SOCIETY OF ACTUARIES Financial Reporting Section

The Financial Reporter

ISSUE 93 JUNE 2013

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EXECUTIVE SUMMARY

Recent revisions to Actuarial Guideline 38 (AG38) have focused on the way companies have structured their universal life no-lapse guarantee provisions to minimize potential premium deficiency reserves. In particular, the calculation to derive the minimum premiums from which potential deficiencies may arise have been redesigned to take into account multiple charge structures and premium payment patterns, and requires the actuary to select the charge structure or premium pattern that would tend to maximize premium deficiency reserves. For companies that wish to continue to offer strong secondary guarantee protection on their products, it will be difficult to avoid holding premium deficiency reserves.

This paper tests the AG38 revisions against a product designed with a dual shadow fund charge structure, and finds that reserve increases occur in line with the strength of the no-lapse guarantee coverage relative to the margins built into the valuation mortality, lapse, and interest assumptions.

Until such time that the interim solution offered under Section 8E of AG38 is replaced by a principle-based approach, potential reserve redundancies for strong secondary guarantee coverage might be managed by developing more robust "X factors" consistent with experience.

BACKGROUND

In September 2012, the National Association of Insurance Commissioners (NAIC) adopted certain revisions to AG38 that applied retroactively to the valuation of universal life with secondary guarantees in Section 8D, and revised the valuation methodology for post-2012 issues in Section 8E.

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The **Financial** Reporter
ISSUE 93 JUNE 2013

Published by the Financial Reporting Section Council of the Society of Actuaries

This newsletter is free to section members. Current issues are available on the SOA website (www.soa.org).To join the section, SOA members and non-members can locate a membership form on the Financial Reporting Section Web page at www.soa.org/fr.

Keep Moving and Live

By Matthew Clark

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When people ask me about why I volunteer at the Society of Actuaries (SOA), I am quick to point out the opportunity we all have to impact the profession and the industry. I am fortunate to have found a profession that aligns with my skill set. As the profession evolves, I find myself to be an eternal student. I like to make the shark reference …"if I stop moving, I will die."

I have made reference to the investments that the SOA and more specifically the Financial Reporting section continue to make. It is exciting to see the insight and value brought to the actuarial profession. The technology, methodologies, techniques and product evolution are difficult to keep up with at times.

The Financial Reporting section just finished identifying the session topics for the annual meeting. I don't want to get ahead of the planning committee, so I will not release the sessions at this time. What I do want to share is the excitement and passion the council brought to the process. We are aware that the members of the SOA and the section are excited about the continued regulatory developments. We are also aware that the members are tired of seeing the same updates repeated as the regulatory process takes time to evolve. We challenged ourselves to bring a new level of excitement and creativity to the sessions this year. In short, we thank you for your feedback on the annual survey. We hear you and have responded.

Next, I ask you to continue to share your research ideas. We are continuously identifying and funding projects at the SOA. We consider all suggestions and make every effort to align the research focus to the interest of the members. As we see the regulatory, risk, and product development activities aligning, there has been an increased opportunity to align efforts and resources across sections. Please consider sharing your ideas. Additionally, please consider dedicating your time to the research process.

I have mentioned the introduction of the podcasts in the past. I only ask that you please read the article included in this issue and experience the podcasts. The section is interested to hear if you like the podcasts and any suggestions you have for future podcasts. We are excited to explore this medium to serve the industry.

I want to provide insight into the most exciting development at the Financial Reporting Section. If you are like me, you have your copy of the US GAAP book sitting on your desk. It likely has pages that are highlighted, corners folded over, or pages tagged. This has been the "go-to" reference for the life insurance industry. How many of you knew that the Financial Reporting Section funded and supported the production of that book? Now for the exciting news: a new edition of the book is going to be authored. This next edition will focus on emerging regulatory guidance. Of course, we need to wait for that guidance to be finalized before the authors can begin. While this journey has just begun, I am very excited for the profession. I have reserved a spot on my desk for the next edition.

Finally, we have another great issue of *The Financial Reporter* to share with you. I thank all of the authors and the team that makes this publication possible. I encourage all of you to consider contributing to future issues. ■

These revisions arose from regulatory concerns over the use of no-lapse guarantee charge structures that minimized deficiency reserves by reflecting higher minimum no-lapse premiums in the valuation process. Such premiums reflected in the valuation were higher than those that might otherwise keep the no-lapse protection in force under a more typical policyholder premium payment pattern.

One example of this practice was to design a contract where the cost of insurance (COI) charges were significantly higher when the no-lapse guarantee fund is at or near zero. In such a case, the minimum premiums solved for to keep the secondary guarantee in force (per Step 1 of AG38) would be higher to reflect the higher charge structure. Larger minimum premiums work to minimize deficiency reserves, because they are compared to XXX net premiums derived in Step 2 of AG38 for this purpose.

For policies issued from July 1, 2005, to Dec. 31, 2012, Section 8D of the revised AG38 Guideline applies a reserve floor derived from a modification of the deterministic component of VM-20, which is a gross premium reserve utilizing prudent estimate assumptions along with certain specified assumptions. Because the level of the deterministic reserve floor applied retroactively to in-force policies is subject to company-specific experience and assumptions, this paper will not examine the impact of Section 8D of AG38. Note that in a Milliman survey on this topic, the majority of respondents indicated less than 1 percent or no additional reserves were required when applying the primary reserve methodology of Section 8D to their in-force block.

For policies issued on and after Jan. 1, 2013, the revised guideline (per Section 8E) continues the formulaic approach under AG38 while modifying the process for minimum premium determination, either using the charge structure that minimizes the schedule of premiums (Method I), or assuming a premium pattern that maximizes initial deficiency reserves (Method II). Furthermore, guaranteed policy credits (such as interest on the no-lapse shadow fund) for business subject to Section 8E requirements are restricted to a Moody's bond yield index plus 3 percent.

This article examines the impact on the reserves for a universal life secondary guarantee (ULSG) policy design with a multiple charge structure under the pre-2013 valuation of Section 8C relative to the requirements specified for 2013 and later business under Section 8E.

VALUATION METHODOLOGY

This valuation pertains to a block of new business issued throughout 2013. The block was constructed based on in-force distribution characteristics and insurance amounts from the last several years of sales of an actual ULSG portfolio. This valuation examines the results under both the original requirements of Section 8C of AG38 and the Section 8E Method I requirements.

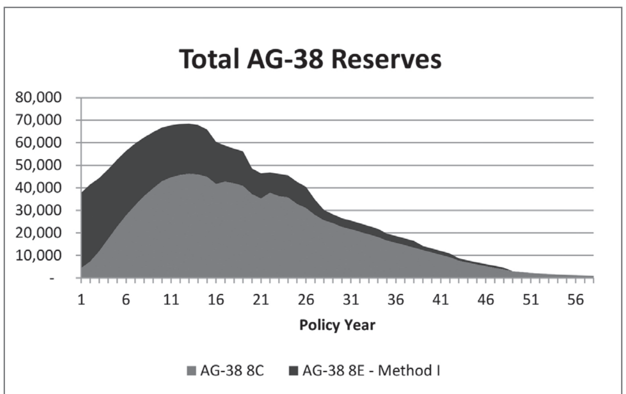
Provided in this study is also a detailed look into the impact on a single policy (male, age 45, nonsmoker). This includes a comparison of XXX net premiums relative to Step 1 minimum premiums, in order to illustrate how deficiency reserves may develop in the valuation process. The results are also sensitivity tested assuming an increase in no-lapse guarantee COIs to demonstrate the impact on projected deficiency reserves.

All policies assume no-lapse guarantee availability to age 121, with a combination of loads, COI charges, and interest spreads set appropriate to satisfy pricing requirements prior to the recent valuation changes. In other words, the ULSG test plan used in this research work is one possible example of a design that exists in the market and is impacted by the AG38 revisions.

VALUATION RESULTS FOR A YEAR OF NEW BUSINESS

The reserve values shown in the table in Figure 1 use the AG38 approaches for Sections 8C and 8E, for a block of ULSG policies issued throughout one policy year. All projection assumptions are based on best estimate pricing lapses, mortality, and premium payment patterns (payment of level target premiums is assumed). All policies are subject to a no-lapse guarantee to age 121. All valuation results use the 2001 CSO ANB S&U table with 3.5 percent interest. For clarity, no UL model regulation or cash value floor is applied to the reserve results shown.

Figure 1



The increase in reserves shown in Figure 1 is directly related to the following paragraph in Section 8E of AG38 for policy design #3:[1]

> *If, for any policy year, a shadow account secondary guarantee, a cumulative premium secondary guarantee design, or other secondary guarantee design, provides for multiple sets of charges and/or credits, then the minimum gross premiums shall be determined by applying the set of charges and credits in that policy year that produces the lowest premiums, ignoring the constraint that such minimum premiums satisfy the secondary guarantee requirement and ignoring any contingencies or conditions that would otherwise limit the application of those charges and credits.*

> The increase in reserves … in Figure 1 is directly related to … Section 8E of AG38. …

There are two sets of COI charges for this product: a lower set that applies when the shadow fund balance is greater than zero, and a higher set that applies when the balance is zero. The directive for policy design #3 specifies the use of the lower set of charges in solving for the minimum gross premium in Step 1, despite the fact that this contradicts the charges outlined in the policy form that would apply during the \$0-to-\$0 minimum premium solve process.

RESULT ANALYSIS

The graph in Figure 1 shows the excess reserve as the darker area, which is generated per Method I of Section 8E, and is a premium deficiency reserve representing the difference between the XXX net premium underlying the Section 7 Model 830 reserves,[2] and the premium net of loads and charges that will minimally fund the shadow account.

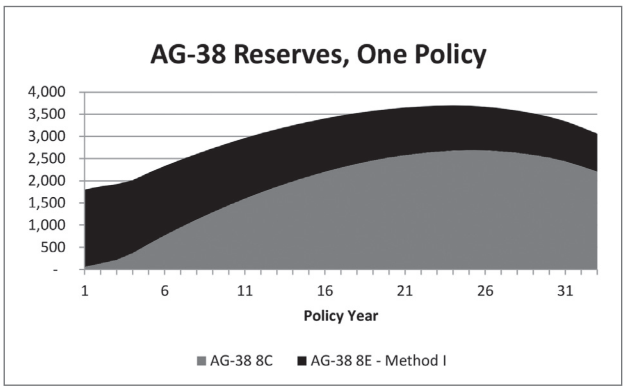
Note that the Section 7 net premium determined in Step 2 of AG38 includes an allowance for lapses. These rates are strictly defined by issue age and policy duration, and the Figure 1 results reflect this allowance. In order to reduce the deficiency reserve reflected above further, valuation mortality must be reduced by way of X factors that are supported by actuarial opinion, or the minimum premium requirements for the shadow fund

CONTINUED ON **PAGE 6**

must be increased by weakening the secondary guarantee protection (i.e., increasing shadow fund loads or charges, reducing credited interest rates, etc.).

This is illustrated more clearly by limiting the analysis to a single policy. The graph in Figure 2 compares both AG38 Section 8C and 8E statutory reserves for a male, age 45, nonsmoker.

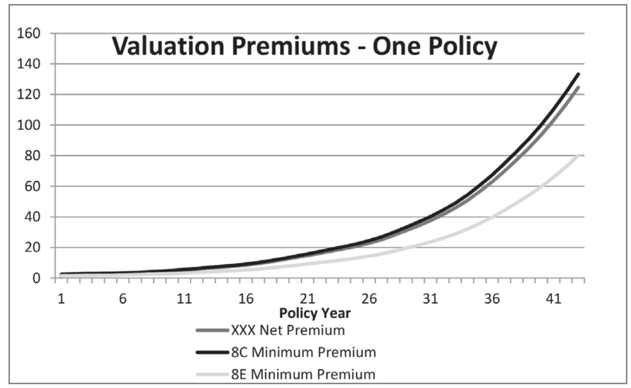
Figure 2



Using the original Section 8C valuation methodology, Step 1 minimum premiums are solved for using the higher set of charges and, as a result, no premium deficiency reserves develop. In applying Section 8E methodology, however, a lower set of set charges is used to solve for the minimum premium requirements. The resulting minimum premiums are lower than the equivalent XXX net premiums using the select and ultimate 2001 CSO table. It is this premium disparity from which the reserve deficiencies of Figure 2 emerge. All three premium paths are illustrated in the graph in Figure 3.

