changes: For the long-term project, it is proposed that principle-based concepts be established to assist with the allocation between IMR/AVR.
- Derivative guidance: There is ambiguity in the guidance for the allocation of derivatives held at fair value that are deemed to be hedging interest rate risk (i.e., do not follow hedge accounting).
- Reinsurance ceded /assumed: The impact of reinsurance is a common question on determining IMR and AVR for reporting entities.

IMR / AVR Specific Allocations (#2023-15): The Working Group exposed revisions to the Annual Statement Instructions related to the allocation of realized gains/losses on SSAP 26R bonds and mortgage loans between IMR and AVR. The goal of both changes is to prevent non-interest related changes from being captured in IMR. The revisions would generally require realized gains/loss to be allocated to IMR only when they more predominantly reflect interest-related changes and prevent allocation to IMR if

certain criteria are met. In the case of mortgage loans, this is in contrast to current guidance which focuses solely on certain criteria being met (e.g., 90 days past due or in process of foreclosure). Similar to mortgage loans, the SSAP 26R bond revisions identify certain circumstances that would preclude allocation to IMR. The current criteria based on changes in the investment's NAIC designation from the beginning of the period until sale/disposal is maintained but would require consideration of NAIC designation changes through a reasonable amount of time after the sale/disposal of the instrument. This revision would address situations where an investment is sold after a credit event occurs but before the NAIC designation is changed. The move from rules-based to principles-based guidance will increase judgment used in the measurement of AVR/IMR and likely require reporting entities to revise their related processes and controls.

Short-Term Investments (#2023-17): The Working Group proposed revisions to SSAP 2R, Cash, Cash Equivalents, Drafts and Short-Term Investments, which would become effective January 1, 2025 (consistent with the principled-based bond definition project). With the goal of eliminating the potential for investments to be designed to specifically qualify for short-term reporting (e.g., collateral loans), the proposed revisions would explicitly prohibit all Schedule BA investments and mortgage loans from being reported as cash equivalents or short-term investments regardless of their maturity date.

Risk-based capital

Investment RBC

The Risk-Based Capital Investment Risk and Evaluation (Investment RBC) Working Group was created to perform a “comprehensive review” of the RBC investment framework in light of a significant number of investment-focused proposals from other task forces and working groups. The working group continues to discuss the items referred by the Financial Condition committee including a long-term focus on developing a scheme for determining RBC charges for CLOs and an interim focus on addressing concerns of potential RBC arbitrage involving residual tranches in all types of structured assets.

The working group adopted, as an interim solution, a C-1 RBC factor of 30% for residual tranches (which is consistent with the charge for traditional equity securities) and an additional 15% sensitivity test for year-end 2023. This will be replaced by a 45% charge applied beginning with year 2024 with a consideration of positive or negative adjustments based on additional information that may indicate to the working group that 45% is not appropriate. There were concerns raised in comment letters received that 45% may not be consistent with the risk profile of all residuals generally and this interim solution would allow more time to review the RBC charge specifically for CLO residuals without disrupting the markets. The working group noted that while this is for Life RBC only, they do plan to address Health and P/C RBC next year.

The working group continued to discuss the recommendation from VOS/TF to permit the Structured Securities Group (SSG) to financially model CLOs for the assignment of NAIC designation and recommended C-1 RBC factors. The working group also heard a presentation from the American Academy of Actuaries that recommended a flowchart to determine if existing RBC factors could be used with or without adjustment, if new factors need to be developed, or assets need to be modeled individually to determine C-1 factors. For those asset classes that require modeling, a principles-based approach for determining the RBC factors was recommended. There were no exposures made as more discussion needs to occur. See further discussion in the VOS/TF Summary below.

Life RBC

C-2 Mortality Risk – Previously, the Life RBC Working Group adopted structural updates for more granular product categorizations for C-2 Mortality (LRO25) risk ahead of the adoption of the new factors for 2023 RBC reporting. The Life RBC Working Group also previously adopted the related instructional and Academy-proposed factor changes necessary to fully implement the revised mortality risk proposal.

Since then, the Life RBC working group has been continuing to discuss their list of additional future changes and instructional updates to be made based on items identified during the adoption process of the new factors. To that end, the working group previously proposed a new financial statement footnote to allow for inputs to be sourced directly from the financial statements to calculate the net amount at risk for the new C-2 mortality risk categories. The new note was referred to Blanks and has subsequently been deferred for year-end 2023. The working group discussed as an alternative, changes to the LRO25 schedule that would address those pieces needed for RBC that cannot be pulled from the annual statement through a line description change to company records along with a guidance document from the Working Group to clarify the sources.

