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"Capital Assessment for Insurers"

Multiple Choice Questions — Submit Answers Online

1. What type of testing provides an estimate of how much capital remains relative to levels targeted by a P&C insurer?
   - A. Exclusion Testing
   - B. Asset Adequacy Testing
   - C. Stress Testing
   - D. Certification Testing
2. What type of Modeling is most appropriate to generate many different random simulations?
   - A. Deterministic
   - B. Super
   - C. Stochastic
   - D. Probable Maximum Loss
3. What type of capital measurement metric uses stochastic modeling and bases conservatism on a percentage of results worse than a chosen estimate?
   - A. Value at Risk
   - B. Risk of Ruin
   - C. Risk-Based Capital
   - D. Expected Policyholder Deficit
4. Which broad risk classification evolves from failure of debtors, bond issuers, reinsurance partners or counterparties to meet payment obligations?
   - A. Operational
   - B. Reputational
   - C. Market
   - D. Credit
5. How much correlation between major risk categories is used within the NAIC's Risk-Based Capital modeling?
   - A. 1 Standard Deviation
   - B. Zero
   - C. 100 Basis Points
   - D. .7 to .9 Copulas

"Long-Term Care Insurance - A Long-Term Problem"

True or False Questions — Submit Answers Online

1. Long-Term care Insurance started in the 1970's when interest rates were high and the industry based pricing on the assumption that the interest rates would continue.
2. Due to the low interest rates, some insurers are investing in riskier investments outside of the norm to earn higher yields.
3. Regulators should look at the Company's surplus amounts to minimum surplus when reviewing request for rate increases by insurers.
4. Regulators should look at the extent to which the insurer may be trying to recoup past losses when reviewing request for rate increases by insurers.
5. The Application of Asset Adequacy Testing to Long-Term Care insurance Reserves guidelines states that a uniform approach for future rate increase assumptions should be used.

"PBR, How Shall I Examine Thee? Let Me Count the Ways"

Multiple Choice/True or False Questions — Submit Answers Online

1. In Experience Analysis, the most important actuarial review item is:
   - A. Testing of the data underlying the experience studies
   - B. Evaluation of the appropriateness of the data based on its intended use
   - C. Sample recalculations of specific experience study results
   - D. Evaluation of use of the scenarios in the cash flow projection model
2. The primary tasks involved in auditing or examining in a current statutory reserve are as follows:
   - A. Verifying the accuracy of the policy data;
   - B. Reconciling information flows (data and assumption feeds into the valuation system, and reserve feeds out of the system and into the ledger); and
   - C. Verifying the accuracy of the valuation systems calculations (including whether the proper assumptions were used in the calculations).
   - D. All the above.

3. Under Principles-based reserves, the projections of future benefits, expenses and revenue consider all cash flows material to the business, including premiums and other revenue collected from the insured, investment income, policyholder benefit payments (including surrender benefits net of surrender charges) and expenses.
   A. True
   B. False
4. While the NAIC's PBR Review Working Group is currently developing additional procedures for inclusion in the risk-focused financial examination process, in both a financial examination and a financial statement audit, the review should first involve an evaluation of company controls related to each risk, and then substantive testing would follow only if the residual risk is still deemed to be high.
   A. True
   B. False
5. By applying a risk-focused approach to the testing, the examination or audit can be broken down into key areas of risk to be focused on.
   A. True
   B. False

Capital Assessment for Insurers

By Doug Franklin, Donna Galer, Kristina Narvaez, Max Rudolph

Methods of calculating risk capital are not standardized. Each company is unique and should consider their specific needs. This aligns well with the ORSA regulation, where the focus is on the "O" in Own Risk and Solvency Assessment.

This article will approach the topic from a high level, providing a general idea of the myriad of choices available. Capital that is risk-based contributes a consistent metric for the firm's CEO, the chief allocator of capital, to differentiate between alternative uses of a firm's hard earned surplus. A reasonable methodology encourages insurers to embed the process in their daily activities as ORSA requires. Results are aggregated across risk and line of business, considering interactions and diversification between risks. One insurer may have an aggressive risk culture while another is conservative. This is reflected in the risk appetite, but will also appear in the assumptions chosen when calculating capital. The peer reviewer, or regulator, should recognize these differences between companies when looking at the results.

Capital assessment must balance all of these choices, knowing that they interact with each other sometimes in unintended ways. Assumptions set in models can impact decisions made about risk appetite or risk limits. In a proverbial chicken and egg discussion, should risk appetite and tolerance be set before aggregating risk capital developed by models or should the models showing current status determine these risk thresholds?

In general, developing risk capital requires you to think about the following categories.

- Valuation basis
- Methodology
- Models
- Metrics
- Time horizon
- Individual risks considered
- Aggregation method

Choices for Capital Assessment

Seven Key Methodological Elements that Must Be Decided

Valuation Basis	Methodology	Models	Metrics	Time Horizon	Individual Risks considered	Aggregation
Statutory	Deterministic Stress Testing	Mental / Qualitative	Risk of Ruin	One year	Market	Additive
GAAP	Stochastic Simulation	Quantitative /spreadsheet / software / factor based	VaR	N years (tactical)	Credit	Variance/ Covariance
Economic		Nested stochastic	EPD	Run-off of portfolio	Insurance	Copulas
			TVaR or CTE		Operational	
					Liquidity	
					Reputational	

The analyst can think of the many options as a lock with seven spinning mechanisms. Each company will choose a different combination, and more than one could make sense for a company.

When asked to peer review a capital assessment, a large part of the process can be described using these categories. The original assessment should be described clearly, and perhaps explain why one choice inside a category was made rather than others. Each choice forces someone to think through the various options.

Valuation Basis

There are many ways to define surplus, but all are based on netting the difference between values of assets and liabilities. Insurers have various accounting regimes to choose from when managing their company. Each is a little bit different. Some define cash flows as net income, which can be very confusing. Some include target surplus based on a regulatory requirement, rating agency factor, or internal economic capital estimate. Most will use net results after tax, but there are variations. Statutory accounting in the insurance industry focuses on the balance sheet and tends to use conservative assumptions. GAAP accounting is designed for a going concern company and looks primarily at the income statement. For risk management, including capital assessment, many companies use economic values based on pure cash flows. Economic values also include off-balance sheet items and realistic assumptions for pension plans. It is reasonable for a regulator in the U.S. to ask how a company considers statutory accounting in their assessment.

Economic capital models may provide additional data points for the regulator if using pure cash flows that are not dependent on any accounting regime. For example, life and health companies currently perform asset adequacy testing that is based on statutory accounting profit metrics, so metrics based on cash flows add new information to analyze.

Once the basis is chosen, income and cash flow are created from models. These can be simple or complex, and various inputs to the environments are created using everything from a few deterministic scenarios to stochastic techniques with millions of scenarios. This is combined with the current risk profile (balance sheet items), tactical business plans, and strategic plans.

Methodology

Capital assessment can take many forms, with the size of company and lines of business generally driving the choices made. Here are some examples that will not surprise an examiner. A small insurer is less likely to run stochastic simulations. A life insurer will include interactions between assets and liabilities, while a casualty insurer will generally run them independently. The goal is to identify potential adverse capital events and their impact on a specific risk profile, noting the impact on risk capital targets and thresholds. Multiple metrics are often used, focusing on either a point estimate (single number) or incorporating a range of outcomes.

The primary separation of methodology is between deterministic (discrete) and stochastic testing. With deterministic scenarios, each one is chosen for a specific reason. They can be reverse stress tests, where poor end results are imagined and scenarios that create these results are tested, or sensitivity tests where assumptions are tested, often in ways that are assumed to consider both positive and negative connotations. These are easier to present to board members as you can craft a narrative around the scenario.

It is important to view the impact that various stress events might have on capital levels and share those results with the Board. Even if the insurer focuses on stochastic analytical techniques, this is an important task to complete. Stress tests provide estimates of how much capital remains relative to those levels targeted by the company for ratings and solvency. They might show the impact of a major earthquake in a key part of California, the impact of a 100 bp movement in interest rates, or a shift in medical loss ratios. These scenarios should be considered by companies to ensure they hold enough capital to withstand reasonably likely events and continue as an ongoing entity.

When quantification tools include stochastic simulation, they can be driven by assumptions such as claims, or general economic conditions like interest rates or inflation. These general assumptions must be consistent across all models (e.g., assets, liabilities). Monte Carlo techniques are often used, where a random number generator creates a series of scenarios based on parameters including the initial level, average expected level over time, and expected volatility. These scenarios can then be graphed or parameterized to a known statistical distribution to illustrate the likelihood of poor events and display extreme events. Extreme scenarios result in what is often referred to as "the tail".

While companies almost always include some form of quantification in their capital assessment models, qualitative analysis can often be useful as well. This provides initial, common sense analysis (what do you think drives results) that leads to further scrutiny. As results move up the reporting hierarchy, quantification tends to be replaced by narratives that describe what could go wrong and how bad it could be. Discussing the difference between normal results, plausible events and catastrophic events can help leaders determine their risk appetite and the resulting risk limits. These levels of adversity allow a frank discussion of the business and its risks. What could go wrong? What could go right?

Models

Capital assessment can be accomplished using a wide variety of sophistication, from mental models that qualitatively make arguments for capital needs to nested stochastic models that attempt to identify higher order interactive results. Peer reviewers should question models that provide extremely precise results yet are built on assumptions that allow minimal rigor. A good quantitative model has qualitative descriptions to accompany it, explaining why certain assumptions and specific levels of refinement were chosen.

Qualitative models focus on exposure and high levels of probability and/or severity for a given risk. This can be useful for a risk with minimal variability, where running lots of scenarios will provide an obvious result, as well as one that is binary. Binary risks follow Boolean logic; they either happen or they don't. Some risks can be modeled in different ways for different uses. An earthquake may be modeled as a binary risk by a small casualty company located in a known earthquake zone where the event would create a solvency risk, while a company writing homeowners insurance nationally might utilize a stochastic analysis of its expected claims that are diversified geographically.

It is also important to recognize various protections within the balance sheet, such as reinsurance, that mitigate gross exposures. Large losses and attritional losses are often modeled separately to allow for the measurement and benefit of per risk and catastrophe reinsurance treaties. These contracts are then layered on top of direct exposures to generate the net exposure, with reinsurer counterparty risk acknowledged.

Historically, the National Association of Insurance Commissioners (NAIC) has utilized risk factors to allocate capital, using more sophisticated models to estimate the capital necessary for each type and tier of risk. An insurer's exposure is then multiplied by the factor to generate the required capital for an individual risk.

Quantitative methods vary from simple spreadsheets to the use of modeling software, sometimes incorporating separate and distinct asset and liability projections. Run times become material when these projections interact (e.g., products that credit interest and generate an account value).

Models that run without being encumbered by balance sheet calculations like universal life reserves can run much faster. This allows more stochastic scenarios to be run, for example, or a greater focus on detail. Sometimes reserve approximations, such as holding cash surrender values rather than statutory reserves for universal life products, are used to accomplish these objectives.

Metrics

Measurement is a key part of a capital assessment. It can be a statistical measure utilizing stochastically simulated results, or it can utilize standard formulas developed by a rating agency or regulator. The specific metric is less important than whether the results are used to manage the insurer. An unsophisticated metric that is being used is better than a sophisticated metric used only for the capital assessment. That being said, several metrics are commonly used.

Value at Risk, or VaR, is a metric that utilizes stochastic results and bases conservatism on the percentage of results worse than that chosen. For example, a 95 VaR would choose a threshold where 5% of the stochastic results were worse than that. The metric was developed by banks, and the Basel requirements use VaR. It can be very useful during periods of calm, but comes up short when a crisis arrives and correlations between risks increase.

The data used in a VaR analysis can come from historical results, a parameterized standard distribution such as the normal distribution (common), or using Monte Carlo simulation techniques. Unfortunately the tails of the distribution tend to be fatter than expected (kurtosis) when using the normal distribution, a frustrating result when capital is being calculated based on adverse deviations, leading to a false sense of security. The results can't be added, meaning that rather than running a stochastic model for each risk and summing them, a complex stochastic on stochastic model must be run.

Because VaR creates a single point estimate, it becomes relatively easy for an astute modeler to manage to the model, making it look like there is little risk when in reality the tail is much worse than represented. An example of this was seen during the financial crisis, where some insurers hedged their variable annuity exposure to a 30% decline but not beyond. Once the decline went past that the companies were fully exposed. A strong capital assessment will share enough information to avoid this situation, either including a graph of all the scenario results or utilizing multiple metrics.

One issue with VaR is that assumptions are frequently updated. This makes it procyclical, creating problems because it increases required capital during times of stress and defeats the purpose of capital. A factor based capital requirement, although not as sophisticated as other models, has the advantage of releasing capital as exposure reduces, making it easier to continue as a going concern.

A metric called Tail VaR, or CTE (continuous tail expectation), gets past most of these shortcomings but is not widely supported or used except by the insurance industry. Here the metric looks at the average of all scenarios beyond the point chosen. This makes it much harder to manipulate the result, and the results are additive. Given that the data is available when VaR is being calculated it is unclear why both metrics are not generated on a regular basis.

Several other measures come from statistical teachings, some with variations. The risk of ruin looks at how likely it is that you will lose all your capital (e.g., in a single coin flip it is 50%). You can reduce this by diversifying across risks, finding better opportunities, or hedging. Many investors find out the hard way that leverage (debt, margin accounts, unhedged derivative positions) increases this risk.

The simplest metrics are based on exposures. They provide a form of worst case scenario. For example, a gross exposure to mortality is $100,000,000 if that amount of life insurance was written (reduced by reserves accumulated prior to death and reinsurance). The exposure to junk bonds is the book value of any bonds rated below investment grade. Static metrics like duration can also be used to manage risk and lower capital requirements.

The NAIC has limited concentration of specific asset exposures for many years. This concept can be extended to liabilities, liquidity, and personnel matters (e.g., to generate a diversity of thought by limiting the number of graduates from one university).

Time Horizon

How far from the current time into the future are losses measured? Does a projected loss need to occur within one year, within the tactical business plan, 30 years, or during the run-off of the portfolio? It depends upon what the goal is. If the goal is to illuminate the risk during normal trading operations, then a short time horizon is appropriate. For an insurer who has made promises to clients that are measured in decades, a single point of failure along the way results in insolvency. Some products (e.g., P&C, major medical health, annually renewable term) tend to be shorter-term (primarily one-year) in nature, reasonably allowing for application of shorter timeframes.

Individual Risks Considered

The general risk categories defined by the NAIC for its risk-based capital metric generally do a pretty good job of covering the risks of an insurance company, and can support risk management at a non-insurance company too. The insurance/underwriting risk category is what most non-insurers consider operational risk. They hedge their exposure through the purchase of an insurance contract, reducing their risk and adding to the insurer's risk. Risks can be stratified in great detail or not based on how the specific risk is managed.

At a very high level, risks are categorized by assets, liabilities, and operations. These each drill down by differentiators like asset class and product type in an effort to have the splits be consistent with how the risks are managed. Risks will vary by type of insurer, and are reported net of formal mitigation efforts like reinsurance.