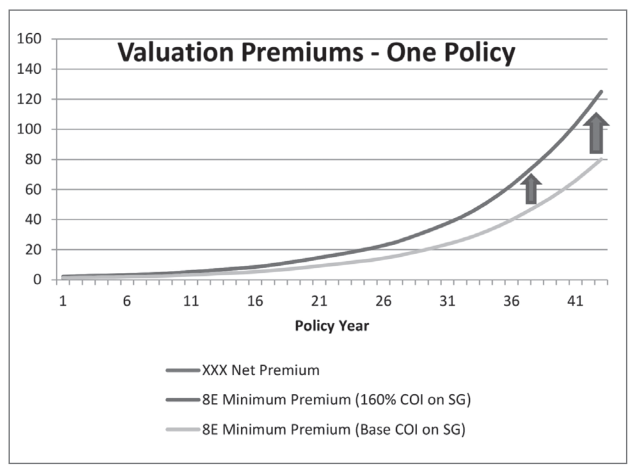
... to reduce the deficiency reserve ... valuation mortality must be reduced ... or the minimum premium requirements ... increased by weakening the secondary guarantee protection

Figure 3



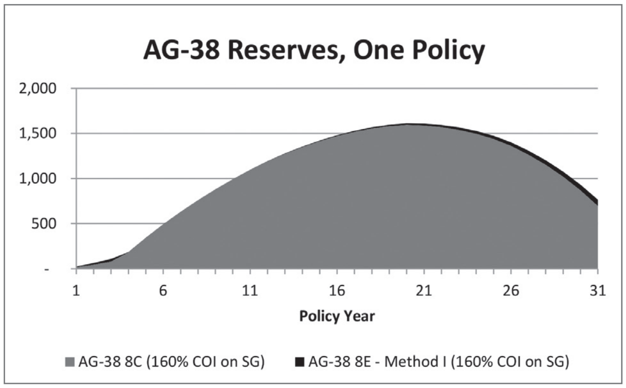
A weakening of the secondary guarantee coverage can be reflected by multiplying the no-lapse guarantee cost of insurance by 160 percent. This places the solved-for Step 1 minimum premiums at or very near the underlying XXX net premiums, as reflected in the graph in Figure 4.

Figure 4



Note in particular that the dark line for XXX net premiums in Figure 4 underlies the revised minimum premium, and the two are materially equal. The graph in Figure 5 reflects the revised reserves using 160 percent of COIs for both the Sections 8C and 8E Method I calculations.

Figure 5



By increasing the COIs, the Section 8E Method I approach produces no material AXXX reserve deficiencies, by way of equalizing the XXX net premium with the Step 1 minimum premium. Note that we have not revised the premiums deposited, and therefore the lower overall reserves shown in figure 5 relative to figure 2 are explained by the lower funding ratios that now apply to both Sections 8C and 8E AXXX calculation approaches.

The intent of this demonstration is not to advocate weakening of secondary coverage to lower both reserves and reserve deficiencies, but to illustrate that anticipated deficiencies in moving to Section 8E Method I are related directly to margins in the valuation mortality and lapses that are in excess of the shadow fund premium requirements baked into policy design. Until such time that the interim solution offered under Section 8E of AG38 is replaced by a principle-based approach, companies that choose to continue offering strong lifetime ULSG protection might consider developing more robust X factors in line with experience that could potentially lower valuation redundancies reflected through the deficiency component of reserves.

I did not explore Method II calculations in this article. If the actuary is not comfortable with making the required attestation for Method I, then Method II would apply. It seems clear that the premium pattern tests required under Method II to maximize deficiencies provide no incentive over Method I to reduce reserve redundancies, and that margins in the valuation assumptions in excess of the secondary guarantee funding requirements will still act to create reserve deficiencies.

I close by mentioning that the NAIC Emerging Actuarial Issues Working Group has been responding to questions by the industry regarding Sections 8D and 8E of AG38, and that further information on such issues can be found at the working group's website at: ***http://www.naic.org/committees_e_emerging_actuarial_issues_wg.htm.*** ■

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END NOTES

1 There are three policy design options identified under Method I of AG38. ULSG products utilizing a single set of charges and credits are generally indicated as falling under either policy design #1 (for shadow account designs) or policy #2 (for accumulated premium designs). I specifically focus on policy design #3 for the purpose of this presentation as the impact of the AG38 revision is most clearly demonstrated for such products.

2 Model 830 is the Valuation of Life Insurance Model Regulation, and Section 7 specifies minimum valuation standards for universal life policies with secondary guarantees.

A Logical Hole in AG33 for Annuity Statutory Reserve Calculations

By John Blocher

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A series of commercials asks people whether they want more cash. Apparently, everyone does except for an amazingly literate baby who doesn't. It might be surprising to actuaries that Actuarial Guideline 33 (AG33) as currently written actually doesn't assume for statutory reserve calculation purposes that the contract owner will want the highest present value (PV) in a meaningful situation.

AG33 requires each benefit available under an annuity contract to be individually categorized as a non-elective benefit or an elective benefit. While these categories are defined in AG33, here is a practical view: 1) For non-elective benefits, someone is pushing the contract owner through a door because they have died or some other incident occurred to them that is beyond their control; 2) For elective benefits, the perfectly informed contract owner is always calculating the PV and waiting for the optimal moment to use the benefit. Non-elective benefits are assumed to always be taken after the appropriate incidence has occurred and are assumed to never be compared to elective benefits; therefore, the PV of a non-elective benefit may be greater than, equal to, or less than the elective benefit that has the maximum PV.

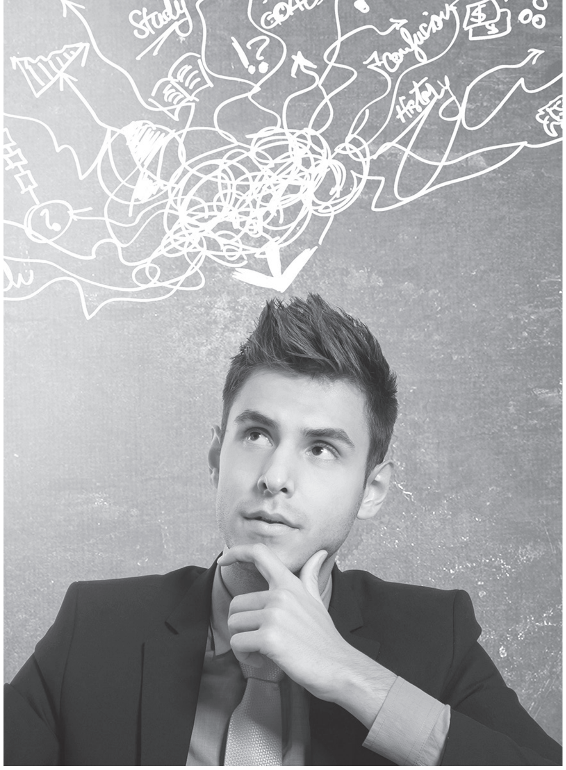
The reserve calculation worked well prior to annuity contracts that include guaranteed death benefits in excess of account values or guaranteed living benefits applying proceeds in excess of account values. AG33 was edited in 2009 to specify the valuation plan type to use after a guaranteed lifetime income benefit (GLIB) is elected both before and after the account value is depleted. However, no edit was made at that time as to whether it is still appropriate to continue to use all the non-elective benefit incidence rates in the reserve calculation after the account value is depleted.

After the account value is zero and the contract is still in force, it is not likely that the contract owner will make any kind of waiver of surrender charge claim (called "non-elective, non-mortality waiver benefits"), whether for nursing home confinement, terminal illness, unemployment, or anything else where the incidence does not automatically end the guaranteed living or death benefits. Why? The contract owner would be turning off future available guaranteed living or death benefits in exchange for nothing. It is difficult to imagine anyone will do this. What actually turns off any guaranteed living or death benefits is whatever is specified in the rider as terminating them. Usually, for a single life contract, it is death of the annuitant; and for a joint life contract, it is death of the second annuitant. Those deaths have to be reported or it is fraud; however, other non-elective incidences may not always be reported.

A contract owner might also stop making non-elective, non-mortality waiver benefit claims well before the account value is zero. For example, if an account value is $18,000 and annual life-contingent payments are $5,000, the contract owner will carefully consider whether collecting $18,000 now instead of later (assuming account value is also paid on death) is worth giving up $5,000 annual payments that continue for life, even after a non-elective incidence has occurred and mortality has significantly increased. Yet current AG33 assumes the contract owner will always take the account value even when GLIB annual payments that continue for life may have a substantially higher PV. A similar concept applies with any guaranteed death benefits in excess of account value.

Several alternative approaches could be used to correct this problem:

A. On a non-elective incidence basis, compare the non-elective, non-mortality waiver benefit to the elective benefit with the highest PV and use the higher PV of the two choices; otherwise ignore the incidence (ignoring the non-elective, non-mortality waiver benefit can only increase the reserve).
B. Ignore non-elective, non-mortality waiver benefit incidence rates entirely (position for companies electing to not use non-elective, non-mortality waiver benefit incidence rates



knowing their use decreases reserves in aggregate).

C. Turn off non-elective, non-mortality waiver benefit incidence rates when the initial surrender charge period ends (the "cutoff" method).

D. Use another reasonable approach to turn off non-elective, non-mortality waiver benefit incidence rates at a duration when the contract still has significant account value remaining.

E. Turn off non-elective, non-mortality waiver benefit incidence rates when the account value is zero.

There are arguments for each of these positions. It is clear the actuary should not use non-elective, non-mortality waiver benefit incidence rates after the account value is zero. It is best operationally if there is one set of rules that applies whether or not guaranteed death benefits or guaranteed living benefits are present. Approach A is the only one involving picking the highest overall PV, while approaches B, C, D and E each turn off non-mortality, waiver non-elective benefit incidence rates in the reserve calculation at a point varying by the chosen approach when account value is greater than or equal to zero.

Approach C is closest to the traditional view of non-elective, non-mortality waiver incidence rates. Several published sample calculations have used the "cutoff" method, though not describing it precisely in that fashion. "Initial surrender charge period" means the surrender charge period in effect when the contract is originally issued, even if the contract has rolling surrender charges based on premium duration instead of contract duration or renews with an additional surrender charge schedule after some number of contract durations.

There are also Actuarial Guideline 43 (AG43) implications. Contract owners would not be expected to voluntarily lapse after the account value is zero even if the standard scenario as currently written allows a 2 percent lapse. A revision process for AG43 is ongoing that appears likely to, at a minimum, set lapse rates to 0 percent when the account value is depleted. In stochastic models, it should be assumed that, after the account value is depleted, contract owners will not make non-elective, non-mortality waiver benefit claims.

There may be implications for policy form filings. Specifying a benefit expiration point removes any potential inconsistency as to when to use non-elective incidence rates even without any AG33 edits; however, expiry may appear to be less consumer-friendly from a marketing perspective.

For AG33 itself, the industry may want to consider a revision specifying much more closely when non-elective benefit incidence rates are allowed. Emerging principle-based reserve standards will also need to appropriately consider this situation. In the meantime, actuaries may want to review their annuity statutory reserve calculation implementations, and carefully consider whether any contract owner would ever voluntarily call an insurance company to stop sending them contractually guaranteed payments in exchange for nothing.

The views expressed herein are those of the author and do not necessarily reflect the views of Security Benefit. ■

Are You Ready for the New Accounting Rules?

By Jim Milholland

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It looks like it's really going to happen. The International Accounting Standards Board (IASB) has completed its discussions of the new accounting standard and expects to issue an exposure draft in the second quarter of 2013. This puts the standard on track for an effective date possibly as early as 2017. A more likely date is 2018, as the boards will probably deliberate on the comments to the exposure draft until late in 2014 and then allow three years for implementation. The Financial Accounting Standards Board (FASB) has a similar timetable for the adoption of a standard for the United States. Despite the fact that the proposals of the boards have some significant differences, and notwithstanding the possibility of changes to the proposals as a result of comments made on the exposure drafts, the essential elements of the proposals are fairly well set. It's not too early to start sizing up the challenges and assessing readiness.

THE ESSENTIAL ELEMENTS

What follows is a highly summarized description of the proposals. It provides only the points most relevant to determining the resource requirements.

For life insurers, the liabilities for most contracts other than group contracts will be measured by the building blocks. The first block is a projection of expected future cash flows. "Expected cash flows" are meant to be mean values. Estimating mean values may require multi-scenario or even stochastic projections.