The working group adopted changes to align the CM6 and CM7 RBC factors for non-performing commercial and farm mortgages with the factors for Schedule A and Schedule BA investments in real estate which were adjusted in 2021. It also adopted the same formula for calculating RBC amounts for non-performing and performing mortgages.

The working group also heard a proposal from the ACLI to align the 1.26% C-O charge for “conforming” repurchase agreements with the 0.2% C-O charge for conforming securities lending programs and exposed the proposal for a public-comment period ending September 29.

Valuation of Securities Task Force

The Valuation of Securities Task Force (VOS/TF) discussed the following significant projects and issues.

Financial modeling of collateralized loan obligations (CLOs): In February 2023, the VOS/TF adopted an amendment to the P&P Manual to include CLOs as a financially modeled security with an effective date of January 1, 2024. Since the Spring National Meeting, the SSG continued to develop the modeling methodology but there were no formal exposures or adoptions.

Structured Equity and Funds & NAIC designations assigned through the filing exemption process: At the Spring National Meeting, VOS/TF deferred a decision on a controversial proposed amendment to the P&P Manual related to certain investment structures, which in the SVO’s view allow for RBC arbitrage due to the investments being characterized as filing exempt. The proposed amendment would have i) defined such investments, ii) made them ineligible for filing exemption, and iii) directed the SVO to assign NAIC Designations and Categories utilizing a look-through assessment. While the amendment was not adopted, in consideration of comments received indicating that the scope of the proposed amendment was unnecessarily broad compared to the perceived concern with a subset of filing exempt investments, the VOS/TF directed staff to draft a separate amendment outlining recommended procedural steps for reviewing filing exempt investment securities for which SVO staff have concerns about the assigned NAIC Designation and the steps insurers could take to clarify and rebut those concerns.

At the Summer National Meeting, VOS/TF discussed comments received on a proposed P&P manual amendment authorizing the SVO discretion over NAIC designations assigned through the filing exemption process. Numerous comment letters were received which raised varied concerns with the proposal. Ultimately VOS/TF directed SVO staff to work through and incorporate actionable comments from the comment letters into the proposal with specific direction from Task Force members generally being focused on increasing transparency in the process.

Blanks Working Group

The working group did not meet at the Summer National Meeting but did meet in May and July and took the following significant actions.

Adopted proposals

- Modified the instructions for Note 8 and Schedule DB to reflect changes to SSAP 86 adopted by SAPWG related to excluded components. (SAPWG 2021-20). (2022-17BWG Modified)
- Added additional instructions and illustrations related to Note 7 – *Investment Income* to reflect changes to SSAP 34 – Investment Income Due and Accrued adopted by SAPWG (2023-11BWG).

Exposed proposals

The working group also exposed or re-exposed for comment the following significant proposals with a comment period ending October 12 unless otherwise noted:

- Updates related to the bond project most notably to split the Schedule D, Part 1 into two sections; one for Issuer Credit Obligations (SSAP 26R) and one for Asset-Backed Securities (SSAP 43R) related to the SAPWG bond project. Comments are due October 12, 2023. (2023-06BWG Modified).
- Add a new financial statement footnote, Note 37 – *Life Insurance Net Amount at Risk by Product Characteristics*, to the Life annual statement to require the financial statements to categorize information consistent with the new life C-2 RBC mortality risk charges. This exposure was deferred, and a revised proposal is expected for the next working group call in November. For more information see Life RBC summary. (2023-09BWG).

Financial Stability Task Force and Macprudential Working Group

Financial Stability Oversight Council (FSOC) developments - The FSOC released proposed guidance and an analytical framework for designating nonbanks that potentially pose financial stability risks, which could potentially include insurers. A designation means the FSOC has determined that the particular entity poses a systemic risk to the entire financial system and, therefore, should be subject to enhanced supervision by the Federal Reserve, in addition to any existing functional oversight by another state insurance regulator. The comment period for this closed on July 27. The NAIC has long argued that the business of insurance is not inherently systemic, and while insurers can be affiliated with other parts of the financial system that could create risk, state insurance regulation has evolved significantly since the 2008 financial crisis, refining an already effective system to limit systemic risk in the insurance sector.