Some examples of risks considered are:

- Market risk - changes in interest rates, equity prices, volatilities, credit spreads, real estate values and foreign exchange rates
- Credit risk - failure of debtors, bond issuers, reinsurance partners or counterparties to meet payment obligations or by changes in their creditworthiness

- Insurance risk
    - Non-cat and catastrophe risk - unexpected occurrences of catastrophe and non-catastrophe events beyond the risk levels included in the price of the insurance contracts.
    - Reserve risk - inadequacy of reserves, for example caused by unanticipated loss trends or inflation
- Operational risk - inadequate internal processes, or from personnel and systems, or from external events
- Liquidity risk - failure of meeting short-term current or future payment obligations
- Reputational risks - significant direct losses or losses in future business caused by a decline in the company's reputation

While many risks have standardized modeling techniques, some deserve additional description from the insurer in how they perform their capital assessment and others are rapidly evolving. Investment strategy, in particular, has several outlier companies that invest heavily in real estate, equities, and even entire companies. These can challenge rules of thumb and provide difficult interaction considerations that are fair game for a peer reviewer to ask about.

Aggregation Methods

The question here is whether, and how, to give credit for diversification between risks as they interact. This can be an important difference between otherwise similar capital assessments. If one assumes no diversification, then capital backing individual risks can be calculated separately and are additive. This would normally overestimate the aggregated capital as risks are rarely fully correlated. For example, the risk of both a 1 in 100 hurricane hitting the US and a 1 in 100 credit crisis in the same year is much lower than either by itself. A few large companies will model this risk using brute force with lots of computers to aggregate capital across risks, but the time this requires is massive. Consequently, it is standard practice to incorporate a correlation matrix to combine capital for individual risks into a total. If the correlations are 1.00, the result is the same as simply adding them together. But an experienced practitioner can build a reasonable matrix, or one can be calculated. An additional complexity uses copulas to aggregate economic capital, where the correlations vary across a set of stochastic scenarios. For example, most of the time risks may be considered to have correlations of .7, but if extreme scenarios are detected the correlation increases to .9. This is more common among asset classes during a tail event, but could also reflect a regional carrier writing both auto and homeowners in a region prone to flooding. Performing sensitivity testing of a correlation matrix can be a helpful analysis to the modeler even if the results do not appear in the final report.

Traditional risk based capital developed by the NAIC assumes risks are independent, with zero correlation between major risk categories. This is conservative in almost all cases, but provides a consistent measure of capital requirements between insurers.

Capital Allocation

A key component to measurement of capital is how to allocate it back to specific products and business units. An insurer that has integrated risk into their day-to-day operations will be able to discuss how they align this with their capital allocation method. Many insurers will use factors that can be input to models. Some will apply diversification benefits and others will manage aggregation at the corporate level. These decisions impact investment income allocation, return on equity calculations, and pricing decisions.

Conclusion

Performing a capital assessment covers a wide range of practices. Some that seem simple may be more useful for a specific company than those that seem sophisticated. Each insurer should consider its own risk profile, strategies, and culture before deciding. For a capital model to be useful, it must be integrated into a company's decision-making process. It should be a core element of strategic analyses, growth initiatives, and risk mitigation approaches (e.g., reinsurance) to ensure capital is used efficiently. This requires modelers to accept a level of simplification, as an overly complex model can be difficult to implement and can be difficult to describe to board members. It is critical that ultimate decision-makers do not become reliant on a model that they can't understand or explain.

Feedback to risk owners is just as important as the initial rolling up of capital required for each individual risk. Some risks are important to mitigate, or seek out due to diversification benefits, and product lines are unlikely to know that on their own. An example of this is when a P&C company with exposure to hurricane risk might diversify into areas where hurricanes are not prevalent but another risk, like earthquake exposure, is. Assuming the expertise is present, this may be a method to reduce overall correlation expectations by adding a risk that is currently underrepresented. This type of acquisition strategy, where limited overlap is sought out, is common.

Capital assessments differ from statutory requirements in that they are designed for going concern insurers, while regulators often look at insurers as closed block entities. A regulator might be more interested in a relatively more conservative calculation, through changes in assumptions or specific metric used (e.g., 90 CTE vs. 70 CTE). When calculating an ORSA it is important to integrate the assessment with the way the insurer is managed. This will lead to better understanding of how assumptions integrate with a risk profile, but also improve the assessment over time by including the risk owners in feedback loops.

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Hanover Stone Solutions, LLC, *www.hanoverstonesolutions.com, is an enterprise risk management advisory firm that works with insurance companies to start, complete and vet existing programs for insurance companies, as conducting training programs for state regulators on the principles of ERM to better enable the review of ORSAs.*

Long-Term Care Insurance – A Long Term Problem

By Wayne Johnson, Tricia Matson, Jan Moenck and Andy Rarus

The average life expectancy in the United States in 1970 was 70.8 years, just over a one year increase from the average life expectancy in 1960 (1). It is against that backdrop that Long-Term Care Insurance (LTCI) was originally conceived and marketed in the 1970's. At the time the product was developed, interest rates were high and assumptions regarding investment income were made based upon the thought that interest rates would remain at high levels. However, past performance is no guarantee of future results and interest rates have been at historical lows since 2008. LTCI gained popularity in the late 1980's and the early 1990's, while at the same time the average life expectancy grew steadily and at rate that far outpaced the decade of the 1960s. By 2013 the average life expectancy in the United States had ballooned to 78.8 years. Today, financial planners continue to suggest LTCI as an essential element of a retirement plan.

A closer look at LTCI beyond average life expectancy and interest rates reveals other stresses to the pricing of this product. The frequency and severity of LTCI claims is increasing; a 2014 study performed by AON indicated that frequency was increasing 3% annually and severity was increasing 2% annually (2). The lapse rate for these policies has also been lower than expected. The same AON study showed that the overall loss ratio was expected to grow 5% annually. This perfect storm has caused long-term care insurance to be a long term problem for insurers, regulators and policyholders.

According to an S&P Global Market Intelligence analysis of statutory filings, the insurers with the largest LTCI reserves at December 31, 2016 included the following:

Reserve development at US long-term care writers with largest reserves

For year ended Dec. 31, 2016

Top-tier entity	Reported reserves on individual and group policies ($M) 2016	Development based on present value of incurred claims ($M) 1-year
Genworth Financial Inc.	17,524.9	361.5
Manulife Financial Corp.	16,038.7	240.1
MetLife Inc.	14,192.5	101.5
CNA Financial Corp.	9,442.7	(58.6)
Unum Group	8,020.2	41.4
AEGON NV	4,947.3	(47.0)
Prudential Financial Inc.	4,840.7	(68.4)
Thrivent Financial for Lutherans	4,438.0	(51.3)
Ameriprise Financial Inc.	3,727.7	(385.8)
CNO Financial Group Inc.	3,216.0	385.6

Data compiled April 17, 2017.
Rank based on total reported reserves as of year-end 2016. Top 10 entities shown.
Based on data reported in the supplemental sections of annual statements filed with the NAIC. U.S. filers only. Data on the reported policy reserves is taken from the Long-Term Care Experience Reporting Form 2, and the amounts shown are a summation of individual and group policy reserves. The development data is sources from the Long-Term Care Experience Reporting Form 3, Part 4.
Positive amounts of reserve development indicate reserve strengthening. SNL Financial calculated the 1-year reserve development by summing the reserves recorded in 2016 for incurred years 2015 and prior, then subtracting the amounts recorded in 2015 for those same incurred years.
SNL's top-tier designation reflects the consolidation of data, based on SNL-defined group structures, from individual P&C, life, health and fraternal filers.
Source: SNL Financial, an offering of S&P Global Market Intelligence

As can be seen on the chart above, several insurers had significant adverse development in their reserves during 2016. MetLife Inc., CNA Financial Corp., Unum Group and Prudential Financial, Inc. all stopped writing LTCI years ago, and Manulife Financial Corp. stopped writing these policies in 2016 (4). Genworth Financial Inc. continues to be a leader in writing LTCI, but realized that it will require additional capitalization to turn its business around and is in the midst of being acquired by a private investor to gain additional capitalization (5).

Many of these insurers are actively working to file rate increases. In 2016, Northwestern Mutual initiated rate increases for the first time, obtaining approval for rate increases that would affect over 43,000 policyholders and result in approximately $23 million in calculated premium increases. Genworth Financial Inc. is aggressively working to obtain rate increases, and the MetLife Inc. group of companies had the most filings approved in 2016, with 33 filings approved (6).

There are only about 15 companies that continue to write LTCI (4). Many insurers have changed their product structure in efforts to return to profitability. One new product structure includes riders providing for accelerated benefits clauses on life insurance products. The NAIC is also looking into new structures such as shorter duration products, annuity hybrid products, and the potential for favorable tax credit on LTCI savings accounts or purchases of LTCI from retirement plans (7).

Although very well capitalized, and with a diversified book of products, Thrivent Financial for Lutherans poses another challenge. As a Fraternal, it is not covered by guaranty associations. In the very unlikely event it were to fail, it would need to either assess its members or the policyholders would suffer significant losses.

The Penn Treaty group of companies, which has recently had significant press with its insolvency, is not listed on the chart above. It is estimated to have a net liability of almost $2.7 billion (7). The responsibility to provide funds for the benefits to the Penn Treaty policyholders now rests with the life and health insurance guaranty associations across the county. The Penn Treaty insolvency is having a major impact on life and health guaranty associations across the country, which have assessed their members to cover the cost of the insolvency. As pointed out above, only a limited number of companies have written business in the LTCI market, leaving many companies that never wrote these types of policies with an assessment obligation to cover the cost. If another major insolvency of a long-term care insurer were to occur, it could have a devastating impact on the market.

Given the risks present in the industry, the regulator is challenged with whether to limit rate increases to allow the policyholders to retain coverage at a reasonable price, or to allow the increases to mitigate solvency issues.

Trends in rating practices

Insurers have aggressive and specific targets for rate increases, often with a goal of 100% or lower lifetime loss ratio. To achieve this goal, double-digit rate increases have been common. These increases often have the potential for cross-block and cross-state subsidies, since some states approve only small increases and others approval much larger ones. There have also been offers of reduced benefits when rate increases have been high, in an effort to retain coverage for those who cannot afford such high rate increases.

Trends in reserving practices

In an effort to reign in reserve increases, insurers have taken measures such as including morbidity improvement assumptions in assessing reserve adequacy. They have also taken a more aggressive stance in including future non-approved rate increases and increases in investment income (based on a more illiquid or lower quality investment mix) in cash flow testing. Although in most cases state regulators have allowed some reflection of approved

(but not implemented) rate increases, the amount by which regulators allow reflection of future non-approved rate increases varies greatly by state. Companies base these assumptions on state specific historical experience, which contains a significant level of uncertainty. Given this, and given the long term model used to project LTCI reserves, companies should include significant margins in their assumptions and should reflect those unapproved increases at the state level, if possible. As noted below, the NAIC is scheduled to adopt a new actuarial guideline (effective 12/31/2017) to specify how companies are required to perform their asset adequacy testing for long-term care business.

As new industry morbidity experience emerges, companies must decide whether or not to reflect this new experience and how to do so. They must consider to what degree the experience in the study is applicable to the Company's own business mix. For example, does the experience from the industry study apply to how a company's specific business is marketed and underwritten? Does the study provide experience based on product features that align with those features at the company? Depending on how well or poorly the study data fits the company's business, will impact the level of credibility used when the Company blends its own experience with the new industry table. These are important considerations for one of the key assumptions used in LTCI reserving.

Other strategies which could increase risk

Due to the continued low interest rate environment, some insurers have been investing in riskier assets in an effort to increase investment return to better support their liabilities. This could make the company more susceptible to market risk and volatility in investment markets; potentially resulting in increased losses in a significant or sustained market downturn.

Consumer issues

Consumers are caught in the middle of the long-term care battle. When they bought a policy, and thought that they understood what the premiums and benefits would be, they likely made it an element of their retirement planning. The reality today is that the premiums are either increasing, or the benefits are being reduced. Furthermore, they are finding that the way the benefits were stated in the policy doesn't meet current needs or preferred methods of care, resulting in the policy not providing the needed coverage.

Further complicating the problem for consumers, if the insurer becomes insolvent most state guaranty associations have a limit of $300,000, and a nursing home can cost upwards of $90,000 per year (7).

Areas the regulator should look at when evaluating rate increases

We believe that areas that regulators may want to focus on when reviewing requests for increased rates include:

- Determining if there were appropriate assumption margins based on the level of uncertainty for each assumption;
- Evaluating the extent to which the insurer may be trying to recoup past losses;
- Evaluating the lifetime expected loss ratio on the business if the increase is approved;
- Ensuring that sensitivities to test the materiality of each assumption have been provided in the actuarial memorandum, and reviewing those sensitivities;
- Requesting a dynamic validation of the projection model to ensure that historical pattern of claims and premium is reasonably aligned with the projected pattern of premiums and claims;
- Checking for consistency of assumptions between those used in the premium rate request and those used in the asset adequacy analysis;
- Determining the materiality of the projected results at the tail end of the projection by requesting an alternate projection which excludes the last five to ten years of the projection;
- Requesting an external review of the actuarial memo supporting the requested premium increase.

NAIC Groups Addressing LTCI

Long-Term Care has been gathering a considerable amount of regulatory attention, and several NAIC working groups are looking into ways to address increasing problems and risks associated with LTCI. Some of the key current NAIC activities are listed below.

Long-Term Care Innovation (B) Subgroup

The Long-Term Care Innovation (B) Subgroup has been focusing on approaches to financing LTCI and has developed a list of federal policy changes that could help to increase private long-term care financing options for consumers. As of the writing of this article, these options still require approval by the NAIC's Government Relations Leadership Council before they are presented to Congress. The options include (8):

- Option 1: Permit retirement plan participants to make a distribution from 401(k), 403(b) or Individual Retirement Account (IRA) to purchase LTCI with no early withdrawal tax penalty.

- Option 2: Allow creation of LTC Savings Accounts, similar to Health Savings Accounts (HSAs) and/or Enhance use of HSAs for LTC Expenses and Premiums.
- Option 3: Remove the HIPAA requirement to offer 5% compound inflation with LTCI policies and remove the requirement that DRA Partnership policies include inflation protection and allow the States to determine the percentage of inflation protection.
- Option 4: Allow flexible premium structure and/or cash value beyond return of premium (HIPAA and DRA).
- Option 5: Allow products that combine LTC coverage with various insurance products (including products that "morph" into LTCI).
- Option 6: Support innovation by improving alignment between federal law and NAIC models (HIPAA and DRA).
- Option 7: Create a more appropriate regulatory environment for Group LTCI and worksite coverage (HIPAA and DRA).
- Option 8: Establish more generous federal tax incentives.
- Option 9: Explore adding a home care benefit to Medicare or Medicare Supplement and/or Medicare Advantage plans.
- Option 10: Federal education campaign around retirement security and the importance of planning for potential LTC needs.

Long-Term Care Actuarial (B) Working Group

The Long-Term Care Actuarial (B) Working Group's broad charges are to provide recommendations, as appropriate, to address issues and provide actuarial assistance and commentary with respect to model rules for appropriate LTCI rates, rating practices and rate changes.

Long Term Care (B) Valuation Subgroup:

Currently there is a lack of uniform practice in the implementation of tests of reserve adequacy and reasonableness of LTCI reserves. The Health Insurance Reserves Model Regulation (#010) and the NAIC Valuation Manual (VM-25) contain requirements for the calculation of LTCI reserves. The Model Regulation states, "a gross premium valuation is to be performed whenever a significant doubt exists as to reserve adequacy with respect to any major block of contracts"; BUT some apply at contract level while others do this at the major block level (and everywhere in between).

The NAIC (B Committee) Long-Term Care Valuation Working Group has been working on a draft LTCI guideline to address how LTCI carriers perform Asset Adequacy testing. The draft LTCI Guideline is called "The Application of Asset Adequacy Testing to Long-Term Care Insurance Reserves". The draft was

exposed in February, 2017 and was expected to go into effect December 31, 2017. However, outstanding questions relating to whether this will be a new guideline or incorporated into existing regulations may result in a delayed effective date.