Building block two is the time value of money. This is the effect of discounting the expected cash flows. As the proposals stand, there will be two discount rates. One rate (more properly, yield curve) is the basis for determining the expense for the period of the interest credited to the liability. A market-based discount rate is selected at inception of the contract and fixed for the life of the contract. The unwind of this rate is the interest expense for the period. The other rate is for the current value, using a rate that is consistent with observable rates at the time of the valuation. This measurement of liabilities using current rates is the amount that is presented on the balance sheet. The difference between the measurement under the fixed basis and under the current basis will be a component of other comprehensive income. This treatment is analogous to the available for sale treatment of financial instruments and in fact is intended to provide for treatment of insurance liabilities that is consistent with that of supporting investments. There may in fact be more than two discount rates for insurers using International Financial Reporting Standards (IFRS), if the IASB persists in its thinking that cash flows for participating contracts should be separated into those that are dependent on investment results and those that are not, with different discount rates for the two sets of cash flows.

The third block, which is applicable to IASB IFRS only, is the adjustment for risk. This is the amount that the insurer requires for bearing the risk that the actual cash flows will exceed the projected cash flows. This number is remeasured at each valuation.

The final piece is the residual margin (IASB) or single margin (FASB). This is the amount that is needed to be added to the liability at inception to prevent a profit at issue. It is amortized into income according to the guidance provided by the IASB and FASB; i.e., in relation to services provided and in relation to release from risk, respectively.

In addition to measuring the liability, the insurer must disclose the movement in the liability. This required disclosure displays how the liability progresses with premium income, interest credited and amounts distributed such as claims, surrenders and expenses.

The current proposals also call for a presentation in the statement of comprehensive income that is called the earned premium approach. Under this approach, revenue is the sum of amounts released from margins, the change in the adjustment for risk (under IASB IFRS), and the release from the liability of the amounts intended to provide for claims and expenses in the current period. The presentation is intended to allow a comparison of amounts that provide for claims and expenses to the amounts actually incurred, and a comparison of investment income to the interest credited, so that the drivers of profit are apparent in the income statement.

THE CRITICAL PATH—ACTUARIAL SYSTEMS

In short, the new standards call for a dynamic valuation, possibly needing multiple-scenario projections, requiring justification for the assumptions and the discount rates at each valuation date and the reconciliation of the beginning and ending balances, all within current reporting time schedules. Companies that do not have a robust projection capacity across their enterprise will likely conclude that putting the projection capabilities into place is the top priority.

Insurers that are already conducting embedded value reporting, economic capital calculations or Solvency II may conclude that the same platform can be modified for financial reporting purposes. Getting the systems to provide the liabilities and the reconciliation in the time frame for financial reporting is nonetheless a significant challenge. An ancillary, but important, benefit of starting with systems that serve other purposes is the general consistency of assumptions for the various frameworks. While they may serve different objectives, the various systems should not harbor inconsistencies. It would be embarrassing to an insurer to have to admit that the management perspectives that underlie the report to shareholders are different from those that form the basis for budgeting, planning, risk management, insurance regulatory reporting (such as the Own Risk and Solvency Assessment (ORSA)), or information supplemental to the financial reports (such as embedded values).

Publication of financial results often begins with an earnings release that provides a quick view of earnings, earnings per share, revenue, and drivers of profit for the year. Revenue information will be taken from the actuarial models. Actuaries will therefore need to not only have completed their valuation, but to be

confident in the reconciliation of the liabilities and the related information that is used in the presentation of comprehensive income. This puts additional emphasis on the need for robust models. It is important to avoid having significant unexplained differences in the analysis of the movement of the liabilities.

Companies that are Securities and Exchange Commission (SEC) registrants must be able to demonstrate that their systems operate in a control environment that is Sarbanes-Oxley (SOX) compliant. This is yet another reason for performing the reconciliation on a timely basis. The ability to explain the movement in the liabilities is likely a key control.

POLICIES AND PROCEDURES

While systems development may be on the critical path, equally critical are the policies and procedures required to link the calculations to the pronouncements. The pronouncements will be accompanied by implementation guidance, but many points of inter-

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The systems should work for the actuaries, not the other way around. …

pretation and application will be left to the insurer. The insurer's policy and procedure statements document the insurer's interpretation of the pronouncement and how it intends to apply the interpretation, in a way that assures consistent application and can be used to demonstrate compliance.

Each aspect of the new standard can lead to a policy statement. The list is too long for comprehensive treatment here, but a few examples are in order.

Take, for example, the requirement that the projected cash flows are expected values. This requirement itself leads to several considerations.

One of the biggest decisions for insurers is to what extent stochastic or multi-scenario modeling is needed. Some contracts, especially those with interest-sensitive or equity-based features, will have to be considered for stochastic modeling.

Each assumption underlying cash flows also calls for a policy statement. For example, each insurer must decide how much mortality improvement should be incorporated into the mortality rates and if and how to anticipate some periods of abnormally high claims due to epidemics or other causes.

The insurer should document its procedures for periodic review of experience and its process for approving assumptions, whether there are changes or not. The basis for valuation must be supported at each reporting date and the effects of changes in assumptions must be disclosed.

There will be data issues as well. A couple of examples here will suffice. The models must be designed to correspond with the groupings for disclosures and for analysis of differences between actual and expected benefits and expenses. There are also groupings to make for determining margins and for setting the adjustment for risk. For death benefits, the information required may be different from what is presented now. The death benefit in the presentation of comprehensive income is the amount of the claim in excess of the contract's cash value. Getting the proper amount of the death benefit is nothing new for companies offering universal-life-type products, but insurers may not have this capability already in place for other types of contracts.

RESOURCES FOR IMPLEMENTATION AND MAINTENANCE

It is obvious that the task of implementing the new accounting standard will be daunting. It is also apparent that the amount of effort to maintain the systems and procedures after implementation is much greater than what is needed for most valuation systems in the United States today.

There are clear implications to the number of actuaries needed for the conversion effort and for ongoing reporting. The fact that the systems must be sufficiently robust for SOX-compliant financial reporting suggests that insurers should elevate the status of actuarial models used for financial reporting to be on par with those for the general ledger, policyholder administration and investment. The systems should work for the actuaries, not the other way around, meaning that the number of off-system calculations and workarounds should be kept to a minimum.

THE INDUSTRY AND THE ACTUARIAL PROFESSION

A companion question to the one in the title of this article is "Are we ready?" There are many, many considerations to be made, and most affect a large number of companies. The industry and the professional bodies will no doubt collaborate to help identify the common issues and perhaps even provide some non-authoritative, but nonetheless useful, application guidance. Industry efforts should help insurers bridge the gap between the guiding principles in the pronouncements and the detailed decision making that must take place to implement the standards.

While practices almost certainly will differ among insurers in some respects, the range of practices may narrow with time. Insurers will benefit from industry efforts to facilitate information sharing that may help the industry gravitate to best practices. Certainly practice notes provided by the American Academy of Actuaries (AAA) and the International Actuarial Association (IAA) will go a long way in helping this happen.

START NOW

One can work backwards from the effective date and realize that, while there is plenty of time for the conversion, there is little time to waste in getting started. If a company intends to report in 2018 on the new basis, it should want to have this ability by sometime in 2017. An insurer needs to allow time to conduct a thorough testing of the new reporting process. It may decide to disclose the anticipated effects of the change in accounting policies in the last report that it makes on the old basis. If it takes two years for the systems conversion, then the conversion must start in 2015. So from today, mid 2013, companies have about two years to size up the challenges, to add staff, and to select or design actuarial systems. During this time, the actuaries responsible for the conversion should begin communicating with executives and directors about the implications and impact, and make the case for the cost of the conversion and of the ongoing effort.

So there's no need to panic, but there are advantages to starting now. Well planned is half done, and by the time the details are finalized, precious time will have expired. Actuaries should pick up the project now and begin to assess their capabilities and their resource gaps. ■

PBA Corner

By Karen Rudolph

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The views expressed in this article are those of the author and do not necessarily reflect the views of Milliman nor are they intended as methods of regulatory compliance.

The U.S. insurance regulatory environment is undergoing significant change. A great deal of it is focused on better management and understanding of the particular risks that each insurance company takes on. Actuaries involved in financial reporting are aware, by now, of the advent of principle-based statutory reserve requirements that will apply to new life insurance business under VM-20 in the not-too-distant future and currently apply to variable annuity contracts under VM-21. Principle-based reserves (PBR) will reflect the insurer's assessment of the underlying risks of the business it writes. While the effective date for implementation of VM-20 is unknown, there is a new National Association of Insurance Commissioners (NAIC) risk assessment and monitoring requirement for which the effective date is known. The NAIC's Risk Management and Own Risk and Solvency Assessment Model Act (ORSA) carries an effective date of Jan. 1, 2015. As both VM-20 and VM-21 and the ORSA Model Act contain similar risk assessment and reporting requirements, it will be natural for insurers to want to leverage the same or similar processes when complying with these two requirements. This article provides an overview of the potential synergies between certain requirements of the NAIC Valuation Manual Section VM-20 (as found in the Dec. 2, 2012 version) and the guidance found in the NAIC ORSA Guidance Manual. While the focus of this article is on ORSA and the Valuation Manual, synergies may also exist between ORSA and the International Association of Insurance Supervisors (IAIS) Insurance Core Principle 16 and other international reporting requirements such as Solvency II.

ORSA—AN OVERVIEW

As stated in its opening paragraph, the purpose of the NAIC Risk Management and Own Risk and Solvency Assessment Model Act is to provide requirements for maintaining a risk management framework and completing the ORSA, and provide guidance and instructions for filing an ORSA Summary Report with the insurance commissioner. For states adopting the Model Act, the effective date is Jan. 1, 2015, which means a company must first conduct an ORSA during the 2015 calendar year, and no less frequently than annually thereafter, but also at any time when significant changes to the insurer's risk profile take place. The ORSA Summary Report is submitted annually to the commissioner and includes the information described in the NAIC ORSA Guidance Manual.

The requirements of the act apply to all insurers domiciled in the state unless the company meets the exemption criteria. Both of the following criteria must be met to be exempt:

1. The insurer has annual direct written premium less than $500,000,000, and
2. The insurance group of which the insurer is a member has annual direct written premium less than $1,000,000,000.

The ORSA Guidance Manual serves the purpose of providing guidance to the insurer for reporting on its ORSA process. The Guidance Manual suggests, at a minimum, discussion of the following three areas be included in the ORSA Summary Report:

1. Section 1—Description of the Insurer's Risk Management Framework
2. Section 2—Insurer's Assessment of Risk Exposure
3. Section 3—Group Risk Capital and Prospective Solvency Assessment.

Noting the 2015 effective date for ORSA, it seems highly likely that companies will have implemented ORSA (or calibrated its current risk management processes to the ORSA Guidance Manual) by the time the Valuation Manual becomes operative. There are aspects of the documentation required by the Valuation Manual, specifically in VM-31, which create potential synergies with the ORSA Summary Report and can be used as support for the company's risk management framework. Additionally, the ORSA Guidance Manual allows for the insurer to reference other explanatory documents from within the ORSA Summary Report, in an effort to avoid excessive detail and redundancies. Companies may be able to reference documentation that is produced for compliance with VM-31 when completing their ORSA Summary Report. The following sections list some of the parallels between documentation required by portions of the Valuation Manual and the ORSA Summary Report.

VM-31 PBR REPORT REQUIREMENTS

VM-31 outlines the minimum reporting requirements for policies subject to PBR valuation. These reporting requirements are fulfilled through the company's PBR Actuarial Report. For purposes of the PBR Actuarial Report (i.e., the report required by VM-31), policies for which a PBR valuation have been performed are those policies where deterministic and/or stochastic reserves were calculated pursuant to VM-20 and annuities for which reserves were calculated pursuant to VM-21. The chart below compares required documentation of VM-31 that may be leveraged in fulfilling certain aspects of the ORSA Summary Report.

VM-31: PBR Actuarial Report	ORSA Summary Report
Section 2. General Requirements Paragraph B. The PBR Actuarial Report must include descriptions of all material decisions made and information used by the company in complying with the minimum reserve requirements and must comply with the minimum documentation and reporting requirements set forth in Section 3.	**Section 1—Description of the Insurer's Risk Management Framework** This section discusses the importance of identifying assessment tools (feedback loops) used to monitor and respond to any changes in the company's risk profiles. These feedback loops would include information the company would use in material decisions. For example, a quarterly assessment of policyholder withdrawals may be used to establish the withdrawal assumption for policies subject to PBR and also to assess whether such activity is within a range considered normal, or whether in excess of a normal range whereby management should consider policyholder conservation measures.
Section 3.C.5 PBR Actuarial Report Requirements A description of the risks determined material by the Qualified Actuary and associated with policies and/or contracts subject to a PBR valuation.	**Section 2—Insurer Assessment of Risk Exposures** Section 2 of the ORSA Summary Report should document the company's qualitative and quantitative assessment of its risk exposure for each material risk category such as credit, market, liquidity, underwriting, etc. These risk categories are specifically identified in Section 1 of the Summary Report. The risks determined material for the PBR valuation should be a subset of the universe of risks documented in the ORSA Summary Report.