Private equity considerations – Previously, the Macprudential Working Group (MWG) adopted a final document entitled “Plan for the List of MWG Considerations - PE Related and Other.” The document identifies 13 types of risks related to private equity ownership of insurers, such as companies structuring agreements to avoid regulatory disclosures or requirements and operational, governance and market conduct practices that are influenced by different priorities and levels of insurance industry expertise. The final document also includes documentation of “regulatory responses” to the 13 types of risk listed, interested party comments, and referrals to other NAIC committee groups. The working group heard an update on the referrals. These developments included:

- the formation of a drafting group to develop best practices for regulatory review of holding company structures, ownership, and control,
- an update on Actuarial Guideline LIII-Application of the Valuation Manual for Testing the Adequacy of Life Insurer Reserves (AG 53) to help ensure claims paying ability even if complex assets do not perform as expected,
- the adoption of additional related party codes for investment reporting,
- the Valuation of Securities Task Force's discussion and activity around reliance on rating agencies,

- the MWG continued discussions with the Department of Labor (DoL), including in process updates to the fiduciary requirements under DoL Interpretative Bulletin 95-1 which require due diligence in assessing an insurer prior to a pension risk transfer and,
- adoption of an optional cross-border reinsurance worksheet to assist regulators in reviewing “complex affiliated reinsurance transactions”.

Macroprudential Risk Assessment Process – The task force and working group previously adopted their final Macroprudential [Risk Assessment Process document](#), which has a key objective to “identify and assess industry-wide insurance risks.” The guidance includes both qualitative and quantitative assessment factors to reach baseline assessments of industry exposure to various macroprudential risks. The four assessment levels are High, Moderate-high, Moderate-low or Low. The NAIC’s full Macroprudential Risk Assessment report is still being finalized but the key topics included in the report are investment trends, changes in ownership, increasing catastrophe risk losses, macroeconomic trends such as inflation and interest rates, cyber security and insurance. The group is also working on updating the Macroprudential Risk Assessment dashboard, including incorporating additional climate risk metrics, and comparing the NAIC’s framework to that of the FSOC to identify gaps and propose a way forward.

Climate and Resiliency Task Force

The Climate and Resiliency Task Force was presented with information on a) the increase in global temperature and its subsequent effects on rising sea levels and other catastrophic perils, b) a study on inclusive insurance as well as a review of climate risk disclosures, and c) the occurrence atmospheric river storms in western states. The presentations emphasized the climate-related risks confronting the insurance industry, the escalating severity of natural disasters, and the necessity for a collaborative approach among insurers, regulators, and other stakeholders to tackle the challenges at hand.

Solvency Workstream – The Solvency Workstream previously developed three referrals to propose specific enhancements to existing solvency tools to more explicitly consider climate-related risks, which are being tracked for status updates. Two of these referrals were accepted (referral to the Financial Analysis Solvency Tools Working Group and to the Financial Examiners Handbook Technical Group) and the respective working groups are expected to finalize their guidance for inclusion in the 2023 year-end handbooks. These referrals provide high-level principles for the groups to consider and develop, as appropriate, for inclusion in relevant financial solvency regulation manuals.

The workstream previously heard a presentation from the Federal Reserve on their recently exposed proposed climate scenario analysis exercise. The workstream has also been focusing on the evaluation and development of a U.S. regulatory approach for climate scenario analysis and investing time in understanding the strategies from other nations and insurers. Currently, the workstream is in the process of drafting a referral which is expected to be open for public comment in September.

Principles-based reserving

Valuation Manual amendments

LATF covered several Amendment Proposal Forms (APFs) and related guidance as follows:

Adopted guidance

[APF 2021-08](#) changes reduce the reporting lag associated with the VM-50/VM-51 mortality experience data collection process from two years to one year beginning in 2025. The 2024 data collection will include experience in 2022 and 2023, and the 2025 data collection will include experience in 2024. This APF was originally brought forth in 2021 but was tabled at that time until the new NAIC data collection process was more established.

APF 2023-04 changes clarify the company documentation required to support the assertion that “company experience mortality rates shall not be lower than the mortality rates the company expects to emerge” in PBR Actuarial Report under VM-31 Section 3.D.3.l.iv.

APF 2023-05 revised hedge modeling language to address index credit hedging in VM-01, VM-21, and VM-31. The changes borrow heavily from the draft VM-22, with a goal of consistency between VM-21 and VM-22 on index credit hedging guidance. In particular, with regard to hedge modeling, VM-21 was changed and now states that companies with a more comprehensive hedge strategy combining index credits, guaranteed benefits, and other risks (e.g., full fair value or economic hedging), are not eligible for the treatment described in VM-21 Section 4.A.4.b.i (for hedge strategies with payoffs that solely offset index credits), but must instead follow 4.A.4.b.ii (for hedge strategies with payoffs that do not solely offset index credits). Whereas before, VM-21 provided guidance that an appropriate and documented bifurcation method should be used in the application of sections 4.A.4.b.i and 4.A.4.b.ii for the hedge modeling and justification. This change will be incorporated into the January 2024 Valuation Manual.