The Draft Guideline establishes the following uniform guidelines and limits to certain assumptions to be used in Asset Adequacy Testing (AAT):

- Requires asset adequacy analysis (AAA) if LTCI business falls within scope of guideline
- Specifies form of AAA as either Gross Premium Valuation (GPV) or Cash Flow Testing (CFT) and points to Actuarial Standard of Practice No. 22 (ASOP 22, Statements of Opinion Based on Asset Adequacy Analysis by Actuaries for Life or Health Insurers)
- Specifies a process and timeframe by which additional reserves are established due to reserve inadequacy
- Uniform approach for future rate increase assumptions
- Assumption documentation requirements for key risks
- Standalone AAT results documentation requirements
- Phase In guidelines if additional AAT reserves are required

The scope of the guideline includes any insurer with long-term care insurance contracts with over 10,000 inforce lives as of the valuation date, both direct and assumed; and excludes accelerated death benefit products or other combination products where the substantial risk of the product is associated with life insurance or an annuity.

Long Term Care Pricing (B) Subgroup:

The Long Term Care Pricing (B) Subgroup has been charged with providing recommendations to address long term care rates, rating practices and rate changes. One issue that has been a significant topic of discussion whether to allow recoupment of past losses in implementing rate increases. What has generally been determined is that past losses should not be recouped; however, projected future losses can be addressed by premium increases.

The Subgroup has been evaluating how to categorize into "buckets" the sources of past LTCI premium deficiencies and sources for recouping those past deficiencies. The Subgroup's primary goal is to create a resource document that would indicate how states would treat each of these "buckets". This has been led largely by Texas and Minnesota. States could use this resource document to help them in their review of LTCI rate increases depending on how they view the acceptability of recouping past losses and how these past losses are recouped (i.e., which policyholders, if any, should bear the burden of paying for these past losses and which ones). The Sub-

group's discussion highlights the problems with lifetime loss ratios especially as they may be applied to shrinking blocks of LTCI policies if the company is allowed to recoup all of the past losses from persisting active policyholders.

Receivership Model Law (E) Working Group

Applicable charges of the Receivership Model Law Working Group include 1) to evaluate and consider the changing marketplace of LTCI products and the potential impacts on guaranty funds; and 2) evaluate the needs for amendments to the Life and Health Insurance Guaranty Association Model Act (#520) to address issues arising in connection with the insolvency of long-term care insurers.

Conclusion

Long-term care insurance is being carefully watched by both regulators and insurers, and both are working to find feasible means to shore up reserves on legacy business. There continues to be a need for this type of product in the marketplace, and regulators and insurers are also working closely on how the need can be met with a product that is designed and priced to achieve profitability. In the meantime, regulators are closely watching the impact losses and reserve strengthening are having on the capitalization and solvency of insurers with legacy business on their books since another major insolvency could have a devastating impact on the market.

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PBR, How Shall I Examine Thee? Let Me Count the Ways

By Tricia Matson, Leslie Jones and Andy Rarus

Principle-based reserves (PBR) standards for individual life insurance business became effective in the vast majority of states on January 1, 2017 (with a three year transition period that enables companies, at their option, to adopt anytime up to December 31, 2019). As a result, life insurance companies (excluding those that qualify for and take certain exemptions or exclusions and/or those that exclusively offer pre-need, credit life and industrial life products, which are currently exempt) will be significantly changing the methods, assumptions, processes, and systems used to determine reserves for life insurance products. The available exemptions include the companywide exemption (which may be renamed the "Life PBR exemption") and stochastic and deterministic exclusion tests that, if both were passed, would allow companies to essentially continue to follow an approach similar to today's. This article provides a brief overview of some of the changes that will be driven by the PBR requirements and a discussion of how reviewers of those reserves (auditors and examiners) may approach their review under the new methodology.

PBR Requirements

Reserves under PBR still involve an evaluation of future benefits and future premiums; however, that may be where the similarities to the current formulaic reserving process ends. While there are some historical reserving processes that are more "principle based" in nature, such as asset adequacy analysis and reserving for variable annuities with guarantees, the reserving approach for the individual life formula reserves that currently must be held are static in nature. Under PBR, the projections of future benefits, expenses and revenue consider all cash flows material to the business, including premiums and other revenue collected from the insured, investment income, policyholder benefit payments (including surrender benefits net of surrender charges) and expenses. The calculation involves using some prescribed assumptions and some assumptions that are based on company experience and actuarial judgment. The calculation also provides for margins for uncertainty. In order to include investment income in the projections, both assets and liabilities are projected. Rather than using a single economic scenario, a range of economic scenarios must be considered (if the stochastic calculation is required).

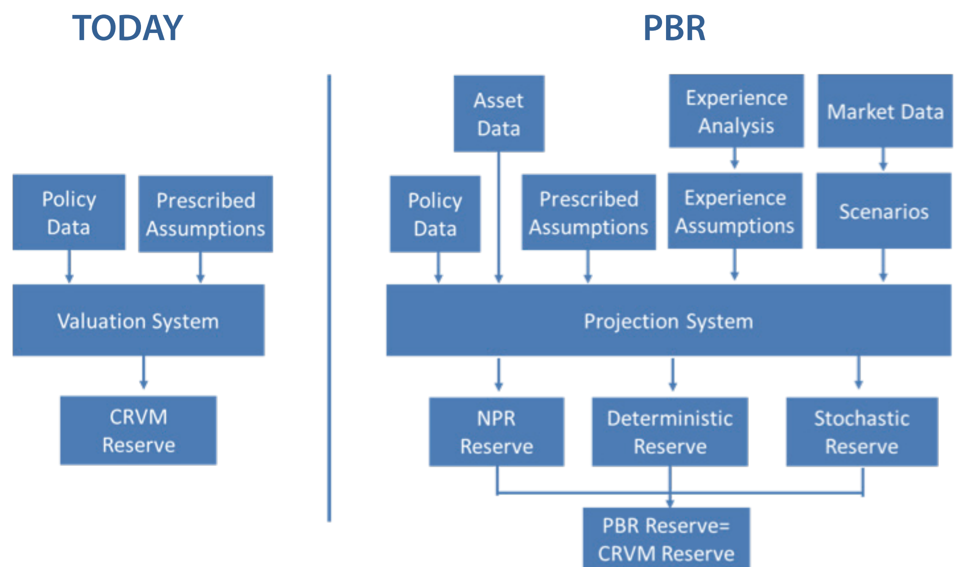
The requirements for the calculation are described in the NAIC's Standard Valuation Manual (VM). Unlike the valuation law, this document will be updated regularly and does not require legislative approval in most jurisdictions. Chapter 20 (VM-20) describes requirements for life products. For in-scope life insurance products that have not met the exclusion tests, the reserve is the greatest of the following three calculated reserves:

1. The net premium reserve (NPR), which is a calculation similar to (and in some cases identical to) today's reserve but with some potential differences in the underlying assumptions;
2. The deterministic reserve, which is a more risk-based, current-assumption reserve including all material cash flows, some prescribed assumptions and a single economic scenario;
3. The stochastic reserve, which is similar in many ways to the deterministic reserve but is calculated using a set of stochastic interest rate and equity scenarios.

Changes in the Reserving Process

PBR will add significant complexity to the reserving process, requiring new data, systems, methods, assumptions, and controls. Figure 1 is a representation of the data flow and elements involved in the current statutory reserving process as compared to what is required under PBR.

Figure 1



In order to focus our commentary on the most significant area of change, we have centered our discussion on the "formulaic" statutory reserves rather than the approach used to evaluate the adequacy of those reserves. Note that PBR will not impact asset adequacy testing requirements - a company will still be required to test their entire block of business. Figure1 and our comments below regarding auditing reserves apply to the formulaic reserves and the PBR reserve that will replace the formulaic reserve, not the examination or audit process that is used for evaluating the reserve adequacy testing process performed by the Appointed Actuary.

Under the current reserving process shown on the left side of Figure 1, the input data needed to perform the calculation involves only policyholder data and specific, prescribed assumptions for mortality and interest based on the policy type and issue year. A valuation system is then typically used to perform the calculations using those two static assumptions, and the reserve for each policy is output from the system. The primary tasks involved in auditing or examining such a reserve are as follows:

- Verifying the accuracy of the policy data;
- Reconciling information flows (data and assumption feeds into the valuation system, and reserve feeds out of the system and into the ledger); and
- Verifying the accuracy of the valuation systems calculations (including whether the proper assumptions were used in the calculations).

Depending on the level of risk associated with the reserving process and the quality of the company's internal controls to mitigate that risk, one or more of these tasks may occur as part of the audit or examination. Data verification and reconciliations are frequently handled by the financial/accounting auditors/examiners, and the verification of the reserve calculations is frequently handled by the actuarial auditors/examiners. Such verification may involve aggregate level review of reserve amounts (performing trend analysis on reserves or other analytical tests) as well as recalculations of reserves for a sample of policies.

Turning to the PBR reserve process, we have several similar tasks that would be performed in order to audit or examine the reserve, as well as some new tasks we must consider. Since the net premium reserve (NPR) calculation is quite similar to the CRVM reserve in the current framework, this article will not focus on that particular part of the calculation. Audit of the NPR calculation is expected to be very similar to what is performed under the current framework.

For the remainder, a key consideration in planning the audit or examination approach is consideration of risk. If, for example, the stochastic reserve drives the final booked reserve for the bulk of the business, it may make sense to focus audit efforts on that part of the calculation. If certain data inputs are brand new that were not previously used in reserving processes, they may be viewed as higher risk than inputs that are consistent with the prior reserving process. So this risk-based approach to identifying where to focus the audit or examination effort will be even more important in a PBR framework.

Based on what is typical for a life insurance company implementing PBR, we have identified the components of the calculation that we believe are likely to be relatively higher or lower risk (after consideration of controls). Of course the actual assessment of the risk will depend on the specific facts and circumstances for each company.

Figure 2

Relatively lower risk	Policy data accuracy, asset data, market data, PBR reserve (booked amount)
Relatively higher risk	Policy data completeness, experience analysis, prescribed assumptions, experience assumptions, scenarios, projection system/model

In addition, the NAIC's PBR Review (EX) Working Group is currently developing additional procedures for inclusion in the risk-focused financial examination process, and has identified the following risks for inclusion in the Financial Examiners Handbook risk repository that are specific to PBR:

- The insurer has not taken appropriate steps to prepare for the implementation of PBR. We have not addressed this risk in our article, since it is focused on how to audit or examine PBR reserves subsequent to adoption.
- In-force data is not complete or accurate nor consistent with accounting records. Ensuring the completeness and accuracy of the in-force data has always been a focus of examinations. However, the importance of ensuring consistency with accounting records is heightened for PBR.
- The data utilized in the company's PBR model is not representative and consistent with the company's in-force data. This would be addressed in the evaluation of policy data accuracy that is included in Figure 2.
- Policies subject to PBR are not properly identified or exclusion testing is not properly performed. This would be primarily addressed in the evaluation of policy data completeness that is included in Figure 2. The projection system used as part of the exclusion testing (as applicable) would be covered in our projection system item.
- The assumptions used by the insurer to calculate reserves for polices subject to PBR are not accurate or appropriate. This would be addressed in the evaluation of experience analysis, prescribed assumptions, and experience assumptions that are included in Figure 2.
- The methodologies utilized in PBR are not appropriate or the reserve computations are not performed correctly. This risk would be primarily addressed in our projection system item . Certain methodologies may also be evaluated in conjunction with the review of assumptions (for example, application of credibility methods).

We expect that in both a financial examination and a financial statement audit, the review would first involve an evaluation of company controls related to each risk, and then substantive testing would follow only if the residual risk is still deemed to be high. The focus of this article is on these higher risk areas, and specifically the substantive testing that would help an auditor or examiner evaluate these risks further. While we understand that control testing is a critical component of the review, we have focused on substantive testing primarily for brevity, and also due to the likelihood that in the early years of PBR, residual risk assessments for many components of the process are likely to be moderate or high.

Policy data, asset data, and some portion of the market data required as inputs into the PBR process are likely to have already been used for other reserving processes, such as determining formula reserves or performing asset adequacy analysis. In the event that the company is leveraging existing processes and data that were already used as part of the cash flow testing process, and already have associated controls, the risk associated with errors in the data or inappropriate transfer of data may be relatively low. In addition, the process of using the results from the projection system calculation, determining the maximum reserve among the three components (NPR, deterministic, and stochastic reserves), and booking the reserve amount to the ledger is a relatively low complexity component and is likely to involve specific controls. So while there is certainly risk associated with these areas, the risk profile is lower than the remaining components of the PBR calculation.

The remainder of this article will focus on approaches to evaluate the higher risk areas. For each of these areas, there is a range of approaches to audit or examine the company's analysis to assess accuracy and reasonableness.

Policy Data Completeness

The completeness of policy data is likely to be a relatively higher risk area due to the new and somewhat complicated process by which companies will be determining which policies are subject to which requirements within the valuation manual. There are several considerations in determining whether a given policy type uses a PBR approach, and then which components of the PBR calculation (NPR, deterministic reserve, stochastic reserve) apply, including:

1. The size of the company (some companies will be eligible for a companywide exemption but only if they do not write certain types of universal life (UL) products and meet other criteria related to premium volume and risk based capital levels);
2. The type of policy (certain life insurance business such as pre-need is excluded);

3. Treatment of policy riders, which must be valued in accordance with requirements set forth in the VM;

4. The issue year of the policy and the transition election made by the company (PBR application is prospective only, so only policies issued after the effective date are included, and the effective date is dependent on the transition election);

5. Whether the business qualifies for the deterministic and stochastic exclusion tests.

In light of these considerations, there is risk that the company has misclassified its business, and potentially left out policies that should be included in the PBR calculation. There is also risk that the exclusion tests were not performed correctly.

The actuarial examiner or auditor could evaluate these risks through procedures such as the following:

- Advising the financial exam or audit team in their policy data completeness testing, to help in understanding which business should or should not be included in the PBR analysis;
- Selecting sample of policies from various lines of business to evaluate the company's decision tree in determining whether PBR applies;
- Evaluating the methods and assumptions used in performing the deterministic and stochastic exclusion tests for reasonableness and consistency with the guidance;
- Evaluating the results of the deterministic and stochastic exclusion tests.

The last two procedures above are similar in nature to those that will be performed in evaluating the PBR reserve calculation itself, which is discussed further below.

Experience Analysis

This is likely to be a high risk area because it has not historically been a direct component of financial reporting, at least for statutory analysis. Experience analysis does, of course, feed into the company's assumption setting process in general. However the primary statutory financial reporting application that uses experience analysis has been cash flow testing. In the event that cash flow testing did not result in the booking of additional reserves, an insurer may not have placed a heavy focus on having appropriate controls and governance in their experience analysis process. This may be less true for companies that also report on a GAAP basis, since GAAP reserving does rely more heavily on experience-based assumptions.

In addition, PBR has specific requirements regarding the setting of "anticipated experience" and "prudent estimate" assumptions. An anticipated experience assumption is an expectation of future experience for a risk factor given available, relevant information pertaining to the assumption being estimated and a prudent estimate assumption is a risk factor assumption developed by applying a margin to the anticipated experience assumption for that risk factor.

Key areas of focus for purposes of auditing or examining the experience analysis process would include:

- Testing of the data underlying the experience studies
- Evaluation of the appropriateness of the data based on its intended use
- Sample recalculations of specific experience study results

Note that we will discuss the application of the experience data to the actual assumption setting process below. The first bullet above would typically be handled by the accounting specialists. However, actuaries would assist in identifying the data to be tested based on its significance to the ultimate reserves booked.