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<table>
<tr><th>VM-31: PBR Actuarial Report</th><th>ORSA Summary Report</th></tr>
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<u>**Section 3.C.7. A summary of the valuation assumptions and margins for each major product line subject to a PBR valuation including:**</u>

Description of the method used to determine anticipated experience assumptions for each material risk factor, including the degree to which the assumptions are based on experience versus actuarial judgment or other factors, and the source of the experience
Description of significant changes from prior year
List of key risk and experience reporting elements the company will track in order to monitor changes in experience that will be used to update assumptions
Description of the method used to determine margins for each material risk factor
Description of any significant changes from the prior year in the method used to determine margins
Disclosure of any assumptions or margins that are inconsistent with risk analysis and management techniques
Considerations helpful in understanding rationale behind and development of assumptions and margins.

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<u>**Section 2—Insurer Assessment of Risk Exposures**</u>

Section 2 of ORSA talks about the quantitative and/or qualitative assessments of risk exposure in both normal and stressed environments for each material risk category identified in the ORSA Summary Report. The normal environment will be expressed in terms of the company's expected values based on current anticipated experience—i.e., through experience studies—and how the company expects experience to unfold over the near term. Risk assessment includes stress testing the normal environment of each material risk factor.

Periodic monitoring of significant risks through experience studies provides a feedback loop of critical data and information to make management decisions.

The ORSA process can benefit from leveraging the quantitative analysis that is inherent in VM-20 assumption setting. As part of the anticipated experience assumption development in PBR, sensitivity tests (or stress tests) can be used to determine the materiality of prudent estimate assumptions on the minimum reserve.

In summary, the overall process of assumption setting for a PBR valuation includes (i) the assessment of risk factors, (ii) determination of anticipated experience, (iii) evaluation of a risk margin for adverse deviation, and (iv) sensitivity testing to understand the impact of the assumption on the minimum reserve. These stress tests assist in "assessing risk exposure" pursuant to ORSA.

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<u>**Section 3.C.8.: A summary of the approach used to model the assets supporting the policies subject to a PBR valuation.**</u>

<u>**Section 3.C.9: A description of the approach used to model risk management strategies (e.g., hedging), and other derivative programs, and a summary and description of any clearly defined hedging strategies.**</u>

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<u>**Section 2—Insurer Assessment of Risk Exposures**</u>

The assessment process of Section 2 of ORSA includes consideration for risk categories related to assets. The documentation required of VM-31 Section 3.C.8 and 9 should include discussion of risks related to the assets supporting the PBR valuation and any hedge programs and/or derivative programs used to mitigate risk. The evaluation of the asset risks and hedging programs are a subset of the company's larger risk evaluation processes which can serve to satisfy the requirements of ORSA Summary Report, Section 2.

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VM-G CORPORATE GOVERNANCE GUIDANCE FOR PBR

An appendix to the Valuation Manual, VM-G, provides corporate governance guidance for PBR valuations. This guidance elaborates on the requirements of the Standard Valuation Law Section 12.B.(2) for companies using a PBR valuation. The premise for the guidance in VM-G stems from recognition that the determination of actuarial and financial assumptions is the responsibility of the company (rather than assumptions that are prescribed by regulation) and requires some degree of oversight from a company's board of directors, senior management and appointed actuary. Each of these levels of company management carries specific responsibilities, parallels for which can be drawn to the ORSA process. The chart below highlights some of these parallels.

<table>
<tr><th>VM-G: Corporate Governance Guidance for PBR</th><th>ORSA Summary Report</th></tr>
<tr><td>
<u>Section 2. Guidance for the Board</u>

• Establish a process to receive and review reports of the effectiveness of internal controls with respect to PBR calculations
• Interact with senior management to resolve questions and collect additional information as needed
• Determine what additional steps are necessary to rely on the PBR valuation function established by senior management
• Provide general oversight of the PBR valuation in a manner commensurate with the materiality of the valuation in relationship to the overall risks borne by the company

<u>Section 3. Guidance for Senior Management</u>

(1) Oversight:
• Ensure adequate infrastructure is established to implement PBR
• Review the PBR elements for consistency with other company risk assessment processes
• Review PBR results for consistency with established risk tolerances
• Review and address significant and unusual issues/findings in light of the results of the PBR valuation.
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The ORSA Guidance Manual does not use a company's management levels to categorize responsibilities as does VM-G. However, one of the key principles a company must discuss in Section 1 of its Summary Report is the company's risk culture and governance, including an articulation of the roles, responsibilities and accountabilities of stakeholders in the risk-based decision-making process. PBR is a valuation method intended to consider risks inherent in the product being valued. The documentation of responsibilities and accountabilities that are laid out in VM-G can be leveraged for ORSA purposes and to ensure some degree of consistency and streamline the documentation.

In Section 1of the Summary Report, the company must discuss its formal risk appetite statement and associated risk tolerances and limits. It is specifically noted that board understanding of the risk appetite statement is important to ensure alignment with risk strategy. In this way the company's board must be actively engaged in observing the consistencies between the company's positions on risk as well as how those positions are carried out through the PBR valuation.
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VM-G: Corporate Governance Guidance for PBR	ORSA Summary Report
(2) Internal controls: • Adopt controls that assure all material risks are included • Assure PBR valuations are made in accordance with the Valuation Manual • Ensure an annual evaluation is made of the internal controls and communicate the results to the board. (3) Valuation execution: • Determine whether company resources are adequate for the modeling function • Address whether models and procedures produce appropriate results relative to the PBR objectives • Confirm there is a process to validate data used in model assumptions and validate model input • Establish a process to find and limit material errors and weaknesses and provide an ongoing effort to improve model performance • Establish a procedure for review of PBR valuation including reporting on the adequacy of principle-based reserves. (4) Report to the board, annually, on these matters: • Infrastructure (risk tolerances, policies, procedures, controls, etc.) that senior management has established to support PBR valuations • Critical risk elements of the valuation and their relationship to those for other risk assessment processes • Summary results of the PBR valuation, including the level of conservatism and materiality of PBR reserves in relation to the total liabilities of the company • The level of knowledge and experience of senior management responsible for the PBR valuation • Reports related to governance of PBR, including the certification of the effectiveness of internal controls, as provided by SVL Section 12.B.(2).	In Section 1 of the Summary Report, the company must provide a high-level summary of the company's risk management and controls. The ORSA Guidance Manual notes that managing risk is an ongoing enterprise risk management activity, operating at many levels within the organization. This has support in the levels defined in VM-G. Although the PBR valuation is just one aspect of the larger enterprise risk management process, the accountabilities specified by VM-G provide a framework the company can consider in its ORSA process. Section 1of the Summary Report calls for a discussion of the company's risk reporting and communication, where such communication is intended to provide key constituents with transparency into the risk management processes and facilitate active, informal decisions on risk taking and management. As part of the PBR valuation process, senior management is reporting to the board on topics related to PBR, risk elements, conservatism, materiality, controls and governance.

VM-G: Corporate Governance Guidance for PBR	ORSA Summary Report
Section 4. Guidance for Qualified Actuaries, Including the Appointed Actuary • One or more qualified actuaries must oversee the PBR valuation • Review and approve assumptions, methods, models • Review and approve internal standards for actuarial valuation processes, internal controls and documentation used for PBR valuations • Confirm that assumptions prescribed in the Valuation Manual are being used as required • Provide a summary report to the board and senior management on the PBR valuation process; assist their understanding of PBR valuation results, the level of conservatism in the reserves, the materiality of PBR reserves in relation to the overall liabilities of the company and significant or unusual findings • Provide an opinion on the adequacy of company statutory reserve, both those developed using PBR and using other approaches, as part of his/her annual Statement of Actuarial Opinion • Cooperate with internal and external auditors and regulators in working to resolve significant issues regarding the PBR valuations.	

CLOSING

Implementing PBR valuations will take resources the company may find scarce. Leveraging the steps in the process to fulfill as many of the company's risk management requirements as possible may be one way a company can become efficient over time. Knowing the synergies between the requirements of the Valuation Manual (specifically VM-31) and the ORSA process will help to make the annual reporting on these two critical risk assessment processes more streamlined and internally consistent. ■

Spring Cleaning

By Henry Siegel

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This year, both the International Accounting Standards Board (IASB) and Financial Accounting Standards Board (FASB) performed their spring cleaning a bit early. Almost all major issues having been debated and tentatively resolved; most of the discussions were about smaller issues that remained to be addressed. In keeping with that agenda, here are some thoughts that have not made previous articles.

COMPARABILITY

Very frequently in discussions of alternative proposals, we hear comments about which alternative will allow for more comparability of results. Sometimes the discussion is with respect to comparing one insurance company with another; other times it's between insurance companies and other financial companies (e.g., banks). Unfortunately, the more theoretical the answer is, the more difficult the comparison becomes.

The building-block approach, for instance, is a sound general principle that by its nature leads to results that are only comparable within ranges. Two individuals asked to project the present value of future cash flows (the first two building blocks) for a given portfolio of insurance contracts will almost certainly reach different answers. Neither may be right or wrong; the future is unknown and unknowable and projections are therefore somewhat subjective. The best we can do is a rough estimate that is almost certain to be wrong.

I conclude, therefore, that practicality must be given a larger weight in setting a standard than comparability. Insisting on theoretically correct, detailed calculations (e.g., market-consistent stochastic cash flows and discounting) may be a waste of money unless cash flows are very sensitive to small interest rate movements, and can actually lead to less comparability since the assumptions themselves, being more complex, will be more difficult to compare.

DISCOUNT RATES

When the insurance contracts project started, the IASB proposed to require a risk-free yield curve for discounting. When preparers objected, on both theoretical and practical grounds, this was changed first to risk free + liquidity adjustment (as in Solvency II), and then the top-down approach was also allowed. There are significant theoretical and practical difficulties with all these approaches that have been well documented and discussed. I want to deal with a non-theoretical question having to do with practicality and comparability.

In all of these formulations, actuaries have generally thought in terms of a discount "rate"; whereas others have thought in terms of a "yield curve." Unfortunately, neither accomplishes what is needed to produce a useful result. A yield curve, or more likely a set of yield curves, is extremely difficult to work with technically and to describe to users; a single rate, on the other hand, does not capture the timing of future cash flows but is simple to explain.

It's very difficult to compare companies as the yield curve used for discounting changes over time, especially if each company makes its own determination of how it will change. It would be just as valid and far more useful to allow the use of a single discount rate for each year's cash flows based, for instance, on the projected portfolio rate for that year (after deduction for expected and unexpected defaults as appropriate). One could then display those rates in a simple graph or table that could be easily understood.

To facilitate comparability, each company should also be required to compute an equivalent level discount rate for each liability (or portfolio of liabilities) regardless of how they actually calculate that liability. If a company tells you the equivalent discount rate on a liability moved from 5 percent to 4.9 percent, that would be far more useful in understanding what happened than being told that the slope of the yield curve changed and rates went up or down by 10 to 25 basis points depending on duration.

REALITY

To do the discounting required in the building-block approach, the actuary needs to determine what interest rates to use. This choice is often described in terms of "real-world" interest rates vs. "market-consistent" interest rates. I've been struggling with these concepts for many years, and I consistently wonder how an actuary can use any rates that are not "real-world" unless

arbitrarily required to by some standard. After all, if the rates are not real-world, what world do they apply to? Why should a liability that, on a going concern basis, will not be sold in the marketplace and for which there is no active market, use rates that are used to price assets that are freely marketed?

RETIREMENT

The new accounting standards are expected to be effective Jan. 1, 2018. Solvency II looks like it could be on roughly the same time frame. Comframe also looks like it's due to be effective then. Even PBR might be approved about then. That seems like a good retirement date.

QUARTERLY MEETINGS

This quarter the boards met jointly only in January. After that, they went their own ways as they tried to finish their respective discussions and staff started drafting in earnest. About the time you read this, both Exposure Drafts should be out or almost out.

The new accounting standards are expected to be effective Jan. 1, 2018.