APF 2023-07 removes Company Specific Market Path (CSMP) from VM-21. CTE with Prescribed Assumption method will be the only method permitted starting January 1, 2025.

Exposed guidance

APF 2023-06 proposes changes to the formula for calculating the NPR for ULSG products and the addition of a CSV floor in the calculation of the scenario reserve before calculating the CTE 70 metric for the stochastic reserve in VM-20. Due to the plethora of comments received on this APF, LATF plans to spend more time digesting the feedback.

APF 2023-08 would clarify allocation of negative IMR for VM-20, VM-21 and VM-30; in particular, non-admitted IMR would be excluded. This APF is similar to 2022 NAIC staff guidance on allocation of negative IMR but has slight tweaks in the executive summary. This APF is expected to be revisited after the SAPWG decision on negative IMR.

APF 2023-09 proposes changes to VM-20 related to mortality improvement. If adopted, the change will require that historical mortality improvement from the experience date to the valuation date *shall* (instead of *may*) be incorporated. Also, companies shall ensure considerations adopted by LATF and published online are reflected in the historical mortality improvement assumption. The comment period ends September 27th.

Other VM Project Updates

VM-22 - PBR for fixed annuities

LATF heard an update from the VM-22 Subgroup on activities related to fixed annuity PBR. Updated draft guidance is available on the LATF webpage but was not re-exposed for comments.

The subgroup exposed a draft of the Standard Projection Amount (SPA) requirements on July 29, with comment period ending October 27. The exposure focuses on the structure and methodology of the SPA; it contains placeholders for assumptions. The Subgroup plans to hear presentations on SPA mortality assumptions for payout annuities, deferred annuities and structured settlements on its upcoming calls.

Field testing is targeted for 2024 and adoption in 2025, with a voluntary effective date of January 1, 2026 and a mandatory effective date of January 1, 2029. This timeline assumes the economic scenario generator is fit for this purpose by the beginning of the planned field test.

Upon adoption, the standards will be effective for new business only and will not apply to guaranteed investment contracts, funding agreements, or stable value contracts. Retrospective adoption and broadened scope will be considered later, perhaps along with development of a principles based capital methodology. A proposed PBR exception would exempt companies with less than \$1 billion of fixed annuity statutory reserves, gross of reinsurance.

VM-20 HMI and FMI update

LATF members discussed the 2023 recommendations for the Historical Mortality Improvement (HMI) and Future Mortality Improvement (FMI) scales. Updates include considerations to the smoothing approach and COVID-19 updates.

The updated smoothing breaks mortality groups into smaller bands, with linear interpolation between the bands. This causes the mortality improvement curve to flatten out across durations within each mortality band but reflects the sharp increase/decreases between bands.

COVID impact will be included in the first few years of the FMI scale for 2023, similar to the prior year scale. The data suggests that the scale should include additional adjustments for COVID and non-COVID pandemic related deaths. Since some companies with high credibility will use their best estimate mortality (including implied historical improvement) for long periods before grading to industry, this would create a potential disconnect between HMI and the recommended industry FMI scale.

Proposed changes are reflected in APF 2023-09, currently exposed for comment until September 27, 2023.

Negative IMR

The LATF members discussed negative IMR allocation in VM-20, VM-21 and VM-30, taking into consideration the then pending SAPWG decision on admittance of negative IMR (INT 23-01). The interpretation was subsequently adopted by SAPWG. LATF members discussed a comment letter from the ACLI on the IMR template which is optional for insurance companies for year-end 2023. The ACLI asked for clarification regarding the template due date and the use of the template by the regulators as well as a few detailed reference updates. The ACLI also asked for clarification of whether the intent was for all admitted negative IMR to be fully allocated in PBR and AAT, including admitted negative IMR arising from assets in a segmented surplus portfolio. The ACLI observed that positive IMR arising from such assets is not allocated in PBR and AAT. LATF members acknowledged that the treatment of segmented surplus portfolios was not contemplated by the interpretation proposed by SAPWG. No further action was taken at the meeting.

Life Actuarial Task Force

Actuarial Guidelines

AG53 Review plan

LATF heard an update regarding the regulatory review of company filings for Actuarial Guideline LIII - *Application of the Valuation Manual for Testing the Adequacy of Life Insurer Reserves (AG53)*. The AG53 Review Group, formed within the Valuation Analysis (E) Working Group (VAWG), reviewed 246 AG53 Asset Adequacy Testing (AAT) templates submitted by companies that were due in April of 2023.