The most important actuarial review item is the second bullet above. It will be very important for the auditing or examining actuary to evaluate whether the experience data being used is suitable for the ultimate use of the experience study. For example, if the experience study is used to set assumptions on business written in 2017 on a 6 class underwriting structure, but the data underlying the study is based on only 3 underwriting classes, how is that being addressed in the process? If the experience data is analyzed at a very granular level, are the results at that level credible, or do they need to be blended with industry data or grouped differently to achieve appropriate credibility? For experience that is dependent on the external environment (for example, lapses that tend to vary based on interest rates), how is that accounted for? As part of the audit or examination, these are areas that the reviewing actuary should understand, and raise as issues or concerns if the process does not appropriately take them into account.

It may also be worthwhile to do some testing of the experience study calculations on a sample basis. While the calculations of metrics such as actual to expected ratios is typically not very complex, the process may be prone to error if it has not historically been well controlled.

Assumptions

Due to the increased number and complexity of both prescribed assumptions and experience-based assumptions in PBR as compared to current formulaic reserve approaches, auditing or examining the proper application of these assumptions will be more challenging. However the general approach to doing this review will be similar to what is done today

for the prescribed assumptions used in the formulaic reserves and the experience-based assumptions used in asset adequacy analysis. Currently as part of examinations or audits, where reserving assumptions are deemed areas of high risk (which is typical), the auditing or examining actuary will evaluate (sometimes on a sample basis) whether the company has applied the correct mortality table(s) and interest rates as part of the reserving process for formulaic reserves, and whether the company has appropriately considered experience data, credibility, and other sources of information in setting assumptions for asset adequacy analysis. Similarly, audits or examinations of PBR reserves will involve evaluating whether the PBR reserves follow the prescribed approaches and assumptions as documented in VM-20, as well as whether the assumptions can be supported by credible company data or industry studies. However, the items to be evaluated are much more extensive and include items such as:

- Default costs
- Interest rates, spreads, and equity levels
- Mortality
- Premium persistency
- Lapses
- Expenses
- Other policyholder behavior
- Application of credibility
- Treatment of reinsurance
- Treatment of hedging programs

Not all of these are explicitly prescribed, but even where company experience is used in the assumption setting process, there are prescribed approaches that must be used, limits that must be considered and margins that must be established.

One suggested approach to audit this long list in an efficient manner is to apply risk-based sampling techniques, similar to what is already done on audits and examinations. For example, the reviewing actuary could review the company's sensitivity testing to understand which assumptions are most impactful, and focus the review on only those assumptions. Another approach would be to select a representative sample of policies (considering the relative risk profile of policy types), and test the assumptions used for the sample for compliance with the regulation. This could be done in conjunction with the testing of the PBR projection system, which will typically be done on a sample basis (this is covered in more detail below).

One component of PBR will be experience data reporting. This data provides a comparison basis that allows the regulator to perform reasonableness checks on the appropriateness of assumptions as documented in actuarial reports and may serve as a source of information for regulators to potentially use to identify assumptions that appear inconsistent with typical industry practice and therefore warrant additional review.

The NAIC performed a pilot project to assess company readiness and approach for PBR. One of the findings was that the approach companies used for setting the mortality assumption varied significantly, in particular as it related to credibility of experience data. So this, for example, may be an assumption that is viewed as a relatively higher risk item.

Although this article is focused on substantive testing, and less so on controls, an important consideration in designing the nature and depth of testing is the extent to which the company has formal, documented processes for assumptions setting and governance. We expect that companies will have in place formal processes and procedures for setting assumptions, including information to be evaluated, frequency, and thresholds for determining whether updates are needed. We also expect a formal and centralized assumption review process. To the extent the assumption governance process is weak, more substantive testing may be warranted.

Scenarios

Unlike today's reserving for life insurance products, the PBR calculations will often include a stochastic component, in which future cash flows are projected over a range of stochastic interest rate (and depending on the product, equity) scenarios. In fact, PBR also contemplates stochastic scenarios for other risk factors (such as mortality and policyholder behavior) but it is not anticipated that many companies will use such scenarios at implementation. Since the stochastic reserve component of the PBR reserve is based on the results from the "tail" of these scenarios, it is important that the scenarios used are generated and applied properly. There is a prescribed scenario generator that companies must use, and while some companies will already be familiar with the generator, many may be using it for the first time. Areas for review related to the scenarios include:

- Evaluation of the generation of the stochastic scenarios using the prescribed generator
- Evaluation of use of the scenarios in the cash flow projection model

Since the scenario generator is available to the public, testing the scenarios used is relatively straightforward. Techniques to do so could involve an independent run of the economic scenario generator and comparison of the results or performing analytical tests on the scenarios such as deriving the means, volatilities, and specific calibration points at future projection years to confirm accuracy.

Evaluating the use of the scenarios in the cash flow projection model could be accomplished through independent recalculations of results for sample policies and sample scenarios, which is discussed further below. Another potential approach is to perform analytical tests on cash flow output, such as calculating the projected investment return in several of the tail scenarios to confirm that the relative returns move in tandem with the input scenarios.

Projection System

Potentially the area of greatest risk in the near term is the accuracy of the projection system used to determine the PBR reserves. Many companies will be implementing, or significantly enhancing, their actuarial projection systems to handle PBR. The vendors offering these systems have been working on expanding the functionality to accommodate PBR for some time. However there has been limited industry testing of the functionality to date, and some of the guidance was continuing to evolve right up until mid-2016 for a 2017 adoption date. The guidance will continue to change. All of this presents risk in the projection system, including:

- Vendor coding is not fully reflective of the PBR requirements, or does not appropriately handle the specifics of an individual company's products
- Company-implemented modifications were not done correctly
- The approach used by the company to group individual policies into "model cells" for projection purposes materially misstates the reserve
- Use of modeling simplifications or scenario reduction techniques that materially misstate the reserve
- The detailed specifications of the products are not properly reflected in the projection system
- There are insufficient controls on the projection system, resulting in errors with data feeds or manual entries, or a poor change control process
- Users of the system are not fully trained or proficient and use the models or model output incorrectly
- The company does not have a robust (or even reasonable) model validation policy or process, or appropriate model governance in place

Therefore it will be important for auditors and examiners to perform testing to assess the accuracy of the PBR calculations. This is not a new concept, since we have existing examples in which auditors and examiners are testing complex (including stochastic) actuarial projection models, such as:

- Testing of variable annuity reserves, which already follow a principle-based approach for reserving

- Testing of asset-liability management, cash flow testing and hedging models as part of a risk-focused examination where these areas present high residual risk
- Testing of actuarial projection models used for certain GAAP applications such as DAC amortization and products for which there are profits followed by losses and a projection-based reserve must be established

The steps involved in substantively testing a projection model for PBR are:

1. Performing static and/or dynamic validations of the model: A static validation confirms that the modeled policies are consistent with the inforce business subject to PBR, through comparisons of items such as actual and modeled policy counts, reserves, face amounts and account values. A dynamic validation is a comparison of recent actual cash flows to those projected in the early years of the model.
2. Testing, or reviewing the company's testing, of whether the approach to grouping policies into model cells results in a significant understatement of reserves: This may involve running the calculations before and after grouping on a sample basis, or asking the company to do so and reviewing the results.
3. Selecting a sample of policies for testing: This involves obtaining a listing of the policies and/or model "cells" (policy groupings used for modeling) and selecting a subset of the policies or cells based on risk characteristics. For example, the examiner or auditor may wish to cover the top products being sold, males and females, the most prominent underwriting classes, and a range of issue ages in the selection process.
4. Coordinating with the financial examination team: It is the financial team that is likely to be testing policy data (if appropriate) and they will need guidance from the actuary as to which policy characteristics are important ones to the calculation.
5. Selecting a sample of scenarios for testing: This would typically focus on the deterministic scenario since it supports the deterministic reserve and then one or more "tail" scenarios that drive the stochastic reserve. Since the stochastic scenarios themselves are evaluated as described above and the process by which the projection model develops projected cash flows is the same regardless of scenario, it is generally not necessary to test a large number of scenarios to gain comfort with the model.
6. Obtaining from the company the detailed model input (data and assumptions) and output (projected cash flows and associated inforce statistics), and performing analytical tests on that model output to assess reasonableness.

7. Performing independent projections of cash flows for the sample in a different system than the one the company uses: Using a different projection system eliminates the potential for a vendor error to be present in both calculations and therefore missed.

8. Comparing the projection amounts for consistency, and working through differences with the company.

Another approach that is referenced in the draft financial examination guidance and has been suggested by the NAIC, is the use of a "model portfolio approach." This approach involves the use of a defined, standard set of policies and specifications and the calculation of the PBR reserve for that policy set using both the company's projection system and the reviewing actuary's projection system. The NAIC has a team of actuarial resources in place to assist state regulators in this process and most large audit firms have an actuarial projection model that could be used for such an approach. Two potential drawbacks of this approach are that it may not address the risk if the reviewing actuary has the same projection system as the company (since certain errors could be vendor-built), and that it will not necessarily identify risks associated with unique product features offered by the company. However in many instances it would capture the bulk of the potential drivers of error.

In performing independent recalculations, it is very common to have small projection differences due to differences in treatment of cash flow timing (e.g., order of decrements), different time steps, etc. However these should not have a material impact on the final reserve amount for the sample. Significant differences from the company's calculations would be evaluated and resolved.

As a final point on modeling, the PBR Model Governance Practice Note Work Group of the American Academy of Actuaries (Academy) released a new practice note to provide additional information for practicing life actuaries seeking to better understand models, model risks, model governance, and related issues, as these actuaries implement PBR. There is also a model governance checklist on the Academy website that touches on many of the items discussed above.

Conclusion

Due to the magnitude of the change in data, assumptions, application of judgment, processes, and technology, significant effort is required to examine or audit PBR reserves. However, it is not an insurmountable task. Using many of the tools already in existence for similar processes and applying a risk-focused approach to the testing, the examination or audit can be broken down into key areas of risk to be focused on. In addition, because the business subject to PBR will be relatively small to start and grow over time, the examination or audit of the reserves can follow suit. It will be beneficial for auditors and examiners to review and plan their procedures in

advance of having to actually perform substantive testing. Because of the complexity of PBR and the need therefore to focus on areas of highest risk in performing substantive testing, it is even more important to plan carefully in advance of diving in!

The authors would like to thank Mike Boerner and Pete Weber for their valuable review of and contributions to this article.

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PwC NAIC Newsletter

August 2017

The National Association of Insurance Commissioners held its Summer National Meeting in Philadelphia August 4-8. This newsletter contains information on activities that occurred in some of the committees, task forces and working groups that met there. For questions or comments concerning any of the items reported, please feel free to contact us at the address given on the last page.

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Executive Summary

- The Cybersecurity Working Group and the Innovation and Technology Task Force both adopted the Insurance Data Security Model Law; final adoption by Executive Committee and Plenary is expected later this year.
- The Statutory Accounting Principles Working Group adopted new disclosures for high risk deductible policies and exposed significant new proposals related to reinsurance risk transfer, goodwill, bank loans, and surplus notes.
- At the last minute, the Capital Adequacy Task Force agreed to delay 2017 implementation of the Operational Risk charge for all RBC formulas, as a result of concerns voiced by industry.
- The Valuation of Securities Task Force, representatives from the Investment Analysis Office and industry representatives continued to debate issues related to the Filing Exempt enhancements project; regulators hope to have new processes for private letter rating securities and investments with reporting exceptions implemented by January 1, 2018.
- The Group Capital Calculation Working Group continued work on its project to construct a U.S. group capital calculation using an RBC aggregation methodology; a dozen volunteer companies are currently participating in a baseline exercise in preparation for eventual field testing.
- The Variable Annuities Issues Working Group is completing its second Quantitative Impact Study with a goal to complete recommendations by the end of 2017; detailed work on the VA hedging project is continuing; consensus is needed on significant open issues.
- The Financial Stability Task Force discussed the NAIC's new Macro-Prudential Initiative which is focused on tools to evaluate liquidity and capital strength; the task force approved the formation of a Liquidity Assessment Subgroup.
- The Reinsurance Task Force announced that the NAIC will not hold any public discussions with regard to the EU/U.S. covered agreement until after the agreement is formally signed.

PwC NAIC Newsletter

August 2017

All documents referenced can be found on the NAIC website naic.org.

Executive Committee and Plenary

Plenary conducted an interim election in May for the role of Secretary-Treasurer after the death of Texas Commissioner David Mattax. Director Raymond Farmer of South Carolina was elected to the position.

Cybersecurity

Insurance Data Security Model Law

Although the Cybersecurity Working Group did not meet publicly between National meetings, they released three new drafts of the Insurance Data Security Model Law in April, July and August based on comment letters received on each draft. At the Summer National Meeting, the working group adopted version 6 of the model law dated August 7 (with Arkansas, New Mexico and Utah voting no). The model was also adopted by the Innovation and Technology Task Force (with Utah again voting no). Final adoption by Executive Committee and Plenary is expected later this year.

The model establishes industry standards for data security which will apply to a broad range of "licensees," including insurance companies, agents and brokers and requires written information security programs for protecting sensitive data. Companies will be required to notify the domiciliary state within 72 hours of a "cybersecurity event" (unauthorized access to, disruption or misuse of, an information system or information stored thereon). A goal of the working group was to make the model as consistent as possible with the New York cybersecurity regulations, which became effective March 1, 2017.

Significant changes to the model since the Spring National Meeting include the following: the term "data breach," for which there are investigation and notification requirements, was replaced with "cybersecurity event," the section on Consumer Protections Following a Data Breach was replaced with a Notification to Consumers subsection that refers to a state's data breach notification law, the phrase "nonpublic personal information" was replaced with the broader "nonpublic information" term, and requirements for an incident response plan were added.

The final version also simplifies the requirements related to third-party service providers: licensees are to exercise due diligence in selecting these providers, who should "implement appropriate administrative, technical, and physical measures to protect and secure" information systems and nonpublic information that are accessible to, or held by, the third-party service provider. An annual certification to the commissioner was also added; an insurer must report to the domiciliary commissioner by each February 15 that the insurer is in compliance with the information security plan requirements (Section 4 of the model).

The model provides licensees one year from the effective date of the model to implement Section 4 of the model and two years from the effective date to implement the third-party service provider requirements.

Cyber risk guidance for financial examiners

The IT Examination Working Group exposed proposed revisions to the Financial Condition Examiners Handbook to guide an examiner on how cybersecurity risks can be addressed during a financial examination. The revisions include insights on assessing the strength of the insurer's security program such as past events, incidents and breaches; integration of cybersecurity into the insurer's enterprise risk management; assessment of employee training/security awareness; vulnerability management; and mergers and acquisitions. The revisions also provide guidance on insurers' use of third-party service organizations. The exposure period ends September 10.

Big data

The 2017 charges of the Big Data Working Group are to 1) review the current regulatory frameworks for oversight of insurers' use of consumer data, 2) evaluate data needs and tools for regulators to monitor the marketplace and 3) propose a structure for the review of complex rating models. Since the Spring National Meeting, staff has been collecting information related to the first two charges, while the working group members have prioritized the third charge, focusing on rating models for personal auto and homeowners insurance.