JANUARY MEETINGS

JOINT MEETING OF IASB AND FASB

Allocation of Insurance Contract Revenue upon a Change in the Pattern of Expected Claims

The boards tentatively decided that, if there is a change in the expected pattern of future claims, the remaining insurance contract revenue should be reallocated prospectively to reflect the latest estimates of that pattern.

Transition for Insurance Contract Revenue

The IASB tentatively decided that, on transition, an insurer should estimate the amount of revenue to be recognized in future periods by estimating the residual margin or initial loss included in the liability for remaining coverage. In estimating that residual margin or loss, an insurer shall assume that the risk adjustment at inception equals the risk adjustment on transition.

In addition, the IASB decided that when retrospective application is impracticable, an insurer shall estimate the residual margin by maximizing the use of objective data. In other words, an insurer should not calibrate the residual margin to the insurance liability as it was measured using previous GAAP.

The FASB tentatively decided that for contracts accounted for under the building-block approach that are in force at transition, the amount of the revenue to be recognized after transition should be determined as follows:

- For contracts for which the margin is determined through retrospective application, the insurance contract revenue remaining to be earned as of the

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date of transition should be determined retrospectively by using the assumptions applied in the retrospective determination of the margin.
- For contracts for which retrospective application is impracticable for determining the margin because it would require significant estimates that are not based solely on objective information, the remaining insurance contract revenue to be earned should be presumed to equal the amount of the liability for remaining coverage (excluding any investment components) recorded at the date of transition (plus accretion of interest).
  - The liability for remaining coverage for these contracts at the date of transition should be presumed not to consist of any losses on initial recognition or of changes in estimate of future cash flows recognized in profit or loss after the inception of the contracts.
  - The remaining insurance contract revenue to be earned shall be limited to the total expected cumulative consideration for in-force policies in the portfolio (plus interest accretion and less investment component receipts).
  - The remaining insurance contract revenue should be allocated to periods subsequent to the date of transition in proportion to the value of coverage (and any other services) that the insurer has provided for the period (i.e., applying the pattern of expected claims and expenses and release of margin).

IASB-ONLY MEETING

Definition and Scope

The IASB tentatively decided:
- Not to address policyholder accounting (except for cedants) in the insurance contracts project;
- Not to create specific guidance on grandfathering the definition of an insurance contract; and
- Not to create specific guidance on takaful (i.e., Islamic insurance allowed by the Sharia).

Recognition

The IASB tentatively decided to revise the recognition point to clarify that the recognition point for deferred annuities is the earlier of the start of the coverage period or the date on which the first premium becomes due. In the absence of a contractual due date, the premium is deemed to be due when received. Some preparers had wondered if the effective date of coverage meant when benefits became payable which would have meant no recognition of the liability until then.

Measurement

The IASB tentatively decided:
- To clarify that the cash flows relating to tax payments should be evaluated and treated like any other cash flows;
- Not to address discounting of deferred taxes in the Insurance Contracts project; and
- Not to create specific guidance on tacit renewals or cash bonuses.

Reinsurance

The IASB tentatively decided:
- Not to impose a limit on unfavorable adjustments against the positive residual margin on reinsurance contracts held by a cedant; and
- To confirm the proposal in the 2010 Exposure Draft that an insurer should treat ceding commissions as a reduction of premiums ceded to the reinsurer. This tentative decision is a problem since it means the net premium for the cedent in a coinsurance arrangement would not be consistent with the claims. For instance, a 50 percent ceded arrangement would show greater than 50 percent premium but only 50 percent of claims. This would be misleading.

Premium Allocation Approach

The IASB tentatively decided:
- To align the requirements for reducing the liability for remaining coverage in the premium allocation approach with the requirements for releasing the residual margin in the building-block approach; and
- For contracts accounted for using the premium allocation approach, to provide an insurer with relief from disclosing a maturity analysis of cash flows for the liability for remaining coverage.

Business Combinations and Portfolio Transfers

The IASB tentatively decided:

- To confirm the proposal in the 2010 Exposure Draft that different requirements should apply to business combinations and portfolio transfers; and
- Not to create explicit guidance on the allocation period of the residual margin in a business combination or portfolio transfer.

Implementation Guidance

The IASB tentatively decided:

- Not to carry forward the implementation guidance that currently accompanies IFRS 4 Insurance Contracts to the new standard; and
- To add an explicit explanation that not carrying forward implementation guidance of IFRS 4 does not mean that the IASB rejected it.

FEBRUARY MEETINGS

IASB MEETINGS

The IASB met to complete its planned technical discussions of the proposed model for accounting for insurance contracts. The IASB staff also requested permission to begin the balloting process for the revised Exposure Draft.

Transition Requirements for Contracts Acquired through a Business Combination

The IASB tentatively decided that:

a. In applying the transition requirements for insurance contracts, an insurer should account for the in-force contracts that were previously acquired through a business combination using:
    i. The date of the business combination as the date of inception of those contracts; and
    ii. The fair value of those contracts at the date of the business combination as the premium received.
b. When an insurer first applies the forthcoming Insurance Contracts Standard to insurance contracts that were previously acquired through a business combination, any gains or losses should adjust retained earnings (rather than goodwill).

Permission to Ballot a Revised Exposure Draft for Insurance Contracts

In September 2012, the IASB agreed to publish a revised Exposure Draft of the proposals on accounting for insurance contracts but to seek feedback only on the following issues:

a. Treatment of participating contracts;
b. Presentation of premiums and claims in the statement of comprehensive income;
c. Treatment of the unearned profit in an insurance contract;
d. Presenting, in other comprehensive income, the effect of changes in the discount rate used to measure the insurance contract liability; and
e. The approach to transition.

At this meeting, the IASB concluded that it had met the due process requirements to begin the balloting process. The IASB also noted that it has undertaken extensive outreach and comprehensively addressed the comments from respondents to the 2010 Exposure Draft *Insurance Contracts*. The IASB intends to undertake fieldwork with preparers and users of financial statements during the comment period to assess the costs and benefits of the targeted proposals. Accordingly, the IASB gave permission to begin the process of balloting the revised Exposure Draft.

All IASB members agreed, but Stephen Cooper noted his intention to dissent from the publication of the revised Exposure Draft.

The IASB tentatively decided that the revised Exposure Draft should be open for comments for 120 days.

FASB MEETINGS

The FASB continued its discussions of the proposed insurance contracts standard on Feb. 6. The boards discussed (1) accounting for guarantees, (2) modifications of insurance contracts, and (3) foreign currency transactions.

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Project Scope—Accounting for Guarantees

The board tentatively decided that the proposed Insurance Contracts Standard should apply to all guarantee contracts that meet the definition of an insurance contract except those that have any of a number of explicit characteristics (unless the guarantee meets any other scope exception previously tentatively decided on by the board).

Modifications of Insurance Contracts

The board tentatively decided that:

1. An insurer should derecognize an existing contract and recognize a new contract (under the applicable guidance for the new contract) if it amends the contract in a way that would have resulted in a different assessment of either of the following items had the amended terms been in place at the inception of the contract:
   a. Whether the contract is within the scope of the insurance contract standard
   b. Whether to use the premium allocation approach or the building-block approach to account for the insurance contract.
2. Additionally, an insurer should derecognize an existing contract and recognize a new contract if any of the following conditions exist:
   a. The insured event, risk, or period of coverage of the contract has changed, as noted by significant changes in the kind and degree of mortality risk, morbidity risk or other insurance risk, if any.
   b. The nature of the investment return rights (for example, whether amounts are determined by formulas specified by the contract, pass through of actual performance of referenced investments, or at the discretion of the insurer) accounted for as part of the insurance contract, if any, between the insurance enterprise and the contract holder has changed.
   c. Any additional deposit, premium or charge relating to the original benefit or coverage, in excess of amounts specified or allowed in the original contract, is required to effect the transaction; or if there is a reduction in the original benefit or coverage, the deposit, premiums, or charges are not reduced by an amount at least equal to the corresponding reduction in benefits or coverage.
   d. There is a net reduction in the contract holder's account value or the cash surrender value, if any exists, other than resulting from distributions to the contract holder or contract designee or charges related to newly purchased or elected benefits or coverages.
   e. There is a change in the participation or dividend features of the contract, if any such features exist.

The FASB continued its discussions of the proposed insurance contracts standard on Feb. 13. The board discussed (1) reconsideration of the measurement of investment components and the aggregate insurance contracts revenue, (2) transition, (3) effective date and comparative financial statements, (4) early adoption, and (5) comment period.

Reconsideration of the Measurement of Investment Components and the Aggregate Insurance Contracts Revenue

The board decided the following:

1. The amount of consideration allocated to investment components and excluded from the premium presented in the statement of comprehensive income should be equal to the cash flows the insurer estimates it will be obligated to pay to policyholders or their beneficiaries regardless of whether an insured event occurs.

2. At each reporting date, these cash flows should be re-estimated based on current assumptions utilized in the measurement of the insurance contract liability, with any effect on insurance contract revenue allocated prospectively to periods in proportion to the value of coverage (and any other services) that the insurer estimates will be provided in those periods.

Transition

The board decided the following:

1. When determining the margin at contract inception, insurers can measure the insurance contract liability and the margin using the insurers' determination of the portfolio immediately prior to transition.
2. Contracts written or substantially modified subsequent to the transition date should be grouped into portfolios in accordance with the proposed guidance, which if different than (1) may require separate portfolios.

Effective Date and Comparative Financial Statements

The board decided the following:

1. Not to include in the Exposure Draft, Insurance Contracts Update, a minimum time period between the issuance of the proposed guidance and the effective date, but rather to ask a question regarding key drivers impacting timing of implementation.

2. The effective date for nonpublic entities will be a minimum of one year after the effective date for public entities.

3. Insurers would be required to restate all comparative periods presented.

Early Adoption

The board decided that insurers would not be allowed to early adopt the proposed guidance.

Comment Period

The board decided to provide a 120-day comment period for the upcoming Exposure Draft, *Insurance Contracts Update*.

On Feb. 20, the FASB continued its discussion of Insurance Contracts.

Segregated Assets Related to Direct Performance Linked Insurance Contracts

The board decided the following:

1. The liability for "direct performance linked insurance contracts" and the assets directly linked to those liabilities should be reported in the insurer's financial statements.
2. The guidance described in 3 through 9 below applies if the segregated fund arrangement meets both of the following conditions:

   a. The insurer must, as a result of contractual, statutory, or regulatory requirements, invest the contract holder's funds directed by the contract holder in designated investment alternatives or in accordance with specific investment objectives or policies. Investment of a portion of the contract holder's funds would not meet this criterion.
   b. All investment performance, net of contract fees and assessments, must as a result of contractual, statutory or regulatory requirements be passed through to the individual contract holder.

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i. Contracts may specify conditions under which there may be a minimum guarantee, but not a ceiling, because a ceiling would prohibit all investment performance from being passed through to the contract holder.
ii. Contractual features that give the insurer discretion on the amount or timing of the pass through would not meet this criterion. For example, if performance is passed through to individual contract holders on the basis of realized gains on the investment portfolio or when the insurer declares a "dividend," the investment performance is deemed to not be passed through to the individual contract holder.

The board decided ... An insurer should accrete interest on the margin to reflect the time value of money.

3. The guidance in Subtopic 944-80, Financial Services—Insurance—Separate Accounts, regarding an insurer's consideration of qualifying segregated fund arrangements when performing analyses for consolidation under Subtopic 810-10, Consolidation—Overall, should be retained (retention of Accounting Standards Update 2010-15).
4. An insurer should record the contract holder funds and its proportionate interest in the qualifying segregated fund arrangements at fair value through net income.
5. The assets in the qualifying segregated fund arrangements should be presented separately in the statement of financial position or disclosed in the notes.
6. An insurer should disclose the amount of the assets in the qualifying segregated fund arrangements that:
   a. Are legally insulated from the general account and those that are not.
   b. Represent the insurer's proportionate interest.
7. The liabilities directly linked to segregated fund arrangements should be disclosed in the notes.
8. Revenues and expenses need not be presented separately from revenues and expenses for other insurance contracts in the statement of comprehensive income.
9. Investment income generated from the assets in the qualifying segregated fund arrangements and the interest credited to contract holders as a pass through of that investment income should be presented separately as part of investment income and interest expense in the statement of comprehensive income or disclosed in the notes.

Accretion of Interest on the Margin

The board decided the following:

a. An insurer should accrete interest on the margin to reflect the time value of money.
b. The interest accretion rates should be based on the same yield curves used for purposes of discounting the cash flows determined at inception of the portfolio of insurance contracts and not subsequently adjusted.