The first area of focus for the review (Phase 1), is companies whose net yield assumptions are higher than comparable companies with similar asset portfolios. Higher net yield assumptions provide more favorable AAT results, and the concern is if the yield is overly optimistic, and therefore not realized, reserves may be inadequate. The Review Group also focused on assumed returns for reinvestment in high-yielding assets, as there may be less of a basis for assuming such yields will continue in the future.

In addition, the AG53 template requires companies to report the Guideline Excess Spread, which is derived by subtracting the Investment Grade Net Spread Benchmark from the Net Market Spread for non-equity-like. Companies were asked to include justification for their Guideline Excess Spread in the templates. The primary explanations provided were spread related to credit and illiquidity risks. The Review Group observed some explanations that were brief and not well supported by robust analysis. A

Guidance Document is expected for year-end 2023 that will clarify the support requirements and fill in gaps identified during the review of year-end 2022 filings.

Subsequent areas of focus for the review (Phase 2) will be other issues, including incomplete documentation and review of narrative answers to identify best practices. The Review Group will also be focusing on reinsurance collectability risk, with an additional focus on risks reinsured to non-traditional reinsurers. Twenty two companies have been asked for additional information.

Other LATF Activity

Presentations on the field test of C3 Phase 1

The C3 Phase 1 (C3P1) quantification, which calculates the RBC for interest rate risk for deferred and immediate annuities, guaranteed separate accounts, guaranteed investment contracts, and single premium life, was tested with different Generators of Economic Scenarios. Participation in the seven field test runs ranged from 10 to 24 companies. These companies represent 13-19% of the total industry C3 Phase 1 capital. Two baseline scenarios, one as of 12/31/2021 and another as of 12/31/2019 + 200 BP, were generated from an older version of the Academy Interest Rate Generator (AIRG).

Comparative field test scenarios included four corresponding scenarios from the Conning GEMS UA Treasury model and an additional scenario as of 12/31/2021 from the AIRG with a lower mean reversion parameter.

While all of the field tests saw a significant increase in the C3 reserve from the comparative scenarios versus the baseline scenarios, many of the participants had little to no C3 capital in their baseline making the results potentially less meaningful. A new field test is planned no sooner than Spring 2024.

Generator of Economic Scenarios implementation project – Interest Rate Acceptance Criteria

LATF asked the Academy to deliver a series of presentations focused on proposing qualitative stylized facts and quantitative acceptance criteria for the three major components of an Economic Scenario Generator (ESG) used for statutory reporting purposes: interest rates, equity returns, and corporate bond fund returns.

Stylized facts, based on historical market data and economic theory, describe properties of the economic variables to be simulated. Informed by stylized facts, acceptance criteria are a set of quantitative metrics over different time horizons or in different economic conditions. The criteria are intended to provide a framework for ensuring generated scenarios are consistent with the stylized facts.

Models are to be selected based on their ability to reflect stylized facts and then calibrated in accordance with accepted criteria, an iterative process.

Representatives of the Economic Scenario Generator Subcommittee provided an update on the Academy's work to propose acceptance criteria for interest rates, including both newly developed criteria and minor changes to previously proposed criteria. The subcommittee expects to propose equity criteria later this month.

Changes to previously proposed criteria (looking at 1-year and 20-year results):

- Move the steady state period from 50 years to 80-100 years to reduce the effect of initial conditions on steady state rates. Bounds are moved to focus on “plausibly more extreme” scenarios than “percentiles exponentially weighted” (PEW), which reflect history from 1953 to 2021 but are weighted toward recent experience. Buffers are proposed to avoid results that are too extreme.
- For rate volatility (standard deviation of monthly yield changes) – minor changes from the earlier proposal include the same steady state extension as rate levels. The initial period is unchanged at

ten years. Desired ranges are $\pm 50\%$ relative to history for each of three beginning-of-month yield ranges, with the consideration of consistency between volatilities of short and long duration rates.

- Proposed changes for shape (slope) of the yield curve also include extension of the steady state period and holding the initial 10- year period unchanged. Criteria were added for more extreme movements from mean. To allow for plausibly more extreme than history, a 50-basis point buffer is added to above the average slope and subtracted from below average.

Newly proposed criteria:

- For the steady state period (80-100 years), set upper and lower bounds for rates and slopes, with slope boundaries varying according to level of the 20-year rate. Also, ranges for frequency of worse-than-history rates and slopes were included.
- Ranges for the length of time it takes for interim rates and slopes to get halfway from initial levels to median were included. The Academy is exploring potential for additional interim criteria.
- Set low-for-long criteria for the steady state period, expecting rates to stay below specified levels for at least five consecutive years in at least X% of scenarios. X is yet to be determined and other figures are subject to refinement based on reference models.