During its June 30 conference call, the working group discussed a proposed structure to review models used to create rate filings, which proponents believe would help speed products to market. The proposal would create a Predictive Analytics Team (PAT) consisting of NAIC employees with predictive analytics modeling, insurance, and actuarial experience, and an NAIC Predictive Analytics Working Group (PAWG) consisting of 5-10 regulatory actuaries. The PAT would review the assigned models to determine that the model was constructed properly with adequate testing and validation, that variables used in predicting loss are statistically significant, and that appropriate governance and controls structure exist on both the model and the input data. However, the working group repeatedly stressed that the states would retain full regulatory authority (similar to the Reinsurance Financial Analysis Working Group which reviews XXX/AXXX transactions when requested by a state).

The proposal was exposed for comment, and comment letters were received from states, trade associations and other interested parties. The working group discussed these comments in detail at the Summer National Meeting. Trade associations voiced very significant concerns including delegation of authority to NAIC staff, protection of insurers' confidential trade secrets, qualifications of individuals reviewing the models, and lack of due process and transparency. Several parties noted that the proposal would create an entirely new regulatory regime without any legislation, and these new entities would have significant authority. The proposal was supported by some states in the comments received, and additional states furthered that sentiment during the meeting, mainly that this proposal is a method to share resources and expedite review of complex models. Several regulators noted that even states with larger resources often send the review of certain models out for review based on the complexity or amount of requests that occur in peaks during the year, and this proposal can help manage the timing of approval turnaround.

The chair concluded the discussion with stating that the feedback will be considered by the working group, and a revised draft will be issued in the upcoming months for comment.

Statutory Accounting Principles Working Group

The working group met June 8 and at the Summer National Meeting; significant actions include the following below. (Appendix A to this Newsletter summarizes all actions taken by the working group since the Spring National Meeting.) (After each topic is a reference to the Statutory Accounting Principles Working Group's agenda item number.)

New high deductible disclosures (#2017-11) – The working group approved revisions to SSAP 65 to significantly expand disclosures related to high deductible policies, which previously only required disclosure when unsecured recoverables were due from a professional employer organization. The revised disclosures, effective for year-end 2017 annual and audited financial statements, require information for all high deductible policies including the reserve credit recorded for unpaid claims, paid recoverable amounts past due, total collateral pledged both on and off balance sheet and the ten highest unsecured high deductible amounts by counterparty (counterparties do not need to be specifically named). The threshold for PEO disclosures was increased to those greater than 1% of capital and surplus. The annual statement disclosure will also be data captured for further analysis; the disclosures were also adopted by the Blanks Working Group in June (2017-14BWG).

Reinsurance risk transfer for short duration contracts (#2017-28) – Regulators, including the Financial Analysis Working Group, have raised concerns to the SAP Working Group about short duration health contracts that are classified as quota share reinsurance contracts but may not adequately transfer risk as a result of risk limiting features in the contracts. At the Summer National Meeting, the working group exposed its 34 page Form A which includes the following proposals (which are broader than just health short duration contracts):

- SSAP 62R clarifications – These proposed revisions focus on categorizing contracts as proportionate or nonproportionate and the related reinsurance credits for each, including considerations of all risk limiting features.

- SSAP 62R clarifications – Proposed guidance emphasizes that risk limiting features should be explicitly considered in determining reinsurance credit.

- Enhanced disclosures – New guidance is proposed that the SSAP 62R risk limiting disclosures (paragraphs 93-98) be adopted for SSAP 61R contracts, beginning in 2018.

- Glossary revisions – Revisions to the SSAP 61R glossary definitions of proportionate and nonproportionate are being proposed along with Master Glossary guidance on classifying contracts as short duration and long duration, which would be a new concept for statutory accounting.

During discussion in Philadelphia, the chair of the working group made the comment that some insurers have been "jumping from a risk transfer conclusion directly to proportionate reinsurance credit" and the proposed guidance is an attempt to return the guidance to its original intent. The chair also stated the working group's belief that long duration life reinsurance risk transfer is not considered to be problematic, and that interested parties should comment whether there are any unintended consequences in the proposed revisions. The chair also noted that the regulators plan to reconstitute the Risk Limiting Contracts Working Group, which has been inactive since 2015.

Bank loans (#2017-10) – The working group continued its discussion of bank loans, focusing on loans directly issued by an insurer, and whether such loans should be captured within the scope of SSAP 26/Schedule D. (The recently revised SSAP 26R states that only "bank loans acquired through a participation, syndication or assignment" are fixed income instruments.) Industry had submitted comments strongly supporting continued reporting of such directly issued bank loans as Schedule D investments, which they believe are very similar to private placements. The working group agreed to expose a revised definition which includes directly issued bank loans as an SSAP 26R debt instrument.

This view is consistent with the view of the Valuation of Securities Task Force which concluded at the Summer National Meeting that "bank loans made by an insurer that is also a financial institution should be in scope of SSAP 26R." The task force also supports adding reporting lines to Schedule D to separately identify loans directly issued and loans acquired.

Reconsideration of goodwill limitations (#2017-18)
Through its reviews of SCA filings, NAIC staff noted individual holdings of investees by insurers for which admitted goodwill is a significant portion of the total SCA equity balance (even though the insurance parent can only admit total goodwill up to 10% of its capital and surplus). This resulted in a recommendation to the working group to reconsider additional limitations on goodwill. The regulators agreed to expose the following six alternatives for comment (which vary from no change to very material).

- Decrease the 10% limitation by the parent insurer to 5% of capital and surplus

- Limits would be based on a percentage of the dollar amount of goodwill remaining after the initial 10% limitation

- Cap the amount of goodwill at the asset or net asset value of each individual SCA

- Eliminate admitted goodwill entirely

- Make no changes to goodwill admissibility

- Enhance disclosures related to goodwill

Surplus note amortization and accretion (#2017-12)
After lengthy discussion at two meetings, the working group exposed proposed revisions to SSAP 41R to reflect the "fundamental principle" that the balance of a surplus note issued at a discount or zero coupon can never be greater than the amount of cash and liquid admitted assets received. Other conclusions reached by the working group, which are viewed by some as very conservative, include the following:

- Surplus note principal amounts issued at a discount or zero coupon or in a surplus note exchange should not accrete the face value of the note in surplus.

- If a reporting entity "under any situation" incurs a greater principal obligation than the amount of cash/liquid assets received, the excess should be charged to operations when incurred or recognized as a liability (for amounts deemed by the domiciliary commissioner to be more

consistent with the concept of a discount which requires future repayment).

High-cost risk pooling in ACA risk adjustment (#2017-26) – As a result of a new HHS regulation, the ACA risk adjustment program will include, beginning in 2018, a provision called high-cost risk pooling, which is similar to an involuntary pool reinsurance mechanism. The working group exposed for comment a proposal from the AAA's Health Financial Reporting and Solvency Committee to account for the risk adjustment payables and receivables in three separate parts:

- The portion of the insurer's claims above the HCRP threshold would be accounted for as a reinsurance ceded claim recovery
- The portion to fund reimbursements would be accounted for as reinsurance ceded premium, and
- The residual portion would be premium subject to redetermination.

The exposure also proposes new HCRP disclosures and recommends deleting disclosures related to the transitional ACA reinsurance program, which has ended. In addition, the working group asked for comment on an alternative considered by the AAA, which would be to make no change to the risk adjustment accounting due to the uncertainty of reliable information to estimate the three portions above, and the potential complexity. No proposed wording for exposed for the alternative accounting.

Interim meeting
The SAP Working Group announced it will not be meeting at the Fall National Meeting in Hawaii, and instead will hold conference calls on October 12 and November 6 to address items exposed for comment.

Blanks Working Group

During its June conference call and Summer National Meeting, the Blanks Working Group adopted nineteen proposals, seven of which implement revisions proposed by the SAP Working Group related to changes to statutory accounting guidance for 2017 such as the new long-term guaranty fund assessment disclosures and more detailed repurchase/reverse repurchase agreement disclosures. Other noteworthy revisions are as follows:

2017 P&C statement of actuarial opinion and actuarial opinion summary clarifications (2017-04BWG) – The instructions revisions include the following new guidance: "the Appointed Actuary's comments on reinsurance collectability should address any uncertainty associated with including potentially-uncollectable amounts in the estimate of ceded reserves."

Additional definitions for line of business appendix (2016-06BWG) – New definitions added include Cyber Liability, Vehicle Excess Waiver and five new categories of Accident and Health.

Incorporate Valuation Manual requirements into the life and fraternal actuarial opinion instructions (2017-08BWG) – The revision includes the following statement: "the Actuarial Opinion must follow the requirements guidelines and standards for statements of actuarial opinion prescribed by VM-30, Actuarial Opinion and Memorandum Requirements, of the Valuation Manual.

Modifications to XXX/AXXX Reinsurance Exhibit (2017-01BWG) – Significant changes to the Exhibit and instructions were adopted to reflect changes to Valuation of Life Insurance Policies Model Regulation (#830) and the recent adoption of the Term and Universal Life Insurance Reserve Financing Model Regulation (#787).

General interrogatory to identify "multistate insurer" (2017-10BWG) - A new interrogatory was added to explicitly identify insurers that assume reinsurance covering risks in at least two states as these entities were subject to Part B accreditation requirements as of January 1, 2017.

The above items are effective for 2017 annual statements except for the new interrogatory which will be effective for the first quarter of 2018.

The proposal to add private letter (PL) and reporting exception (RE) designations to Schedule D and BA (2017-07BWG) was deferred until the VOS Task Force approves amendments to the SVO P&P Manual to define these designations. See the VOS Task Force summary for further discussion.

Risk-based capital

Operational risk (2016-13-O)
During its June 28 conference call, the Capital Adequacy Task Force made the surprising unanimous decision to delay "for at least one year" implementation of the operational risk charge for all RBC filers. The new charge had been scheduled to go into effect for 2017 RBC filings. Industry objections included a "double counting problem" for life filers that have subsidiaries with operational risk greater than that of the parent life insurer, and concerns by health insurers surrounding the uncertainties of health insurance reform. The task force adopted the proposal structure and instructions for the operational risk charge but set the risk charge factor to 0% for 2017.

The Operational Risk Subgroup has a meeting scheduled for August 24 to discuss a proposal for 2018, which includes examination of the "double counting" issue and discussion of longer-term operational risk data options.

Investment RBC
Bond factors - The Investment RBC Working Group released the AAA's updated recommendation (June 2017) of corporate bond risk factors, revised to address issues raised by the ACLI in 2016. The AAA report also updated the portfolio adjustment formula. The Academy's representative summarized that the effect of the updated factors compared to current factors is an increase in the average industry C-1 charge from 1.00% to 1.20%; this represents an industry increase in required surplus of 20% or approximately $6 billion (after tax, before co-variance, the portfolio adjustment and top 10 asset concentration).

At the Summer National Meeting, the working group had a spirited debate on the revised bond factors and portfolio adjustment. The ACLI's comment letter stated that "while the current base factors represent an improvement over the initial recommendation, the slope of the charges still is counterintuitive and provides an incentive to invest in below investment grade securities." The comment letter also notes that the portfolio adjustment factor has changed substantially and would result in a material negative RBC impact especially for small and mid-sized companies. As a result of the analysis from the ACLI and 12 other comment letters, the AAA will be revising the portfolio adjustment and corresponding base factors and expects to provide a report by the end of August.

Implementation of 20 RBC categories – The Investment RBC Working Group plans to schedule a joint conference call with the Life, P/C and Health RBC Working Groups to consider adoption of the increased granularity in the bond formula to the 20 categories adopted by the Investment RBC Working Group. Such adoption is critical so that the NAIC Investment Analysis Office can map the 20 categories to the NRSRO ratings. The chair of the IRBC Working Group reiterated its position that the granularity proposal will be ready to implement in all formulas for 2018. However, there is continued pushback from the health and P/C industries that the life bond factors are not appropriate for use in their RBC formulas, and the ACLI is recommending field testing before implementation. The chair committed to having an "open and transparent process" in its discussions with the other working groups and interested parties.

Real estate proposal – The working group had exposed for comment a revised ACLI real estate proposal for Life RBC recommending a 10% charge for real estate, and the addition of a market value adjustment to reflect that market values of real estate can be significantly greater than the depreciated cost carrying value. The proposal recommends the same treatment for Schedule A and Schedule BA real estate. The working group briefly reviewed a comment letter from the AAA which proposes a 12% charge to better reflect "extreme fluctuations in the real estate market." The AAA also does not support the proposed market value adjustment. The ACLI plans to provide a response to the AAA letter shortly and is still hopeful that both the revised factor and market value adjustment can be adopted for 2018 RBC filings.

Life Risk-RBC
Longevity risk – On behalf of Longevity Risk Subgroup, the AAA's Longevity Risk Task Force continues to assess an approach for longevity risk, with the assumption that the RBC charge should reflect the impact of longevity stress, primarily mortality improvement, on all future cash flows. Since April, the AAA Task Force has performed additional analysis of historical data, developed specifications for a field study, and re-evaluated risks to be included in the RBC charge. In Philadelphia, the task force recommended that the subgroup conduct a study to evaluate the results of applying the proposed approach to actual company blocks of business. Instructions and a template have been developed for the subgroup to conduct a field study on individual and group annuities. The field study will review 2016 statutory reserve amounts using two assumption bases (2016 CARVM valuation basis

and 95th percentile stress), applying a range of valuation interest rates, issue ages, duration since issue, and gender combinations.

The next steps for the task force include determining whether to include basis risk, developing a recommendation for a stress event, finalizing specifications for the field study, supporting the subgroup with the field study, and continuing to evaluate an approach for a potential RBC charge for lifetime income benefits. The task force anticipates completion of work in 2019.

FHLB collateral RBC (2017-03-L) – The Life RBC Working Group discussed the ACLI proposal related to the RBC treatment of Federal Home Loan Bank collateral which has been revised to address concerns of the working group that eliminating the C-0 charge entirely encourages insurers to increase spread banking non-insurance activity. The ACLI is proposing to retain the C-1 and C-3 charges but modify the C-0 component to zero (from 1.3%) for the collateral equal to the amount advanced when the liability is part of C-3 modeling, and a factor based on the NAIC rating of the FHLB for any excess collateral. If the FHLB advances exceed 5% of total net admitted assets and the company has not received authorization for the higher amount from its domiciliary state insurance regulator, the factor will be based on a Baa bond factor (currently 1.3%).

In Philadelphia, the working group heard a suggestion from NAIC staff to study 2016 data related to FHLB advances; an analysis of 2015 data revealed inconsistencies in how companies reported these advances. The working group agreed and requested a report from NAIC staff by October 1.

Stress Testing Subgroup – The subgroup has not met since 2015 and was disbanded in June. Its charges, including evaluation of RBC in light of principle-based reserving, will be handled by the Life RBC Working Group.

Property/Casualty RBC

Credit Risk for Reinsurance Recoverables Implementation (2016-10-P) – The regulators adopted a previously exposed proposal to delete page PR012A and revise page PR012 to update references to the annual statement; PR012A is no longer needed to calculate the reinsurance credit risk component of R3 as these amounts will be directly linked to Schedule F beginning in 2018. The RBC proposal would be effective for 2018 RBC filings.

Catastrophe Risk RBC

With implementation of catastrophe risk in RBC for hurricane and earthquake risks completed, the Catastrophe Risk Subgroup is now focusing on developing a detailed process to consider potential charges for other perils such as tornado, flood, terrorism, wildfires, winter storm and cyber risk. At the Summer National Meeting the subgroup heard a presentation from AIR Worldwide, which detailed its severe thunderstorm model for the U.S. The presentation materials note that severe thunderstorms have accounted for 35% of all U.S. catastrophe losses from 1990 to 2015.