Presentation in the Statement of Financial Position and Statement of Comprehensive Income

The board affirmed its prior decision that an insurer would present the following in the statement of financial position:

1. For the building-block approach, an insurer would present the unconditional right to premiums or other considerations as a receivable separately from the insurance contract asset or liability and accounted for in accordance with existing guidance for receivables.
2. For the premium allocation approach, an insurer would disaggregate the liability into components including the liability for remaining coverage, the liability for incurred claims, and the gross premium receivable.

The board decided that for the premium allocation approach insurers would not be required to disclose the

undiscounted amount of liabilities parenthetically on the face of the statement of financial position.

The board made the following decisions regarding presentation in the statement of comprehensive income. An insurer would present:

1. Insurance contract revenue from contracts measured using the building-block approach separately from contracts accounted for using the premium allocation approach
2. Insurance contract revenue and expenses arising from ceded reinsurance contracts separately from other revenue and expenses
3. Insurance contract revenue for ceded reinsurance contracts separately for the building-block and the premium allocation approaches
4. Benefits and claims incurred (including for reinsurance) from contracts measured using the building-block would be presented separately from benefits and claims incurred from contracts accounted for using the premium allocation approaches
5. Interest accreted on the expected cash inflows in the respective revenue line item
6. Interest accreted on the expected cash outflows in interest expense.

Private Companies (e.g., Mutual Companies)

The board decided the following about private companies:

1. A nonpublic entity would consider the reference to segment reporting as part of the general aggregation criteria; however, nonpublic entities would be exempt from the requirement to provide specified disclosures by reportable segment.
2. A nonpublic entity would not be required to provide the insurance disclosures required for interim periods.

MARCH FASB MEETINGS

Treatment of Changes in Estimated Interest Crediting and Accretion Rates

The board affirmed its tentative decision from the November 2012 meeting that an insurer would not be required to disaggregate cash flows of a contract into those affected by returns from assets and those not affected by returns from assets when determining discount rates that reflect the characteristics of the contract's cash flows. The discount rates for the portfolio's cash flows should reflect the extent to which the amount of any estimated cash flows, subject to insurer discretion, are affected by asset returns.

This is an important decision since it appears that the IASB may be arriving at the opposite decision, a decision that would be extremely difficult to implement.

The board also decided the following for insurance contracts that are affected by asset returns:

1. Upon any change in expectations of the crediting rate used to measure the insurance contracts liability, an insurer would:
    a. Reset the interest accretion rates in a manner that recognizes any changes in estimated interest crediting and related ultimate expected cash flows on a level-yield basis over the remaining life of the contracts
    b. Recognize in net income the difference between the prior expected cash flows discounted at the prior interest accretion rates and the revised expected cash flows discounted at the reset interest accretion rates.
3. The degree to which the interest accretion rates for the portfolio are adjusted would reflect the

CONTINUED ON PAGE 28

relative value of the account balance to be credited and the extent that changes in expected amount to be credited to those account balances are the result of changes in expected asset returns.

4. An insurer would apply the tentative decision on accumulated other comprehensive income (AOCI) for non-asset-affected cash flows. That means an insurer would present as part of AOCI the difference between the insurance contracts liability recorded on the statement of financial position (using the current discount rate) and the amount the insurance contract liability would be if it were determined at the interest accretion rates.

Election of the Fair Value Option

Guarantees and Other Contingencies

The board decided to eliminate the fair value option election for guarantees and other contingencies accounted for in accordance with Topic 460, Guarantees, or contingencies accounted for in accordance with Topic 450, Contingencies, that will not be within the scope of the forthcoming proposed insurance contracts guidance.

The board decided that the effective date and transition provisions to eliminate the fair value option for these items would be consistent with the effective date and transition provisions for the proposed ASU, *Financial Instruments—Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities.*

Other Miscellaneous Issues

Criteria to Account for Contracts under the Premium Allocation Approach

The board decided to remove the following criterion that, if met, would preclude an insurer from using the premium allocation approach.

> "Significant judgment is required to allocate the premium to the insurer's obligation to each reporting period."

Accounting for the Excess of the Insurance Liability Measurement over the Fair Value of the Insurance Contracts in a Business Combination

The board decided to record any excess of the asset and liability balances related to insurance contracts measured in accordance with the proposed guidance above the fair value of those assets and liabilities as a loss at the acquisition date.

Whether or Not to Include Expectations in the Liability for Remaining Coverage under the Premium Allocation Approach

The board decided to clarify that for contracts reported under the premium allocation approach, an insurer would not include expectations of future changes in coverage (for example, policyholder cancellations) in the cash flows for purposes of measuring the liability for remaining coverage or the gross premium receivable.

Recognition Point for Deferred Annuity Contracts

The board affirmed previous decisions about recognition point of insurance contracts and to include implementation guidance regarding recognition of deferred annuity contracts. This should be the same as the IASB decision reported above.

Treatment of Income Tax Payments and Receipts

The board decided to clarify in the implementation guidance that cash flows excluded from the measurement of the liability would include income tax payment obligations of the insurer even if the insurance contract permits the insurer to charge back those amounts to policyholders. However, any tax obligations that are incurred by the policyholder and are paid by the insurer in a fiduciary capacity would be included in the present value of fulfillment cash flows along with any amounts the insurer expects to receive from the policyholder related to those tax amounts.

* * * * *

The two boards currently intend to meet jointly toward the end of this year, after comments on their Exposure Drafts have been received and analyzed, to consider whether a converged standard is still possible. I continue to hold out hope that they will conclude it is. I urge everyone who comments on either standard to make this their initial comment:

> *It is in the interest of all parties that the IASB and FASB make all possible efforts to produce a converged standard for accounting for insurance contract liabilities.*

Yet another reason why
Insurance accounting is too important to be left to the accountants!

FASB Disclosure Requirements

Among the disclosures the FASB will tentatively require are the following. A more complete list will be included in the Exposure Draft.

Disclosures about Liabilities:

1. A reconciliation of the opening and closing balance of the insurance liability (or asset) (BBA) and the liability for incurred claims (PAA).
2. Line items in the reconciliation of opening and closing balances that provide sufficient detail to understand:
   a. New business
   b. Cash flows
   c. Changes in assumptions
   d. Derecognition
   e. Time value of money.

3. The notes to the financial statements would explain the significant drivers of the changes in the insurance liability and liability for incurred claims.
4. Liability balance for business assumed in reinsurance transactions.

Information about the Single Margin:

1) A reconciliation of the opening and closing balance for the single margin disaggregated in a similar manner to the disaggregation of the reconciliation of the insurance liability that provides sufficient detail to understand:
   a) New margin with amounts attributable to expected acquisition costs separately identified
   b) Margin released
   c) Balance attributable to expected acquisition costs to be paid.
2) Amounts of revenue recorded in the period that arose from the single margin being released because of a portfolio turning onerous, disaggregated in a manner similar to how the insurer disaggregates the reconciliation of the liability.
3) The amount of the acquisition costs incurred but not yet amortized in the statement of comprehensive income (i.e., embedded in the single margin).
4) Furthermore, the board instructed the staff to include within the implementation guidance items that could be provided as part of the reconciliation.

Interest:

The amount of interest included in the revenue line item and the significant components of interest expense attributable to insurance contracts.

Reinsurance Receivable:

1) A reconciliation of opening and closing balances disaggregated in a similar manner to the disaggregation of the reconciliation of the insurance liability.
2) The balance of reinsurance receivable related to paid claims.
3) The amount the insurer records to the allowance as uncollectible in the period in a similar manner to the reconciliation of the opening and closing balance of the reinsurance receivable. Those amounts should be further disaggregated between those amounts related to credit and those related to disputes.
4) The amount of gains or losses arising from commutations of reinsurance agreements.

Other Disclosures:

1) Disaggregation of the amount recorded in the statement of comprehensive income during the period that results from a portfolio becoming onerous.
2) The balance of premiums received but not yet earned on the insurance component for contracts accounted for using the building-block approach.
3) The amount of premiums received allocated to the investment component during the period.
4) The nature of the key inputs used to measure the liability disaggregated by significant types of insurance.

CONTINUED ON **PAGE 30**

5) Information about compliance with separate insurance regulatory frameworks, including:
   a) The amount of minimum capital necessary to satisfy the insurer's regulatory requirements
   b) The amount of regulatory capital
   c) Any regulatory restrictions on the insurer's ability to pay dividends or principal and interest on loans or notes
   d) Whether a regulatory event would have been triggered had the insurer not used a permitted regulatory/statutory accounting practice.
6) The methods and assumptions for the unbundling of goods, services, or investment components, and the nature of the items being unbundled.

Discount Rates and Future Payments:

1. A table of expected cash outflows along with the corresponding weighted-average current discount rate and weighted-average interest accretion rate.
2. A disaggregation of the disclosure in a similar manner to the disaggregation of its reconciliation of the insurance liability.
3. The information in the following time bands:
   a. For BBA:
      i. Amounts and rates related to the first two 5-year time bands
      ii. Each of the next two 10-year time bands following the 10th year and up to the 30th year
      iii. The total for years following the 30th year after the reporting date.
   b. For PAA:
      i. Each of the first five years after the reporting date
      ii. The next two 5-year time bands following the first five years after the reporting date
      iii. The total for years following the 15th year after the reporting date.
4. Any additional information about amounts and rates within the time bands provided that affect the weighted average significantly.
5. A table of expected receipts from reinsurance receivables in the same manner and time bands as the related expected cash outflows along with the corresponding weighted-average current discount rates and weighted-average interest accretion rates.

Participating Policies:

1) The general criteria on which the participation features of the contracts are based and the amount that accrued to the benefit of the policyholders during the period due to those features.
2) For contracts in which the insurer's nondiscretionary obligation is contractually dependent on the performance of other assets or liabilities of the insurer or the performance of the insurer itself, and the contract does not qualify as a segregated fund arrangement:
   a) How participation features are measured (that is, what the participating features are based on) and what is included in the measurement of the liability (that is, the obligation of the insurer)
   b) If applicable, the quantitative amount of the adjustment to the gross obligation in (a) (that is, the measurement of the asset or liability on which the measurement of the liability is adjusted to) and whether the adjustment is recorded to profit or loss or to other comprehensive income.
3) The amount of expected dividends to policyholders not yet declared that are included in the measurement of the liability.

Reinsurance and Other Transactions:

The board decided that an insurer would disclose the significant differences between gross premiums ceded and net premiums ceded recorded in the statement of comprehensive income (that is, excluding the investment component).

The board decided that an insurer would disclose the following information about material transactions:
1. For material transactions and events during the reporting period for which there are no specific disclosure requirements, such as:
   a. The restructuring of the entity (for example, demutualization or re-domiciliation to another jurisdiction)
   b. Ceasing the writing of new business (for example, exiting a line of business or creating a closed block of business).
2. For those transactions the insurer should provide information that conveys the nature of the transaction and its effect on the insurer's financial statements.

Education on the Go

by James Miles

With the recent addition of a station on iTunes, the Society of Actuaries (SOA) took another modest step into the world of podcasts. Over 20 podcasts are now available on iTunes, and all the podcasts continue to be available for listening on the Professional Development area of the SOA's website. Podcasts offer an opportunity for the SOA and the sections to provide an additional venue for access to educational opportunities for their members and other interested persons; and they are free.

Rob Frasca took the lead on developing the first podcasts for the Financial Reporting Section, and along with Henry Siegel, they created a series of original podcasts. In 43 minutes spread over three podcasts, Rob and Henry discuss the insurance contracts projects of the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB). In the first podcast Rob and Henry begin with the basics of IASB, IFRS, and IFRS 4 (Insurance Contracts). The second podcast continues with a discussion of the insurance contracts projects of the IASB and FASB and includes a discussion of the basic measurement model being proposed for long-duration contracts. In the third podcast, they discuss unbundling, future premiums, participating contracts, reinsurance, short duration contracts, presentation and disclosures.

The current set of SOA podcasts is an eclectic collection ranging from five minutes to 25 minutes in length. The Taxation Section podcasts are based on articles from *TAXING TIMES*. Kristi Bohn interviews Mark Wernicke on the Affordable Care Act in two of the Health Section podcasts. The Actuary of the Future Section created a series of podcasts based on a section-sponsored webcast about making the transition to being a manager. Discussions of recent research projects provide the focus for the podcasts produced by the Pension Section.

Podcasts are designed to deliver information only through the audio medium, unlike recordings of webcasts and virtual meetings that depend on viewing PowerPoint slides along with the audio recording in order to have the full experience. Podcasts can be recordings of original presentations, material re-purposed for presentation in an audio format, or original material.