International Insurance Relations (G) Committee

At this meeting, Jacqueline Friedland from the Government of Canada's Office of the Superintendent of Financial Institutions (OSFI) gave an update on international insurance developments and activities in Canada. She discussed the recent implementation of International Financial Reporting Standard (IFRS) 17 and shared priorities between Canada and the U.S., including analyzing market volatility and climate risk. Friedland also spoke about changes to the OSFI's mandate, including expanding powers and enhancements to the broad oversight of banks and insurers which will need to have and adhere to policies and procedures that bring integrity to their security and will be subject to OSFI examination. Other topics discussed included bilateral meetings with other countries, the NAIC's participation in the Organisation for Economic Co-operation and Development (OECD), and the NAIC's work overseeing and regulating insurers' use of artificial intelligence and machine learning.

The 2023 Fall National Meeting of the NAIC is scheduled for November 30 - December 4 in Orlando, Florida. We welcome your comments regarding issues raised in this newsletter. Please provide your comments or email address changes to your PwC LLP engagement team, or directly to the NAIC Meeting Notes' editor, Jen Abruzzi, at jennifer.abruzzo@pwc.com.

PwC is pleased to offer two insurance accounting webcasts this fall. On October 18 and November 7, we will present our annual Current Developments for Insurance Companies. This 2-hour webcast focuses on recent NAIC activities and GAAP and SAP accounting and reporting issues for insurers, including IFRS 17. Participants can receive 2.0 hours of CPE. (Note that the same content is being offered on two different dates and both receive 2.0 hours of CPE). Free registration is available [here](#).

Newsletter Disclaimer. Since a variety of viewpoints and issues are discussed at task force and committee meetings taking place at the NAIC meetings, and because not all task forces and committees provide copies of meeting materials to industry observers at the meetings, it can be often difficult to characterize all of the conclusions reached. The items included in this Newsletter may differ from the formal task force or committee meeting minutes.

In addition, the NAIC operates through a hierarchy of subcommittees, task forces and committees. Decisions of a task force may be modified or overturned at a later meeting of the appropriate higher-level committee. Although we make every effort to accurately report the results of meetings we observe and to follow issues through to their conclusion at senior committee level, no assurance can be given that the items reported on in this Newsletter represent the ultimate decisions of the NAIC. Final actions of the NAIC are taken only by the entire membership of the NAIC meeting in Plenary session

Appendix A

This table summarizes actions taken by the SAP Working Group since the Spring National Meeting on open agenda items. For full proposals exposed and the status of agenda items that were not actioned during the period, see the SAP Working Group [webpage](#).

Issue/ Reference #	Status	Action Taken/Discussion	Proposed Effective Date
Principles-based bond proposal project (#2019-21)	Adopted (partially) Re-exposed (partially) Directed	Adopted revisions to SSAP 26R, SSAP 43R, and other impacted SSAPs to refine guidance for the principles-based bond project. Exposed a revised SSAP 21R to provide guidance for the accounting for debt securities that do not qualify as bonds, as well as proposed measurement guidance for residuals. Directed NAIC staff to sponsor a blanks proposal to revise Schedule BA in accordance with the bond project for debt securities that do not qualify as bonds, with formal notice to the VOS/TF and the CATF on the proposal to allow life reporting entities the ability to use existing Schedule BA reporting provisions for SVO-assigned designations in determining RBC for debt securities that do not qualify as bonds.	January 1, 2025
Conceptual Framework – Updates (#2022-01)	Adopted	Adopted revisions to the definition of a liability under statutory accounting	August 13, 2023
SSAP 21R – Collateral for Loans (#2022-11)	Re-exposed	Re-exposed the revisions that clarify that pledged collateral must qualify as an admitted invested asset for a collateral loan to be admitted. The revisions require audits and the use of net equity value for valuation assessments when the pledged collateral is in the form of partnerships, limited liability companies, or joint ventures.	August 13, 2023
SSAP 61R, 62R, and 63 – Review of INT 03-02 (#2022-12)	Deferred action	Exposed the intent to nullify INT 03-02, as it is inconsistent with SSAP 25.	December 31, 2023