2016 RBC Results – Of approximately 2,500 companies, only two companies triggered an action level event due to the catastrophe risk charge in 2016 compared to 1 and 17 in 2015 and 2014, respectively.

Health RBC

Risk Corridor Sensitivity Test (2017-09-CA) – The regulators exposed a proposal to remove the risk corridor from the sensitivity test as the temporary risk corridor program expired in 2016. Since the sensitivity test is also included in the Life, Fraternal and P/C RBC filings, the proposal recommends removal of the risk corridor sensitivity test in all formulas. The proposal would be effective for 2018 RBC filings.

ACA Reinsurance Proposal (2017-10-H) – The working group exposed a proposal to remove the Affordable Care Act lines 4, 5, 10, and 11 from the Credit Risk page XR019, as a result of the ACA reinsurance program ending in 2016. The proposal would be effective for 2018 RBC filings.

Valuation of Securities Task Force

FE enhancements project and private letter ratings

In 2016, the task force exposed for comment comprehensive amendments to the P&P Manual to implement recommendations of the Reporting Exceptions Working Group related to verification of private letter ratings to be filed directly by NRSROs and the use of a proposed PL designation for private letter ratings and RE for reporting exceptions. Industry raised significant concerns related to the proposed changes including the comment that IAO policy decisions should be agreed to before drafting and exposing significant P&P Manual amendments for comment. This resulted in the VOS Task Force identifying four major policy decisions that needed further discussion: IAO role and responsibilities related to FE designations, producing designations for private letter ratings, resolving discrepancies between the official NAIC designations and insurers'

computations of the designations, and reviewing the policy of requiring rated securities to be filed with the IAO.

Over five lengthy and sometimes contentious conference calls this spring and summer, the task force, representatives from the IAO and industry representatives debated these issues, with one result being the deferral from July 1, 2017 to January 1, 2018 of the proposed requirement for all private letter ratings to be included in the rating agency feeds or be filed with the IAO and manually added to the FE database. The task force voted to re-expose a 25-page "FE Enhancements" document package for comment until September 15 and a draft "Ratings Verification Process for Securities with Private Ratings" flowchart to outline the intent and purpose of the exposed policy language. A similar flowchart for the reporting exceptions process is also anticipated shortly.

The task force still hopes to have the automated process for filing private letter ratings in place by January 1, 2018 and use of the PL and RE designations in the investment schedules for year-end 2018. Among many open issues is developing a grandfathering methodology to transition the treatment for private letter ratings issued prior to January 1, 2018. The task force has scheduled conference calls September 27 and October 10 to continue discussion of the FE enhancements project.

<u>Unrated securities (5*/6*) guidance</u>
The task force adopted an amendment to the P&P Manual to remove the 5*/6* certification procedures from the manual; the procedures have been replaced by a general interrogatory to confirm compliance, which is effective for the 2017 annual statement and thereafter (2016-28BWG). The task force will retain oversight of the NAIC 5* and NAIC 6* designations. Discussion of how to modify the Z administrative symbol and procedures will continue as a separate project.

<u>SVO assessment of affiliated transactions</u>
Because of the IAO's significant concerns with regard to rating insurance entity related party investments/debt transactions, the task force asked the SAP Working Group for its views on what additional procedures should be considered or inherent limitations of a rating designation. SAPWG responded with proposed revisions to the P&P Manual procedures in issuing NAIC designations for investments of an SCA entity to clarify that an NAIC designation reflects only a credit assessment of the investment and does not consider collectability based on independent payment ability of the SCA, or whether it represents an arms-length and economic transaction under SSAP 25. SAPWG further recommends that the SVO review affiliated transactions in the same manner as unaffiliated transactions. The task force exposed the recommendation for comment until September 21.

<u>Power generation/renewable power methodology</u>
The task force adopted amendments to the P&P Manual developed jointly by the IAO and the ACLI that provide filing, documentation and analytical methodology guidance for power generation and renewable energy projects. The goal of the guidance is to provide greater analytical transparency for both insurers and regulators.

<u>Financial modeling for CMBS</u>
The IAO's Structured Securities Group has been evaluating enhancements made by BlackRock to its CMBS credit model and plans to implement these changes for year-end 2017 CMBS modeling, which may result in an RBC increase for some companies. The SSG noted capital increases in conduit subordinate classes, both legacy and post-crisis, single asset/single borrower post-crisis subordinate classes, and agency post-crisis mezzanine. However, the overall increase in capital affected only 1.37% of CMBS, based on book adjusted carrying value.

Group capital calculation

The Group Capital Calculation Working Group continues its long term project to construct a U.S. group capital calculation using an RBC aggregation methodology.

<u>Use of scalars</u>
The working group reached consensus this summer on this issue, with a majority of interested parties favoring the relative ratio approach to applying a scalar adjustment to non-U.S. insurers, compared with the distance to intervention approach. The working group heard comments on the use of the excess relative ratio and pure ratio approaches, the first of which assumes that the first intervention levels among solvency regimes are equal. The working group agreed to field test both methods. The regulators are also compiling a list of recommended jurisdictions for which a scalar should be developed and what data sources are available. The working group received a listing of 17 jurisdictions from two trade associations and will need to decide whether to narrow the list to fewer jurisdictions.

Captive insurers
The working group exposed for comment until September 5 an NAIC staff memo on the treatment of captives in the group capital calculation that proposes classifying captives into three groups. Pure captives and captives which are not in a holding company group that includes a traditional U.S. insurance company would be treated as non-insurance affiliates. Captives that do not assume XXX/AXXX business would calculate NAIC RBC after adjustment for certain items as required by paragraph 9 of SSAP 97 and would use the ceding company's basis of accounting for insurance reserves.

For captives that assume XXX/AXXX business, they would also calculate NAIC RBC with the two adjustments above, but regulators were asked to consider whether PBR could be used to calculate reserves, perhaps for both in-force and new business. Three additional decision points were also noted in the memo including whether the direct writer would also be allowed to use PBR on both new and in-force business for purposes of the capital calculation, and whether assets backing XXX/AXXX reserves should only receive credit in the group capital calculation if the assets are admissible under NAIC SAP.

Permitted and state prescribed practices
The working group discussed whether accounting practices that differ from NAIC prescribed should be "on top adjustments" to the group capital calculation so that the results are comparable among companies, or whether there should be no adjustments, but transparent disclosure of permitted and state prescribed practices. The chair asked NAIC staff to see what information is available from the current NAIC database on these accounting practices.

Baseline exercise
Approximately 12 companies have volunteered to participate in the baseline exercise which includes data submissions from the volunteers and their preferred alternatives on scalars, permitted practice adjustments and treatment of non-insurance and non-U.S. insurance affiliates. Next steps include impact analysis, observations and feedback from lead state regulators by the end of August. When asked whether the NAIC could share the baseline exercise templates being used, staff stated the templates were only for data collection, not group capital calculations.

There was no discussion of where the project stands with respect to its estimated timeline, which anticipated field testing in 2018 and the calculation being implemented for 2019 reporting to regulators. NAIC leadership did note in Philadelphia that the Federal Reserve has agreed to take the NAIC up on its offer to work in a coordinated effort on a group capital calculation.

Principles-based reserving

The NAIC continued work on its various PBR projects; the voluntary three-year adoption period of principles-based reserving began January 1, 2017 with implementation mandatory as of January 1, 2020. (The NAIC has not updated its survey of companies early adopting PBR; therefore, it is not known how many insurers plan to adopt PBR January 1, 2018. It also appears that New York's implementation of its own version of PBR is stalled and voluntary adoption by New York domiciled insurers as of January 1, 2018 seems unlikely.)

Significant developments since the Spring National Meeting are discussed below.

Valuation Manual Amendment Proposals
The Life and Actuarial Task Force adopted several Amendment Proposal Forms (APF) with non-substantive changes clarifying items within the term and ULSG NPR calculations, the significant data period, and policy loan modeling within the modeled reserves. They also consolidated definitions in VM-01 and adopted other clarifications and revisions. Additionally, LATF adopted revisions to the PBR Companywide Exemption that would eliminate the 450% RBC requirement for companies with ordinary life premium below $50 million, which allow commissioner discretion to continue the exemption for one year if the requirement is met in the prior year. Other clarifying changes were also included in this amendment.

VM-20 Default Cost and Spread Tables
LATF adopted the Table A Baseline Annual Default Costs, which were updated by NAIC actuarial staff with data through December 2016 per the methodology defined in VM-20. Default costs for each investment grade rating category (PBR Credit Ratings 1-10, i.e. Aaa through Baa3) have declined on average by less than half a basis point across weighted average investment durations.

In Philadelphia, LATF exposed the VM-20 investment spread tables updated as of June 30, 2017 for comment through August 22. LATF also adopted changes that provide for the spread tables to be updated monthly going forward; however, LATF members did not approve the proposed 8-day lag

which would facilitate the availability of the spreads at month-end more quickly. Hence, VM-20 investment spreads will continue to be based on data as of the last business day of the month until further notice.

VM-22 Fixed Annuity PBR
LATF heard an update from the VM-22 Subgroup on activity following LATF's adoption of VM-22 – Maximum Valuation Interest Rates for Income Annuities, to be effective January 1, 2018. Under the adopted methodology, valuation rates for income annuities would be adjusted quarterly or daily depending on contract size, would be based on treasury rates plus a spread less default costs and expenses, and would be established based on the expected duration of the payout period.

Beginning January 1, 2018, the NAIC will begin publishing VM-22 SPIA Jumbo and Non-Jumbo valuation rates on the NAIC industry page. Development of maximum valuation interest rates for non-VA/non-SPIA contracts is still in progress as is the valuation methodology. Current direction for valuation methodology for non-VA/non-SPIA contracts is to provide the ability to perform an exclusion test to use Actuarial Guideline 33 as the valuation basis. VM-22 would be used as the valuation basis for products that fail the exclusion test, or if a company chooses to perform VM-22 even if they pass the exclusion test. The VM-22 Subgroup is observing the changes being made to VM-21 (Variable Annuities), with the goal to be consistent with VM-21.

PBR Experience Data Collection
At the Summer National Meeting, Executive Committee adopted a recommendation to authorize the NAIC to serve as a data collection agent for any state collecting experience data in support of PBR. The committee also asked LATF to draft amendments to the Valuation Manual to specifically designate the NAIC as a data collection agent for states when PBR becomes effective.

PBR revisions to the Examiners Handbook
The PBR Review Working Group adopted proposed revisions to the Financial Condition Examiners Handbook to provide guidance to examiners on reviewing life insurers' adoption of principles-based reserving. The revisions were exposed for comment by the Financial Examiners Handbook Technical Group and are expected to be adopted for the 2018 Handbook.

Variable annuities framework

The NAIC continued its projects to consider proposed changes to the statutory framework designed to reduce the level and volatility of the non-economic aspect of variable annuity reserving, statutory accounting and RBC requirements.

Quantitative impact study (QIS II)
The Variable Annuity Issues Working Group held two conference calls to hear updates on progress regarding QIS II testing cycles 1, 2 and 3 that are designed to measure how well the specific proposals to reform VA reserve and capital calculations achieved their objectives and to ultimately assist regulators in making changes to the framework.

Representatives from Oliver Wyman summarized work done on cycle 1, which focused on the stochastic modeling aspects of the reserve and capital calculations. This included removal of the working reserve component of the stochastic calculation, elimination of the requirement to model the runoff of existing hedge assets, higher credits for the impact of clearly defined hedging strategies, calculating reserves and capital with the same distribution of modeled cash flow, and the standardization of general-account return-modeling parameters.

Oliver Wyman representatives also summarized a "self-evaluation" on how well changes tested in cycle 1 help to address four of the five cited motivations for variable annuity captives. The self-evaluation suggested that tested changes go a meaningful way towards both providing incentives for risk management and reducing non-economic balance-sheet volatility. Oliver Wyman also noted the self-evaluation considered framework enhancement objectives and how these had been met when considering the changes tested in cycle 1.

The ACLI provided comments on the self-evaluation, stating that the industry is not ready to conclude on the effectiveness of tested changes to the stochastic calculations until other parts of the testing cycle are completed. This includes both the equity-return scenario modeling parameters and the standard scenario. OW in turn emphasized the difficulty inherent in developing one standard scenario that works for all companies, given differences in products and other characteristics.

Test cycle 2 includes the modeling of revenue sharing, prescribed behavioral assumptions, modeling frameworks for the policy-level cash-flow diversification benefit and equity-return modeling

parameters. Modeling of revenue sharing involves assessing the robustness of revenue-sharing fee streams with a view to providing appropriate credits in reserve and capital modeling. The assessment of behavioral assumptions would involve examining the possibility of blending actual company data with conservative prescriptions. Analyzing the level of diversification benefits would involve looking at alternatives to the current framework that provide meaningful diversification benefits. Finally, assessing the equity-return scenario modeling parameters will involve testing alternative mean return and volatility assumptions but will not involve linking mean returns to interest rate levels.

Oliver Wyman believes the projects are on schedule to complete all cycles by the end of September, which will allow analysis and discussions with the working group, regulators, and industry by the end of the year on QIS II conclusions and recommended framework revisions to be implemented in 2018.

Proposed derivative accounting for hedging VAs
The SAP Working Group continued its high priority project to develop guidance for certain limited derivative contracts (e.g. interest rate hedges with counterintuitive effects) that otherwise do not meet hedge effectiveness requirements of SSAP 86. At the Summer National Meeting, the working group discussed open issues based on the latest exposure draft, Issue Paper 15X, dated April 8 and ACLI's comment letter dated June 16. The most significant issues are as follows:

Amortization and ability to accelerate amortization
NAIC staff noted her belief that the most significant outstanding issue which would have a material effect on the financial statements is the amortization period for deferred assets and liabilities. The proposed guidance would allow recognition of deferred asset and liabilities related to the portion of the fair value fluctuation in the hedging instruments that is attributed to the hedged risk and does not immediately offset changes in the hedged item. The ACLI continues to believe that 20 years is the shortest maximum length that would result in removing most of the non-economic accounting volatility from the statutory financial statements; the issue paper limitation is a 10 year maximum. Working group members are being asked whether they would be comfortable extending the amortization period to 20 years. The chair asked interested parties to provide data on the effect of using 10 years versus 20 years.

Change in hedging strategy/hedging target – The ACLI continues to be concerned that the issue paper does not "sufficiently accommodate" how dynamic hedging strategies work in practice and does not clearly differentiate between "hedge targets" and "hedging strategy." The working group has observed that the ability to change hedge targets frequently would seem to eliminate the possibility that a hedge could ever be ineffective. NAIC staff is asking for working group feedback to permit changes in hedge target not to constitute changes in hedging strategy in limited situations, or other possible solutions.

Termination guidance/expired derivatives – The ACLI supports guidance to continue the current amortization period when a non-expired derivative instrument no longer qualifies for the specialized accounting, or is no longer an effective hedge. In an April 19 referral letter, the working group suggested a compromise of the lesser of 5 years or the remaining scheduled amortization (versus immediate gain/loss recognition) and asked the Variable Annuity Issues Working Group for its view. The VAIWG voted July 20 to support the compromise position, which will be discussed in more detail by SAPWG during its next meeting.

Calculation of deferred asset/deferred liability
The ACLI will work with NAIC staff on complex technical questions related to the proposed calculation steps for the deferred asset and liability and the measurement of gains and losses on open derivatives.

Request for grandfathering – The ACLI has requested that insurers receiving state permitted practices or interpretations of prescribed accounting under SSAP 86 be allowed to either continue their current accounting treatment or adopt the new guidance. The working group does not support such grandfathering, believing it is critical that all departures from the new guidance be documented in the financial statements.