You can subscribe to the SOA podcasts through the iTunes store. Search on: Society of Actuaries. You can also listen to the podcasts by accessing them through the Web page: *http://www.soa.org/PDCalendar.aspx?type=podcast.*

Do you have an idea for a webcast sponsored by the Financial Reporting Section? Would you like to produce a webcast? If so, please send an email to Tara Hansen at *tara.hansen@ey.com* with your ideas. ■

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"Fragile, Handle with Care"

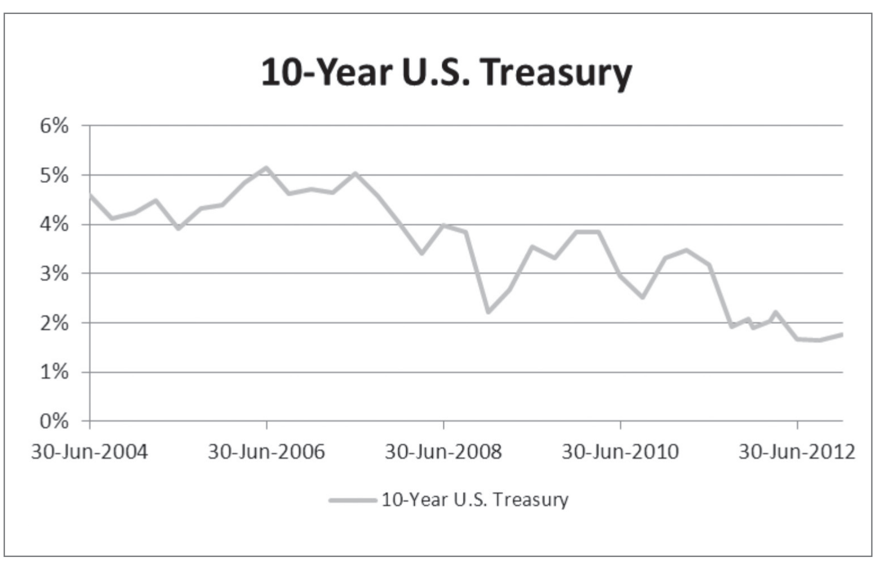
by Ross Zilber

Ross Zilber, FSA, CFA, ChFC, CLU, FRM, MAAA, is AVP, Asset Modeling for John Hancock Financial Services in Boston. He can be reached at rzilber@jhancock.com.

The term "black swan" has been institutionalized in the financial world to describe rare, high-severity events. The term is based on the popular book by Nassim Taleb, who was one of the few select market philosophers who convincingly predicted the recent market collapse in 2008. In his recent book *Antifragile,* Taleb developed a new concept, by the same name as the book title. The book is filled with depth of thought and insight balanced with practical market experience and humor.

Being "antifragile" means gaining from disorder, or volatility. Fragile systems break from certain shocks, like glass breaking from the shock waves of an earthquake. Robust systems, like buildings, don't break easily but do wear out, and could break from large enough shocks. Antifragile systems are different from the robust. Not only do they withstand large shocks without wearing out or breaking, they actually gain from volatility. One example in financial markets is financial options. When volatility increases, the options gain in value. Of course, if the counterparty does not perform its side of the option deal, the system doesn't hold up. There are limits to its "antifragility."

Most antifragile systems use shocks to learn new information, not to break. Additionally, overactive involvement in stabilization of the system will lead to much larger and more severe consequences. There are a number of interesting case studies in the book, some based on overactive central banks eager to solve an economic crisis but inadvertently creating an even worse crisis, to doctors who cause more harm with excessive surgeries and aggressive treatments.



Post financial crisis, insurance companies have institutionalized various risk management tools to assess their ability to withstand volatility. These tools have various degrees of sophistication, from analysis of key sensitivities to robust stochastic techniques. How fragile is the insurance industry?

For insurance companies, interest rates are a key economic factor in assessing fragility. The way company management reacts to the changes in interest rates (or lack thereof) is key to the stability and solvency of the industry. The chart below shows historical U.S. Treasury rates since 2004.

The chart shows an oscillating downward trend, which has already outlasted many forecasts. During this time period, insurance companies (with rare exceptions of fee business and health) sold guarantees and optionality to policyholders. The examples are observed in many insurance products—book value surrenders for fixed annuities, policy loans on life contracts, and guaranteed withdrawal options on variable annuity contracts. Other features are less obvious, like the impact of a sluggish economy with high unemployment on mortality rates through higher anti-selection of the group conversion option. As an industry we have sold economic options; and are therefore short convexity. It is not practical to mitigate that convexity through asset purchases since there is no static basket of investments that can match insurance liabilities. In other words, it would be difficult to match asset and liability cash flows since the liability cash flows depend on policyholder behavior. In addition, the cost the markets charge for options on assets would significantly exceed what the industry has charged policyholders for it (in some cases the industry offered optionality for free by not properly pricing for it).

The inability to cover liabilities with static hedging programs leads to widespread use of dynamic rebalancing. Most common programs match the duration of liabilities and assets up to a certain tolerance limit. For example, for liabilities with a duration of five years, an asset portfolio would be constructed with comparable duration. However, being short convexity means that when interest rates change, durations change as well.

In this example, where convexity of liabilities is not matched, the durations can be matched only at the moment. Once interest rates change, asset and liability durations change, causing the durations to no longer be matched. Since convexity differs, the durations of assets and liabilities would change with interest rates differently. This is an apparent fragility of the insurance system. Even tight duration matching does not give long-lasting protection. The formula below shows how duration is interest rate dependent, and will change differently based on convexity.

Change in Duration = (D^2-C)*change in rates,

Where:
D—Duration prior to change in rates
C—Convexity prior to change in rates

This formula does not work well for large changes in interest rates, and needs higher-order terms for those cases. For example, typical fixed deferred annuity products would have a liability duration of about 5 with convexity of 1.5. An asset portfolio with a comparable duration would have convexity of 0.5. Based on this formula, parallel change in rates of 100 BPS would create a one-year duration gap. Instability in duration with regard to changes in interest rates is further complicated by the different run-off of assets and liabilities over time. Even if interest rates do not change, durations of assets and liabilities will diverge over time. This would be a significant factor for long-duration fixed cash flows, like payout annuities and no-lapse guarantee UL products.

Another consideration is the cost of dynamic rebalancing focused on duration matching. One can estimate that cost to be:

Cost of rebalancing = ½*(Convexity gap)*(Realized rate volatility squared).

Products with more guarantees and options (higher convexity gap) have higher costs of dynamic rebalancing. Dynamic rebalancing costs more during periods of high rate volatility. The example above would translate to about 0.5 percent per year cost for each 100-basis-point annual rate change. In other words, it would cost 0.5 percent of total assets per year to rebalance the asset portfolio to adjust the duration.

There are various ways insurance companies react to changes in the economic environment. The theory presented does not account for management actions. Some companies react very slowly to changes in interest rates, while others are quick to rebalance their portfolio. Some of this is driven by the various accounting systems, which force asset-liability management (ALM) discipline. Different management and organizational structure is another factor.

Many companies utilize derivatives to manage optionality. In the U.S. accounting systems, derivatives (in non-hedging relationships) are held at market value on the balance sheet. If other balance sheet assets are held at amortized cost, the resulting higher volatility puts pressure on regulatory capital, and this increases fragility of the insurance system.

In the United States, the statutory framework relies on the asset adequacy testing (AAT), which requires cash flow testing under various scenarios. There is no consideration of dynamic rebalancing or management styles in this test. In reality, solvency outcomes for identical companies would differ under the oscillating interest rate environment, depending on how their management would react to that environment. Similar considerations could exist under other "prescribed" scenario frameworks. Are regulators getting a false sense of comfort? Another new regulatory development that could impact fragility of the capital is Own Risk and Solvency Assessment (ORSA). This is a new regulatory requirement that will provide regulators with a view of companies' risk management frameworks. It is effective Jan. 1, 2015, and companies are currently preparing for it.

Taleb argues that antifragile systems don't collapse from shocks, but rather use that information to get stronger. Just as boutique restaurants have a high rate of failure, as a system boutique restaurants are survivors. Depending on what the next shock brings, either a spike in interest rates or further prolonged low rates, the insurance industry could face failures. However, companies with skilled management and effective ALM processes in place will survive and prove that our industry as a whole is antifragile. ■

Assumption Development and Governance Discussion Group

by Liz Olson

Liz Olson is an assistant vice president at Nationwide Financial in Ohio and can be reached at olsonl@nationwide.com.

It is no surprise that companies are devoting more and more resources to assumptions as models become complex and bottom-line results are assumption driven. Best practices around experience studies, assumption approvals and documentation, and monitoring are demanding a much higher level of attention in many companies, whether they have had formal systems in place for years or are just starting to develop them.

A number of actuaries across the industry have met a few times via conference call to discuss assumption practices, and now, with the endorsement of the Product Development and Financial Reporting Sections of the Society of Actuaries (SOA), we're looking for broader participation. Our calls consist of introductions and brief updates on company initiatives, followed by a discussion around a topic of interest.

If you are interested in joining our conversations, please contact me at *olsonl@nationwide.com* or 614.249.0605. I can field your questions and add you to our group. Also, look for announcements around our calls in the SOA updates. ■

REQUEST FOR RESEARCH PROJECT INPUT

We need your examples of your experiences with regulatory risk, from the eyes of both those practicing and supervising.

The North American Actuarial Council (NAAC) Collaborative Research Group has recently initiated a study of regulatory risk conducted by Tom Herget and Dave Sandberg. The risk is the unintended results of regulations enacted to achieve supervisory objectives (or the lack thereof) on the market participants (whether policyholders, shareholders or regulators acting on behalf of taxpayers). This study will include examples of regulatory risk.

While the researchers will be contacting individuals in the US, Mexico and Canada, they would also welcome contributions from a wider pool of contributors who can provide their personal examples of regulatory risk both within and outside of North America.

The researchers would appreciate any contributions section members could make. Please email descriptions of regulatory risk to Barb Scott *(BScott@soa.org)* for consideration by the researchers. Detailed descriptions are encouraged.

XBRL – LET'S GET IT STARTED!

by Uttam Agarwal

The following article is reprinted with permission from the January 2012 publication of *The Actuary India.*

XBRL (eXtensible Business Reporting Language) is a freely available and global standard for exchanging business information. It is an XML based language used as a standards-based way to communicate and exchange business information between business systems.

INTRODUCTION

The financial reporting process in the World and especially in India is undergoing a sea change. XBRL is revolutionizing the way business information is generated, reported and analyzed. XBRL has been mandated by many regulators all over the world including Securities and Exchange Commission of the United States of America, Her Majesty's Revenue and Customs of the United Kingdom, Johannesburg Stock Exchange.

XBRL is an XML based language which allows caters to the specific needs of financial reporting by allowing information modelling and the expression of semantic meaning commonly required in business reporting. This language is gaining world- wide recognition as a revolutionary business reporting language and a global standard for reporting of financial information.

The regulators of the country have found it difficulty to monitor and seep through the huge volume of financial data of the companies. In light of the recent corporate failures XBRL has become a compelling need of the hour. XBRL is expected to not only improve transparency, but also increases the re- usability of the information.

The Ministry of Corporate Affairs has made it mandatory by issuing a circular for companies falling under a certain criteria to file their face financials in XBRL format.

WHAT IS XBRL?

Wrapping your head around XBRL can be challenging. Much of this challenge is similar to trying to teach someone about algebra or calculus if they do not understand how to count or do not understand the mathematical operators of addition, subtraction, multiplication, and division.

But is it really that tough?? The answer is No. Although it involves learning of a lot of new terms, XBRL is not Rocket science! A person will face the same level of difficulties as a college student faces when he first comes across the terms debit and credit, assets and liabilities.

Another common question, and this one's a really big one, is that- Do we really need XBRL???

The answer is yes, definitely yes. India didn't snub computers just because they involve a lot of technical stuff. So India's (Bright India) will never snub XBRL.

This article will give you an insight as to what XBRL is and why we need it.

GIST OF THE CIRCULAR:

The Ministry of Corporate Affairs has made it mandatory for the following class of companies to file their financials in XBRL format as per the General Circular No. 37/2011 dated June 7, 2011. Accordingly, the following classes of companies have to file Balance sheets and Profit and loss Account, along with Director's and Auditor's Report, in XBRLForm only from the year 2010-2011 before September 30, 2011 or if they hold meeting in September, then within 30 days from the date of adoption in the General Meeting as per section 220 of the Companies Act, 1956:

i. All companies listed in India and their Indian subsidiaries;
ii. All companies having a paid up capital of ` 5 crore and above
iii. All companies having a turnover of ` 100 crore and above.