Issue/ Reference #	Status	Action Taken/Discussion	Proposed Effective Date
Third Quarter 2022 through Second Quarter 2023 Reporting of the Inflation Reduction Act - Corporate Alternative Minimum Tax (INT 22-02)	Adopted	Adoption Summary of INT 22-02 extends this interpretation for the second quarter 2023 statutory financial statements. For application to the second quarter 2023 financial statements, reporting entities shall follow the guidance in interpretation paragraphs 17 a-c.	May 16, 2023
SSAP 9 and 101 – Inflation Reduction Act – Corporate Alternative Minimum Tax (#INT 22-03)	Exposed	This INT addresses fourth quarter 2022 and interim 2023 reporting. It requires reporting when reasonable estimates can be made. It provides some subsequent events exceptions regarding the CAMT, to allow estimates to be updated as information becomes available.	TBD
SSAP 93 – Low-Income Housing Tax Property Credits (#2022-14)	Exposed	Exposed interested party comments on revisions to SSAP No. 93 and SSAP No. 94R and updates made in response to the comments received.	TBD
SSAP 7 - Asset Valuation Reserve and Interest Maintenance Reserve (#2022-19)	Directed	In addition to the adoption on INT 23-01 (described below), the Working Group directed the formation of an ad hoc subgroup to work on a long-term solution.	Not applicable
SSAP 7 - Net Negative (Disallowed) IMR (INT 23-01)	Adopted	INT 23-01 was adopted with three editorial revisions. This INT provides optional, limited-time guidance, which allows the admittance of net negative (disallowed) interest maintenance reserve (IMR) up to 10% of adjusted capital and surplus. As detailed within the INT, it will be effective until Dec. 31, 2025, and automatically nullified on Jan. 1, 2026, but the effective date can be adjusted (e.g., nullified earlier or extended).	August 13, 2023
Review Annual Statement Instructions for Accounting Guidance (#2023-01)	Directed	Directed NAIC staff to proceed with a broad project to review the annual statement instructions and ensure accounting guidance is included within the SSAPs.	TBD
SSAP 43R – CLO Financial Modeling (#2023-02)	Adopted	Adopted revisions – to incorporate changes to add collateralized loan obligations (CLOs) to the financial modeling guidance and to clarify that CLOs are not captured as legacy securities.	December 31, 2023

Issue/ Reference #	Status	Action Taken/Discussion	Proposed Effective Date
SSAP 51R, 59, and 61R - New C-2 Mortality Risk Note (#2023-03)	Deferred action	Deferred action on exposed revisions to SSAP 51R, SSAP 59, and SSAP 61R providing new disclosures, which provide net amount at risk detail needed to support updates to the life risk-based capital (RBC) C-2 mortality risk charges.	TBD
SSAP 101 -Corporate Alternative Minimum Tax Guidance (#2023-04)	Exposed	Exposed INT 23-03T: Corporate Alternative Minimum Tax Guidance, which provides guidance effective beginning year-end 2023 reporting of the corporate alternative minimum tax, which applies SSAP No. 101—Income Taxes with modification and provides disclosures. The exposed INT 23-03T includes that paragraph 11c of SSAP No. 101 should be followed.	December 31, 2023
INT 20-01 - ASU 2022-06, Reference Rate Reform (Topic 848), Deferral of the Sunset Date of Topic 848 (#2023-05)	Adopted	Revisions revise the expiration date of INT 20-01 to Dec. 31, 2024.	August 13, 2023
SSAP 24 - Additional Updates on ASU 2021-10, Government Assistance (#2023-06)	Adopted	Exposed revisions to SSAP 24 to clarify rejection of ASU 2021-10, Government Assistance, and the incorporation of disclosures regarding government assistance.	August 13, 2023
SSAP 47, 95 and 104R - ASU 2019-08, Codification Improvements to Topic 718 and Topic 606 (#2023-07)	Adopted	The revisions add guidance to include share-based consideration payable to customers.	August 13, 2023
Appendix D - ASU 2019-07, Codification Updates to SEC Sections (#2023-08)	Adopted	Revisions reject ASU 2019-07—Codification Updates to SEC Sections: Amendments to SEC Paragraphs Pursuant to SEC Final Rule Releases No. 33-10532, Disclosure Update and Simplification, and Nos. 33-10231 and 33-10442, Investment Company Reporting Modernization, and Miscellaneous Updates as not applicable to statutory accounting.	May 1, 2023