Other issues and next meeting - Other less significant issues also need to be addressed including governance provisions, assessing hedge effectiveness, Schedule DB changes, and disclosures. Finalization of the guidance is expected in 2018, with possible implementation for year-end 2018. A conference call is expected to be scheduled for September to continue discussion of issues in more detail.

Life Actuarial Task Force

In addition to progress on PBR initiatives, the task force continued work on the following projects this spring and summer.

__Valuation mortality tables__

Accelerated Underwriting Mortality – In Philadelphia, the Joint Academy/SOA Preferred Mortality Project Oversight Group (POG) presented perspectives on Accelerated Underwriting and asked LATF to consider collecting mortality experience for limited medical underwriting, so that "like" experience can be compared for these emerging types of underwriting practices. While not currently required in VM-51, POG requested that experience be collected for this type of underwriting in the future. To prepare for this request, a list of specified data elements was created for comment. LATF voted to expose these data elements for comment through November 7. The purpose of the exposure is to get comments as to whether these data elements would be feasible for companies to provide and if these data elements would appropriately capture the mortality risk of limited medical underwriting.

The VM-20 Reserving Subgroup of the SI/AUW Work Group recommended that in the short term LATF develop guidance notes for PBR valuation. The subgroup presented some interpretations of VM-20 in regard to 1) combining genders and risk classes in the same mortality segments, and 2) combining traditionally underwritten and SI/AUW company experience for the credibility calculation and the resulting margins for SI/AUW. The subgroup interpreted current guidance to allow that risk classes, genders, and even different types of underwriting could be combined for purposes of credibility, noting that larger margins than prescribed should be considered given Section 9.C.5.d of VM-20. Discussion of this matter will continue on future conference calls.

Guaranteed Issue Mortality – LATF received an update from POG on the development of Guaranteed Issue (GI), mortality tables and voted to expose an APF on this matter for comment. The proposed changes 1) include clarification around the definition of GI and provide for inclusion of the GI mortality tables within the Valuation Manual, 2) allow GI business to revert to VM-A/VM-C for reserve valuation purposes, which would allow the use of the deterministic and stochastic exclusion tests, (which is unlike traditionally underwritten term, which is not allowed to "test out" of deterministic reserves), and 3) require the table for non-forfeiture to be applied with the same transition provisions used normally for new tables. LATF seeks to adopt the tables with an effective date of January 1, 2019.

Simplified Issue Mortality – POG also gave LATF an update on the Simplified Issue (SI) mortality table development and suggested definition of SI. LATF exposed the full SI report and SI mortality tables for comments through September 21.

Long-term care issues

__Joint Long-Term Care Insurance Task Force__

This new joint task force of the Health Insurance and Financial Condition Committees was formed to coordinate all aspects of the NAIC's work regarding the long-term care insurance (LTCI) market. During its first conference call, the task force adopted its charges which are to assess the financial solvency of LTCI writers; evaluate sufficiency of current financial reporting and actuarial valuation standards; assess regulatory considerations on rate increase requests and identify common elements for achieving greater transparency and predictability; coordinate state actions for revising guaranty fund laws; monitor regulatory policy regarding short duration LTCI policies; and consider product innovations and potential state and federal solutions for stabilizing the LTCI market. The task force will report to its parent committees and Executive Committee on key issues and progress of work.

The task force heard a presentation on a proposed LTC run-off facility and its potential benefits which include economies of scale through consolidation, disclosure and transparency, and claim and reserving practices. The facility is based on a concept of insurance business transfer which is a novation from one carrier to another, with a closely monitored transparent review process that multiple states can use to protect policyholders' rights. The review process comprises extensive financial statement disclosures, notice requirements, independent valuation requirements, and regulatory approvals for both the transferring and transferred insurer. NOLGHA and a consumer representative gave comments on potential issues related to these structures; the chair noted that the task force has just begun discussion of this topic.

__Model law development__

Executive Committee adopted a request from the Receivership and Insolvency Task Force to consider amending the Life and Health Insurance Guaranty Association Model Act to address guaranty fund assessment and coverage issues of LTC insolvencies. The task force and its Receivership Working Group will also consider whether HMOs should be included in state guaranty funds. That working group met six times this summer focusing on the allocation of guaranty fund assessments for LTC insurer insolvencies among the health, life and annuity accounts and the HMO inclusion issue.

Reserving and rate reviews
The LTC Valuation Subgroup of Long-Term Care Actuarial Working Group completed work on an actuarial guideline, The Application of Asset Adequacy Testing to Long-Term Care Insurance Reserves (AG LTC), which requires that companies perform stand-alone asset adequacy analysis of LTCI blocks of business. The actuarial guideline received final adoption by the Executive Committee and Plenary at the Summer National Meeting.

This new LTC actuarial guideline is intended to increase the uniformity, transparency and accuracy of LTCI reserves starting with year-end 2017 filings. The actuarial guideline 1) requires the use of appropriate assumptions, including future rate increases, underlying LTCI reserves; 2) clarifies the use of aggregation of LTCI and other blocks' reserves; 3) provides documentation requirements for assumptions and reserve results; and 4) provides the means for the reserve analysis to be available to state insurance regulators in all states in which a company is licensed.

The LTC Pricing Subgroup continued its discussion of issues related to recouping past LTCI losses through rate increases with an analysis of rate increase approval practices among several states, as well as discussion of other potential approaches to recouping past LTCI losses. The end product may be a report that summarizes various approaches for rate increase review and approval.

The AAA's LTC Valuation Work Group reported progress in developing recommendations for mortality and lapse minimum valuation standards. A report is scheduled for completion by the end of 2018. The Academy's Combo Valuation Work Group is conducting a survey of companies' valuation practices. The results of the survey is expected to be available by the end of this year.

International Insurance Relations Committee

The committee met in May to review and finalize the NAIC's comment letter to the IAIS on its revised Insurance Core Principles and other ComFrame consultations. A pervasive concept in the 11 page comment letter submitted to the IAIS is that the proposed guidance is too prescriptive and should be more principles-based, especially in ICP 7 (Corporate Governance), and ICP 8 (Risk Management and Internal Controls).

The committee has scheduled a call August 24 to review and approve submission of NAIC comments on revised ICPs 1 (Objectives, Powers and Responsibilities of the Supervisor), 2 (Supervisor), 18 (Intermediaries) and 19 (Conduct of Business).

The committee's ComFrame Development and Analysis Working Group heard an update on the IAIS Common Framework for the Supervision of Internationally Active Insurance Groups, including the Insurance Capital Standard. Peter Windsor (IAIS Secretariat) gave a presentation covering the recent public consultation on ComFrame material, the July 21 release of ICS version 1.0 for extended field testing, and the issues the IAIS plans to address in ICS version 2.0 scheduled for late 2019.

Financial Stability Task Force

Macro-Prudential Initiative
At the Summer National Meeting, the Financial Stability Task Force heard an overview of the NAIC's Macro-Prudential Initiative framework, which is aimed at strengthening and expanding regulatory tools to assess liquidity and capital strength within the industry. Framed as a continuation of the Solvency Modernization Initiative, MPI focuses on four areas: liquidity, recovery and resolution, capital stress testing, and exposure concentrations. While macro-prudential monitoring is an on-going activity and each activity will be maintained and enhanced in the normal NAIC process, the initial MPI enhancements are anticipated to be a two to three year project.

As part of this Initiative, the task force approved a new Liquidity Assessment Subgroup, which charges are to "review existing public and regulator only data related to liquidity risk, identify any gaps based upon regulatory needs, and propose the universe of companies to which any recommendations may apply (e.g. large life insurers), and construct a liquidity stress testing framework proposal." The project plan includes determination of scope and creation of a liquidity stress testing framework by the 2018 Spring National Meeting, and consideration of potential enhancements or additional disclosures after completion of the stress testing framework by the 2018 Summer National Meeting. It is anticipated that the subgroup members will include regulators and life actuaries, with overlap membership with the Life Actuarial Task Force, Life RBC Working Group and Financial Analysis Working Group.

Reinsurance Task Force

Covered agreement
The Reinsurance Task Force introduced the topic by saying they would discuss "next steps" with respect to the covered agreement, given the July 14, 2017 announcement by the Treasury/USTR that the U.S. will sign the agreement. NAIC staff gave the update and announced that until the covered agreement is actually signed and an advisory opinion is issued, the NAIC will not be holding any formal discussions on how to react to the covered agreement. The task force's staff stated that the NAIC anticipates that the credit for reinsurance models will need to be revised to conform the models to the covered agreement, if that is the direction the NAIC wants to take. However, many different paths could be taken with respect to state insurance laws and the covered agreement, and the NAIC will need to develop consensus as to the best approach. The task force "fully expects" that a great deal of time and discussion will be expended to find the best way forward and noted it took a decade to complete its reinsurance collateral discussion. The chair, Maria Vullo of NY, stated the NAIC's process will be "open and transparent."

Also as a result of the decision of the U.S. to sign the covered agreement, the task force concluded that the Qualified Jurisdiction Working Group should terminate further work on its project to determine the effect of EU implementation of Solvency II on the qualified jurisdiction status of France, Germany, Ireland and the UK.

Legal entity vs group ratings for certified reinsurers
At the Spring National Meeting, the task force exposed for comment proposed changes to the Uniform Application Checklist for Certified Reinsurers to provide guidance on the use of either a stand-alone or group financial strength rating. Based on comment letters received, the task force decided to add protocols for considering a group rating to the checklist versus making a "blanket recommendation." Those include the following considerations:

- The rating agency clearly described within the rating report that the group rating was utilized as a result of sufficient legal entity inter-connectivity through financial and operational activities;
- The rating agency enhancement to a group rating was based on the subsidiary's potential benefit from parental capital support;
- The group rating was utilized because the subsidiary derives benefit from its inclusion within a financially strong and well-capitalized insurance group;
- The lead state has contacted the rating agency and was provided a written explanation for the use of the group rating; and
- Other factors deemed appropriate by the Reinsurance Financial Analysis Working Group.

The task force then adopted the revised Uniform Application Checklist.

Reinsurance Investment Security Subgroup
The charge of this new subgroup is to discuss clarification of an investment security as used in the credit for reinsurance models when considering "regulatory transactions" and whether these assets would qualify as acceptable collateral for reinsurance or as primary securities in XXX/AXXX agreements. Regulatory transactions are defined in the IAO P&P Manual as a "security or other instrument in a transaction submitted to one or more state insurance departments."

The subgroup recommended against specifically identifying new investment products that would qualify as reinsurance collateral; instead the subgroup believes such assets should be evaluated by the commissioner on a case-by-case basis. The subgroup focused on a particular investment product, but cannot share details of the structure publicly. However, there appears to be divergence of views among subgroup members of a structure that involves the issuance of a surplus note by a captive to generate funds to acquire the investment and whether that triggers the investment to be a regulatory transaction.

The subgroup has also drafted referrals to other working groups including a request to the VOS Task Force to provide a clearer definition of "regulatory transaction" and for the SAP Working Group to consider whether subsequent transactions involving surplus notes could influence whether the note is in compliance with the strict provisions of SSAP 41R. The Reinsurance Task Force exposed the subgroup's report for comment until September 8.

Financial Regulation Standards and Accreditation Committee

Revisions to the Model Audit Rule
The committee adopted revisions to the Annual Financial Reporting Model Regulation (#205) as an accreditation standard, effective January 1, 2020. The 2014 revisions to Model #205 include requirements related to the establishment and maintenance of an internal audit function.

Term and Universal Life Insurance Reserve Financing Model Regulation
At its meeting in Philadelphia, the Reinsurance Task Force approved its recommendation of significant elements of this model for accreditation purposes; the F Committee is expected to expose the recommendation for comment shortly.

Consideration deferred
The committee agreed to defer consideration of three models as accreditation standards because of changes that might be necessary in the future as a result of the U.S./EU covered agreement (see the Reinsurance Task Force discussion above). These models are the Corporate Governance Annual Disclosure Model Act (#305) and Model Regulation (#306) and the 2014 revisions to Insurance Holding Company System Regulatory Act (#440). The committee plans to discuss this issue again at the Fall National Meeting.

Risk-Focused Surveillance Working Group

In Philadelphia, the working group heard a presentation from a joint group of interested parties on reducing redundancies in the risk-focused surveillance process. With the implementation of the new risk-focused analysis process effective year-end 2017 (and to address long-standing industry concerns), the working group had adopted a charge to "consider specific regulatory redundancy issues provided by interested parties and provide recommendations to other NAIC committee groups as needed." The initial phase of the project was focused on comparing the new Financial Analysis Handbook (updated for the branded risk classifications) to existing guidance in the Financial Condition Examiners Handbook, including exhibits and repositories. The joint group shared a few examples of possible redundancies identified during the initial phase. As recommended by the joint group, the working group agreed to form a drafting group to develop proposed revisions to the Financial Condition Examiners Handbook.

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The next National Meeting of the NAIC will be held in Honolulu November 30-December 4. (Many working groups will not be meeting there but will instead convene by conference call before or after the National Meeting. The tentative agenda has been posted to the NAIC's' website.)

We welcome your comments regarding issues raised in this newsletter. Please provide your comments or email address changes to your PricewaterhouseCoopers LLP engagement team, or directly to the NAIC Meeting Notes editor at jean.connolly@pwc.com.

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 PwC NAIC Spring Meeting Newsletter on all open agenda items. Items exposed for comment have a September 22 comment deadline except that agenda items #2016-02, #2017-08, #2017-25 and #2017-28 have an October 13 deadline. For full proposals exposed and other documents see the SAP Working Group website.