Exemption: banking companies, insurance companies, power companies, NBFCs and overseas subsidiaries of these companies.

These Financial Statements required to be filed in XBRL format would be based upon the Taxonomy on XBRL developed for the existing Schedule VI, as per the existing Accounting Standards.

CONTINUED ON **PAGE 36**

Uttam Agarwal, FCA, ICA (Australia), CPA (Australia) enjoys many professional positions and achievements. He can be reached at uttam@uttamcorporate.com.

GENERAL BENEFITS:

- XBRL allows for the creation of interactive, intelligent data. Each piece of business information has detailed descriptive and contextual information wrapped around it, so that the data becomes machine-readable and can be automatically processed and analyzed.
- XBRL allows business reporting information to be reused and repurposed. A financial or business report created once can be used to create many documents in different formats—HTML, ASCII text, Microsoft Word or Excel—with no loss of accuracy or integrity.
- XBRL adds value to every step of an organization's business information reporting. The entire reporting chain of business information—from data collection through internal reporting and external reporting—will be made more efficient and accurate and will contain more useful data.
- XBRL enhances the ability to compare information from one organization or entity to another, because XBRL lays out a common set of definitions by which all organizations tag their data.
- XBRL allows for unique reporting situations, because it can be extended by a single reporting entity by adding special elements that may be needed to best represent that company.

WHAT ARE THE BENEFITS TO A COMPANY FROM PUTTING ITS FINANCIAL STATEMENTS INTO XBRL?

XBRL increases the usability of financial statement information. The need to re-key financial data for analytical and other purposes can be eliminated. By presenting its statements in XBRL, a company can benefit investors and raise its profile. It will also meet the requirements of regulators, lenders and others consumers of financial information, who are increasingly demanding reporting in XBRL. This will improve business relations and lead to a range of benefits.

With full adoption of XBRL, companies can automate data collection. For example, data from different company divisions with different accounting systems can be assembled quickly, cheaply and efficiently. Once data is gathered in XBRL, different types of reports using varying subsets of the data can be produced with minimum effort. A company finance division, for example, could quickly and reliably generate internal management reports, financial statements for publication, tax and other regulatory filings, as well as credit reports for lenders. Not only can data handling be automated, removing time-consuming, error-prone processes, but the data can be checked by software for accuracy.

XBRL AROUND THE WORLD:

XBRL is growing quickly around the world with increasing participation from individual countries and international organizations. XBRL International is comprised of jurisdictions which represent countries, regions or international bodies and which focus on the progress of XBRL in their area.

A range of national and international bodies and groupings also maintain a strong interest and close liaison with XBRL. They include various organizations representing regulators, banks, stock exchanges and industry bodies.

US Securities and Exchange Commission was amongst the first regulatory authorities to implement XBRL for corporate in the year 2009 itself. Following countries have already implemented XBRL. The following countries have formed organizations for promotion and regulation of XBRL in their respective countries: XBRL Australia, XBRL Belgium, XBRL Canada, XBRL China, XBRL Denmark, XBRL Europe, XBRL France, XBRL Germany, XBRL India, XBRL Ireland, XBRL Italy, XBRL Japan, XBRL Korea, XBRL Luxembourg, XBRL Netherlands, XBRL Poland, XBRL Romania, XBRL South Africa, XBRL Spain, XBRL Sweden, XBRL Switzerland, XBRL United Arabic Emirates, XBRL United Kingdom, XBRL United States, etc.

IN SUMMARY, XBRL IS:

- A freely available, market driven, open, global standard for expressing and exchanging business information.
- An XML language.
- A global consortium of more than 600 members.
- A means of modeling business information in a form understandable by computer applications.

XBRL IS NOT:

- XBRL is NOT a standard chart of accounts. In fact, it is the opposite because XBRL is extensible.
- XBRL does NOT require companies to disclose additional information.
- XBRL is NOT just about financial or regulatory reporting.

Many people tend to try and dumb down the definition of what XBRL is in order to explain it. This occurs for two reasons. First, they think it makes it easier to explain XBRL, but the common result is a poor communication of what XBRL truly is. Second, the person trying to explain XBRL may not truly understand XBRL themselves.

THE BEST DEFINITION OF XBRL IS:

XBRL (eXtensible Business Reporting Language) is an open standard which supports information modeling and the expression of semantic meaning commonly required in business reporting.

XBRL is a language for the electronic communication of business and financial data which is revolutionizing business reporting around the world. It provides major benefits in the preparation, analysis and communication of business information. It offers cost savings, greater efficiency and improved accuracy and reliability to all those involved in supplying or using financial data. It is an open standard, free of license fees, being developed by a non-profit making international consortium.

XBRL is going to revolutionize the world and so every company should be ready to be a part of this change.

XBRL is a revolutionary technology, a chance for Indian companies to race at par with the world. Everybody has heard, “Make hay while the Sun shines,” well, XBRL is here, what we make out of it depends only on us. ■

Financial Reporting Research Scorecard

By Sam Keller

Sam Keller, FSA, MAAA, is an actuary at Allianz Life Insurance Company in Minneapolis. He can be reached at sam.keller@allianzlife.com.

Research is a primary mission of the Financial Reporting Section and is the largest use of section dues. This scorecard will keep section members informed about research projects sponsored or co-sponsored by the section.

Research initiatives in process (updated as of 4/11/2013):

Project Name	Description	Targeted Comp
Monograph on Discount Rates	An IAA-sponsored monograph on the concepts and practical methods used in discounting across actuarial practice areas.	Q2 2013
Monograph on Risk Adjustment	A monograph addressing the application of risk and uncertainty in the measurement of insurance liabilities.	Q3 2014
Principle-Based Approaches Implementation Guide	This study will produce a resource for practitioners regarding practical implementation issues around PBA.	2013
Setting Dynamic Policyholder Behavior	This study will produce a resource for practitioners regarding practical implementation issues around PBA.	2013
IFRS	Examines the impact to life insurance financial reporting of the upcoming IASB Exposure Drafts on accounting of insurance contract liabilities.	TBD

Recently published research of interest to Financial Reporting Section members:

Project Name
Volatility of Fair Value Accounting
Comparative Failure Experience in the Insurance and Banking Industries

Research projects out for proposal:

While there are currently no Financial Reporting research projects out for proposal, please visit *http://www.soa.org/Research/Resea*

Have an idea for a research project? Send it to Matt Clark (*matthewclark@deloitte.com*) or John Esch (*john.esch@allianzlife.com*). ■

pletion	Status	Project Oversight Group (POG) Contact
	The research team has reviewed comments from the exposure draft and produced a revised draft currently being reviewed by the oversight group.	Frank Grossman
	The POG (Project Oversight Group) is reviewing an alternative project plan to accommodate delays encountered around the sourcing and vetting of research materials.	Mark Yu
	The POG has selected a finalist and is proceeding with project kick-off.	Ronora Stryker
	Contract negotiations are continuing with the research finalist and project planning calls are ongoing.	Katie McCarthy
	Researchers are continuing to work with actuarial task forces to assemble financial statements under U.S. GAAP and IFRS bases. Research presentations are being organized with Asian actuarial organizations.	Tom Herget

	Link
	http://www.soa.org/Research/Research-Projects/Life-Insurance/research-how-fair-value.aspx
	http://www.soa.org/Research/Research-Projects/Life-Insurance/Actuarial-Modeling-Control.aspx

arch-Opps/Research-Opportunities.aspx at any time for a comprehensive list of SOA research opportunities.

On the **Research Front**

The following is a list of current research studies that will pique your interest and keep you informed.

2007-09 U.S. INDIVIDUAL LIFE PERSISTENCY UPDATE

This report presents the results of the most recent study of individual life insurance lapse experience in the United States conducted jointly by LIMRA International and the SOA. The observation period for the study is calendar years 2007-09. The study is based on data provided by 27 individual life insurance writers and presents lapse experience for whole life, term life, universal life and variable universal life plans issued between 1910 and 2009. An Excel spreadsheet is available which contains supporting source lapse rates for figures within the U.S. Individual Life Insurance Persistency report. *http://www.soa.org/Research/Experience-Study/Ind-Life/Persistency/2007-09-US-Individual-Life-Persistency-Update.aspx*

ACTUARIAL MODELING CONTROLS REPORT POSTED ON WEBSITE

As the life insurance and annuity industries move toward model-based approaches to reserve and capital valuation (MBV), actuarial models are increasing in complexity and sophistication, while the imperative to avoid modeling errors is also increasing. In a new study sponsored by the Financial Reporting Section, Committee on Life Insurance Research, and Committee on Finance Research, actuarial modeling control practices are examined. Authored by Sara Kaufman, Jeff Lortie and Jason Morton of Deloitte, the report summarizes the results of an online survey and follow-up discussions with survey respondents on the control systems U.S. and Canadian life insurance and annuity companies have currently implemented. The report then evaluates the current state against the controls expected to be in place upon adoption of MBV approaches and increased external scrutiny, and proposes considerations for enhancing the current state to get to the necessary controls within a more highly controlled model framework. *http://www.soa.org/Research/Research-Projects/Life-Insurance/Actuarial-Modeling-Control.aspx*

SOA COMMITTEES, SECTION RELEASE LIVING TO 100 MORTALITY OVERVIEW REPORT

Get a good overview and analysis of the mortality models, theories and trends contained in the papers presented at the past four international Living to 100 symposia by reviewing a new report sponsored by the Society of Actuaries' Committee on Life Insurance Research, the Committee on Knowledge Extension Research and the Product Development Section. Authored by Jennifer Haid, Michael Chan and Christopher Raham of Ernst & Young, this paper offers an overview of the technical materials related to data sources, validation techniques and methodologies used by practitioners to develop mortality estimates for present and future periods. A summary of discussions regarding business, policy and social implications of increased longevity is also included. *http://www.soa.org/Research/Research-Projects/Life-Insurance/soa-living-100.aspx*

NEW REPORT, "RECOGNIZING WHEN BLACK SWANS AREN'T" JUST RELEASED

Read this new research report, sponsored by the Reinsurance and Joint Risk Management Sections and Committee on Life Insurance Research, to better recognize, assess and respond to emerging events. Authored by Guntram Werther of Temple University with the assistance of Thomas Herget, this paper provides a holistic framework for foreseeing large scale, large impact rare events (LSLIREs). The report covers, among other topics, the definition of a black swan vs. LSLIRE; why current recognition methods for these extreme events fail; potential solutions for better foreseeing emerging LSLIREs; and how to improve timing and recognition of the trigger points within an LSLIRE. *http://www.soa.org/research/research-projects/life-insurance/research-2013-black-swan.aspx*

NEW REPORT JUST RELEASED ON LIFE REINSURANCE TREATY CONSTRUCTION

Reinsurance treaty negotiations can be a long process that may lead to lengthy, unwieldy documents and negative experiences for the direct writer and/or reinsurer. The SOA's Reinsurance Section and the Committee on Life Insurance Research have just released a new report on Life Reinsurance Treaty Construction. Authored by Steve Stockman and Tim Cardinal of Actuarial Compass, this report discusses the importance of many reinsurance treaty terms/provisions, identifies common treaty structures, practices, and/or solutions in reinsurance treaty construction and negotiation and illustrates how treaty terms have evolved over time. The knowledge from this research will assist individuals involved in reinsurance treaty negotiations to optimize resources and success in future reinsurance treaty development potentially leading to enhancements in current processes and treaty language, as well as a reduction in the length of time needed to complete negotiations. *http://www.soa.org/Research/Research-Projects/Life-Insurance/Life-Reinsurance-Treaty-Construction.aspx*

REPORT COMPLETE: COMPARATIVE FAILURE EXPERIENCES OF BANKS AND INSURERS

Much has been written about the underlying causes and effects of the most recent financial crisis. The effects of this crisis on financial institutions have certainly differed in the United States, compared to Canada. A new study, sponsored by the Financial Reporting Section and Joint Risk Management Section Research Committee, and authored by Stephen Robb, Paul Della Penna, and Alicia Robb, examines what factors account for these differences; how the recent events differ from previous financial crises; and how their effects differ among the various types of financial institutions. The research uncovered limitations in the available data for the number of failures. The research also indicates that without good data, setting public policy or solving the problems that led to the financial crisis might be difficult. *http://www.soa.org/Research/Research-Projects/Life-Insurance/research-*2013-comparative-failure-exp.aspx

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