Issue/ Reference #	Status	Action Taken/Discussion	Proposed Effective Date
Appendix D - ASU 2020-09— Amendments to SEC Paragraphs Pursuant to SEC Release No. 33-10762—Debt (Topic 470) (#2023-09)	Adopted	Revisions reject ASU 2020-09, Amendments to SEC Paragraphs Pursuant to SEC Release No. 33-10762—Debt (Topic 470) as not applicable to statutory accounting.	August 13, 2023
SSAP 50, 51R, 52, 56, 71, and 85 - ASU 2022-05, Transition for Sold Contracts (#2023-10)	Adopted	Revisions reject ASU 2022-05, Transition for Sold Contracts as not applicable for statutory accounting	August 13, 2023
Editorial and Maintenance Update (#2023-11EP)	Adopted	Revisions change SSAP No. 86 references of “Intrinsic Value” to reflect “Volatility Value”. In addition, “percent” is changed to “%” and all citations to the Purposes and Procedures Manual of the NAIC Investment Analysis Office are streamlined so they do not reflect a specific location in the Manual or a webpage.	December 31, 2023
SSAP 43R and SSAP 48 – Residuals in SSAP No. 48 Investments (#2023-12)	Exposed	Exposed updated proposal to reflect revisions from the interim discussions and coordination on revisions to clarify the scope and reporting for investment structures that represent residual interests within SAPs.	TBD
SSAP 34 – PIK Interest Disclosure Clarification (#2023-13)	Adopted	Adopted revisions to clarify and incorporate a practical expedient, to the paid-in-kind (PIK) interest aggregate disclosure for SSAP No. 34 and annual statement instruction purposes.	December 31, 2023
SSAP 7 – Asset Valuation Reserve and Interest Maintenance Reserve (#2023-14)	Exposed	Expose the overall concept for a long-term project to capture accounting guidance for asset valuation reserve (AVR) and IMR in SSAP No. 7.	TBD
IMR / AVR Specific Allocations (#2023-15)	Exposed	Exposed revisions to the Annual Statement Instructions to remove the guidance that permits the specific allocation of non-interest-related losses to IMR.	TBD

Issue/Reference #	Status	Action Taken/Discussion	Proposed Effective Date
Schedule BA Reporting Categories (#2023-16)	Exposed	Exposure requests industry and regulator comment on a proposal to further define and provide examples for the investments captured as non-registered private funds, joint ventures, partnerships or limited liability companies, or residual interests and reported based on the underlying characteristics of assets.	TBD
Short-Term Investments (#2023-17)	Exposed	Exposed revisions to further restrict the investments that are permitted for cash equivalent or short-term investment reporting. These revisions are proposed to ensure that certain investment types are captured on designated Schedule BA reporting lines and to eliminate the potential to design investments to specifically qualify for short-term reporting.	January 1, 2025
ASU 2016-19, Technical Corrections and Improvements (#2023-18)	Exposed	Exposed revisions to adopt with modification certain aspects of ASU 2016-19—Technical Corrections and Improvements. Revisions also propose amending SSAP No. 92 guidance on insurance contracts to use the same terminology used in SSAP No. 102.	TBD
ASU 2018-09, Codification Improvements (#2023-19)	Exposed	Exposed revisions to reject ASU 2018-09—Codification Improvements	TBD
ASU 2020-10, Codification Improvements (#2023-20)	Exposed	Exposed revisions to reject ASU 2020-10—Codification Improvements	TBD
Removal of Transition Guidance from SSAP No. 92 and SSAP No. 102 (#2023-21)	Exposed	Exposed revisions to SSAP No. 92 and SSAP No. 102 to remove the transition guidance that was included in the initial adoption of SSAP No. 92 and SSAP No. 102, as it is past the 10-year effective period for that transition.	TBD
Actuarial Guideline 51 and Appendix A-010 Interaction (#2023-22)	Exposed	Exposed clarifying revisions and an illustration to SSAP No. 54R to clarify that gross premium valuation (under A-010) and cash-flow testing (under Actuarial Guideline LI—The Application of Asset Adequacy Testing to Long-Term Care Insurance Reserves [AG 51]) are both required if indicated.	TBD

Issue/ Reference #	Status	Action Taken/Discussion	Proposed Effective Date
Third Quarter 2023 Inflation Reduction Act – Corporate Alternative Minimum Tax (INT 23-02)	Exposed	Exposed proposed interpretation that recommends that for third-quarter 2023, reporting entities should disclose whatever information is available regarding their applicable reporting entity status.	December 31, 2023

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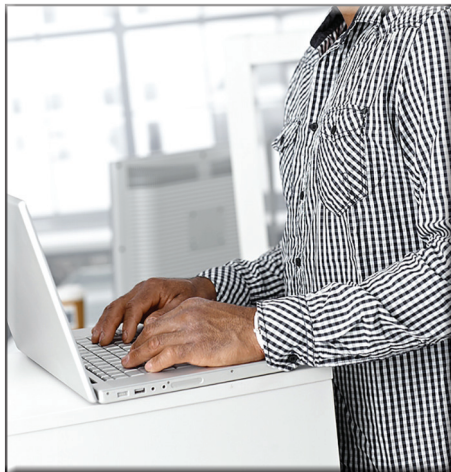
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