Issue/ Reference #	Status	Action Taken/Discussion	Proposed Effective Date
Quarterly Reporting of Investment Schedules (#2015-27)	Referred	SAPWG sent a referral to the AFP Task Force in February 2017 to consider a policy change that facilitates collection of a new electronic-only submission of Schedule D investment data, with information detailing CUSIP, par value, book/adjusted carrying value and fair value each June 30. The AFP Task Force adopted the proposal on May 12 in a 19-10 vote. At the Summer National Meeting, the Financial Condition Committee discussed a new proposal for A.M. Best to provide this data directly to the NAIC. After a very lengthy discussion, the committee agreed the proposal is worth pursuing further and directed NAIC staff to continue working with A.M. Best to resolve identified issues. The annual cost of this data to the NAIC plus how it will be funded also need to be determined.	June 30, 2019
Aging and Revenue Recognition of Multi-Peril Crop Policies (#2015-33)	Further analysis necessary*	NAIC staff is to work with interested parties, regulators and key stakeholders to develop recommendations for updating SSAP 78, Multiple Peril Crop Insurance, regarding (1) the use of the billing date for application of the 90-day rule, (2) defining "processing date" or updating the term, (3) providing more specificity on the period of risk for purposes of earning revenue and (4) developing a glossary.	TBD – discussion was scheduled for 2017 but has not yet occurred.
Principle-Based Reserving (#2015-47)	Exposed*	Issue Paper 154 has been exposed to document the substantive revisions to SSAP 51, *Life Contracts*, related to PBR. Note that the revisions to SSAP 51 necessary to implement PBR were adopted in 2016, effective January 1, 2017.	N/A
SSAP 22 – ASU 2016-02 – Leases (#2016-02)	Exposed	A "full re-write" of SSAP 22 was exposed for comment, which adopts ASU 2016-02 with modifications to continue the current approach for statutory accounting in all areas, including operating leases, sale/leaseback and leveraged leases. Since the proposed changes are so pervasive, careful review will be necessary to determine whether there are any unintended revisions.	Years ending December 31, 2019 with early adoption permitted
SSAP 86 – Special Accounting Treatment for Limited Derivatives (#2016-03)	Further analysis of ACLI comments needed	The working group discussed ACLI comments on its April 8 issue paper which have been grouped into five topics. See detailed discussion in the SAPWG summary.	TBD
Policy Statement on Coordination with P&P Manual, SVO and VOSTF (#2016-13)	Re-exposed	This issue proposes a new policy statement in the AP&P Manual to detail the coordination and collaboration between the VOS Task Force and SAPWG and related staff. Although labeled as nonsubstantive, this issue has been somewhat controversial especially with regard to the section entitled NAIC Designations Do Not Communicate Statutory Accounting Status, and significant revisions were made to the section earlier this year. Comments from the VOS Task Force are expected after the Summer National Meeting.	TBD

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Appendix A

ASU 2014-09 - Revenue Recognition (#2016-19)	Exposed*	In 2016, the working group exposed a proposal to reject most of ASU 2014-09 as not applicable to statutory accounting since the ASU explicitly does not apply to insurance contracts. The working group plans to undertake separate projects to consider principle versus agent considerations. The working group may take up the project again later this year.	TBD
ASU 2016-13 - Credit Losses (#2016-20)	Re-exposed	The working group heard an update related to discussions by the Credit Losses' Transition Resource Group and industry's view that discussions by SAPWG should resume sooner rather than later. One relevant issue identified by the TRG is that reinsurance recoverables are within the scope of the ASU, but there is no specific transition guidance for these receivables.	TBD
SSAP 37 – Mortgage Loans with Multiple Lenders (#2016-39)	Adopted	The working group adopted, with minor revisions suggested by interested parties, proposed revisions to SSAP 37 to clarify that a reporting entity that provides a mortgage loan as a "participant in a mortgage loan agreement" would consider the mortgage loan in the scope of SSAP 37. The revisions include a footnote of two detailed examples of agreements intended to be accounted for as mortgage loans.	June 8, 2017
SSAP 43R – Definition of LBASS (#2016-40)	Adopted	The working group finalized disposal of proposed recommendations from the VOS Task Force without making any revisions to SSAP 43R; this rejection was supported by industry.	N/A
SSAP 26 – AVR and IMR (#2016-41)	Adopted	The working group adopted revisions to SSAP 26 to resolve conflicts between the SSAP and the annual statement instructions. The new guidance states that "other-than-temporary impairment losses shall be recorded entirely to either AVR or IMR (and not bifurcated between credit and non-credit components) in accordance with the annual statement instructions."	August 6, 2017
Appendix C Introduction (#2016-42)	Deferred*	The working group had previously exposed revisions to Appendix C – Actuarial Guidelines in the AP&P Manual to promote consistent application of the Actuarial Guidelines which highlights that insurers which depart from actuarial guidelines should disclose those differences. In comments from interested parties, they suggest that disclosure not be required when insurers hold reserves in excess of the required minimums. The working group asked NAIC staff to work with interested parties to refine the wording of the proposed guidance. Discussion may resume later this year.	TBD
SSAP 101 - ASU 201 2016-16: Intra-Entity Transfers of Assets Other than Inventory (#2016-45)	Adopted	At the request of interested parties, the working group agreed to reject ASU 2016-16 since SSAP 101 already provides clear guidance on intra-entity transactions.	June 8, 2017
SSAP 86 – Derivatives with Future Settled Premiums (#2016-48)	Re-exposed	The working group exposed proposed disclosures to capture information on financing premiums in derivative contracts, for each derivative contract and in the aggregate, which could result in voluminous disclosure. Interested parties submitted a pro forma Schedule DB to provide this information but that cannot be implemented until 2018 at the earliest. The working group asked for information as to how the financing cost (if reported as a fair value change) would be separately identifiable from fair value fluctuations driven by market changes.	Year-end 2017 for the proposed disclosures in narrative format.

Appendix A

SSAP 69 – ASU 2016-18: Statement of Cash Flows – Restricted Cash (#2017-02)	Adopted	SAPWG adopted revisions to SSAP 69 to incorporate this ASU, which goal is to reduce diversity in the classification and presentation of changes in restricted cash. The working group agreed with interested parties not to develop a specific statutory definition of "restricted cash and cash equivalents."	December 31, 2019, applied retrospectively, allowing for comparative cash flow statements. Early adoption is permitted.
Appendix D – 2017-06: Plan Accounting – Master Trust Reporting (#2017-03)	Exposed*	SAPWG proposed rejection as the guidance is not applicable to insurance entities.	TBD
SSAP 86 – Settlement of Variation Margin (#2017-04)	Re-exposed	The working group re-exposed for comment proposed revisions to SSAP 86 that would require changes to variation margin to be recognized as unrealized gains/losses until the derivative contract has matured, been terminated or expires. This revision would apply to both over-the-counter derivatives and exchange traded futures, regardless of whether the counterparty/exchange considers the variation margin payment to be collateral or a legal settlement. Interested parties would like the revisions to be adopted as soon as possible to allow companies to make any necessary programming changes. The proposed guidance does not address whether the collateral changes should be shown gross or net on the balance sheet.	January 1, 2018, on a prospective basis, for entities that previously classified these amounts as realized gains/losses.
SSAP 104R & SSAP 12 – ASU 2016-09: Improvements to Employee Share-Based Payment Accounting (#2017-05)	Re-exposed	This ASU is part of the FASB simplification project and would revise share-based payment accounting in six areas including income taxes and cash flows. The working group re-exposed proposed adoption of this ASU with revisions to SSAP 104R suggested by interested parties and also proposed revisions to SSAP 12 related to income tax accounting for ESOPs. Early adoption is being permitted to allow GAAP filers who are already classifying items as equity (instead of a liability) as a result of the minimum statutory tax withholding change.	December 31, 2017 with early adoption permitted.
Appendix D – ASU 2017-02: Not for Profits (#2017-06)	Adopted	SAPWG adopted rejection of this guidance as not applicable to insurance entities.	June 8, 2017
Appendix D – ASU 2017-03: Amendments to SEC guidance (#2017-07)	Adopted	SAPWG adopted rejection of this guidance as not applicable to insurance entities.	June 8, 2017
SSAP 97 – Extension of SCA Filing Deadlines (#2017-08)	Re-exposed	After consideration of comments from interested parties, the working group agreed to revise the proposal to require deadlines for Sub 1 filings (from 30 days to 90 days from acquisition) and Sub 2 filings (from June 30 to August 31). For companies that receive SCA audited financial statements after August 31, the deadline would be one month after the audit date of the financial statements.	TBD

Appendix A

Appendix A-010 – 2016 Cancer Claim Cost Valuation Table (#2017-09)	Adopted	The adopted guidance incorporates the 2016 Cancer Claim Cost Valuation Tables into Appendix A—010, Minimum Reserve Standards for Individual and Group Health Insurance Contracts.	January 1, 2019 with early adoption permitted for contracts issued on or after January 1, 2018
SSAP 26 – Bank Loans (#2017-10)	Re-exposed	The working group exposed for comment a proposed revised definition from industry for bank loans: fixed income instruments "issued directly by a reporting entity or acquired through a participation, syndication or assignment." Additional discussion of this topic is included in the SAPWG summary.	TBD
SSAP 65 – High Deductible Policies (#2017-11)	Adopted	Significantly expanded disclosures were adopted for high-deductible policies to require additional information on collateral and unsecured and overdue amounts by line of business. See the page 2 for detail of the new disclosures.	December 31, 2017
SSAP 41 – Surplus Note Amortization and Accretion (#2017-12)	Re-exposed	After significant debate this summer, the working group exposed revisions to SSAP 41 to require that the net balance of a surplus note issued at a discount or zero coupon can never be greater than the amount of cash and liquid admitted assets received. See further discussion on page 3.	TBD
SSAP 26 – ASU 2017-08 – Premium Amortization on Purchased Callable Debt Securities (#2017-13)	Adopted	SAPWG adopted a proposal to reject ASU 2017-08 and retain the statutory accounting provisions of "yield-to-worse" for callable debt securities. The working group noted that the ASU moves GAAP closer to statutory accounting, but the regulators and interested parties agreed that there is no need to revise current SAP (which has been recently revised for callable bonds).	August 6, 2017
SSAP 92 & 102 - ASU 2017-07, Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost (#2017-14)	Exposed	SAPWG has proposed rejection of this ASU because SSAP 92 and SSAP 102 currently require disaggregation of pension and OPEB costs for disclosure purposes. As a result, the working group concluded it is not necessary to capture the information separately within the income statement as required by the ASU.	Year-end 2017
SSAP 30 & 97 - ASU 2013-08, Financial Services – Investment Companies (#2017-15)	Exposed	The working group proposed rejection of this ASU as not applicable to statutory accounting, as the guidance is specific to investments held by investment companies.	Year-end 2017
SSAP 104R – ASU 2017-09, Stock Compensation – (#2017-16)	Exposed	The working group exposed amendments to SSAP 104R to adopt this ASU, which provides guidance on what type of revisions to the terms and conditions of share-based payment plans trigger modification accounting.	December 31, 2017 with early adopted permitted

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SSAP 22 - ASU 2017-10, Determining the Customer of the Operation Services (#2017-17)	Exposed	A revision to SSAP 22 is proposed to adopt ASU 2017-10 (with modification) to clarify who is the customer of service concession arrangements. The revisions do not propose adoption of the guidance related to revenue recognition of the service concession contracts.	Year-end 2017
SSAP 68 & 97 – Goodwill Limitation (#2017-18)	Exposed	As a result of analysis done by NAIC staff of SCA filings, the working group is considering further limitations to the admitted amount of goodwill; see the SAPWG summary for additional detail.	TBD
SSAP 68 & 90 - Intangible ASUs (#2017-19)	Exposed	The working group reviewed five ASU on goodwill issued the past seven years by the FASB (ASUs 2010-28, 2011-08, 2012-02, 2014-02 and 2017-04) and proposed rejecting all five. Also included in the exposure is addition of the impairment guidance for long-lived assets in SSAP 90 to SSAP 68 for goodwill impairment assessment.	Year-end 2017
SSAP 97 – Foreign Entity Clarification (#2017-20)	Exposed	The working group exposed a nonsubstantive amendment to SSAP 97 to clarify that the paragraph 9 limited GAAP to SAP adjustments apply to both audited GAAP basis and audited foreign GAAP basis financial statements.	Year-end 2017
SSAPs 41R and 97– Double Counting of Surplus Notes (#2017-21)	Exposed	SSAP 41R and 97 revisions are proposed to prohibit "double counting" of all surplus notes; current guidance discusses surplus notes from an insurance SCA to its parent. This proposal extends that guidance for all parent to SCA insurer surplus notes.	Year-end 2017
SSAP 43R – Removal of Implementation Guidance (#2017-22)	Exposed	The working group exposed extensive revisions to remove transition guidance from the SSAP43R implementation guide and also remove issues which have been subsequently addressed or revised in the SSAP.	Year-end 2017
SSAP 103R –Wash Sales Involving Money Market Mutual Funds (#2017-23)	Exposed	The working group exposed for comment proposed amendments to SSAP 103R to clarify that acquisitions and disposals of shares in money market mutual funds are not subject to wash sale disclosures. They are also asking regulators and interested parties whether all short term investment and cash equivalents should be exempted from disclosure and whether wash sale disclosures for other investments should be expanded to include NAIC 1 and 2 securities.	Year-end 2017
SSAP 100 - Use of Net Asset Value versus Fair Value (#2017-24)	Exposed	The working group agreed to consider whether insurance entities should be permitted to utilize NAV as a practical expedient for fair value in a manner consistent with U.S. GAAP, and/or when specifically identifiable within an SSAP. The proposed changes are extensive and would likely also affect annual statement disclosures and schedules.	TBD

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Appendix A

SSAP 26R – Wholly-Owned Ultra-short Bond Portfolio in an LLC Series (#2017-25)	Exposed	The working group exposed three alternatives in response to an issue submitted by an investment management firm which requested "look through" accounting to SSAP 26R for an LLC investment. Reclassification to SSAP 26R would likely result in a lower RBC charge for non-life insurers so input from the Capital Adequacy Task Force may be sought, depending on feedback from interested parties and regulators.	TBD
SSAP 107 – High-Cost Risk Pooling in ACA Risk Adjustment (#2017-26)	Exposed	The working group exposed for comment proposed changes to SSAP 107 to provide guidance on implementation of the December 2016 HHS regulation that revises how the ACA risk adjustment will function starting in 2018. See page 4 for additional discussion.	January 1, 2018
Issue Paper 143 – Long Term Care Assessments (#2017-27)	Exposed	SAPWG exposed for comment proposed revisions to Issue Paper 143, Guaranty Fund Assessments, which documents the basis for conclusion for revisions related to long-term care guaranty fund assessments.	N/A
SSAP 61R – Reinsurance Risk Transfer for Short Duration (#2017-28)	Exposed	The working group exposed the Form A discussion paper for comment which contemplates revisions to SSAP 61R, SSAP 62R and Appendix A-791. See additional discussion in the SAPWG summary.	TBD
Model 280 – Investments of Insurers Model Act	Adopted	The NAIC adopted revisions to the model act to remove references to Class 1 Money Market Mutual Funds since that concept no longer exists. Revisions were also adopted to correct the definitions for repurchase and reverse repurchase transactions.	August 9, 2017
*No additional action was taken on this topic/issue since the 2017 Spring National Meeting.			

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Appendix B

This chart summarizes other proposals of the RBC Working Groups since the 2017 Spring National Meeting, i.e. those not discussed on pages 4-5 of this Newsletter. The detail of all proposals adopted for 2017 RBC are posted to the Capital Adequacy Task Force's webpage (under Related Documents).

RBC Formulas	Action taken/discussion	Effective Date/ Proposed Effective Date
Money Market Mutual Funds (2017-06-CA)	The Capital Adequacy Task Force adopted revisions to all RBC formulas to change the MMMF factor to zero on the common stock page to prevent double counting for these assets, which are now considered cash equivalents and will receive no RBC charge for 2017 and later (per 2016-15-CA adopted in April).	2017
P/C RBC		
Underwriting Risk Line 4 Factors (2016-14-P)	The Capital Adequacy Task Force adopted a proposal for premium risk factors and reserve risk factors developed by AAA using a new methodology for use in Line 4 of PR016 and PR017. The factors were computed on a gross catastrophe basis, and the increase to the 2016 factors was capped at 10%. It is not expected to take 10 years to reach the AAA recommended factors.	2017
Underwriting Risk Line 1 Factors (2017-05-P)	The Capital Adequacy Task Force adopted the proposal that provides the routine annual update of the industry underwriting factors (premium and reserve) in the formula within PR017 and PR018.	2017
Rcat Calculation Methodology (2017-04-CR)	The Catastrophe Risk Subgroup rejected its previously exposed proposal to clarify the methodology that companies should use to calculate the catastrophe risk charges as a result of comments from industry that the proposal appeared to be reinstating the aggregate exceedance probability methodology. The subgroup had previously concluded the formula should allow flexibility for companies with regard to exceedance probability curve sorting.	N/A
Life RBC		
RBC Shortfall Instructional Changes (2017-02-L)	The Capital Adequacy Task Force adopted the primary security shortfall instruction change proposal, which makes changes needed due to the adoption of the NAIC Term and Universal Life Insurance Reserve Financing Model Regulation.	2017
Health RBC		
Medicaid Pass-Through Payments (2017-08-H), previously (**2015-27-H**)	The Health RBC Working Group agreed to refer the proposal to the Capital Adequacy Task Force for consideration for the life and P/C RBC formulas and for further exposure.	2018

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