

RECORD, Volume 28, No. 1*

Colorado Springs Spring Meeting
May 30–31, 2002

Session 61PD Risk-Based Capital Update

Track: Investment/Financial Reporting

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Summary: Each year the NAIC updates its risk-based capital (RBC) formula. Year-end 2001 included changes due to codification and other improvements. This session covers these changes, the impact they have had on regulators, the rating agency reaction and proposed changes for 2002.

MR. ALASTAIR G. LONGLEY-COOK: We're going to talk about what's been happening. Jim Reiskytl is going to talk about some of the changes that were implemented last year and this year. Larry Gorski is going to talk about the regulatory reaction to that and how regulators are dealing with these changes.

I'm Alastair Longley-Cook. I served as AETNA's Corporate Actuary and I'm now at Tillinghast where I consult on capital and risk management, among other issues. I also chair the Academy's Life Capital Adequacy Subcommittee, which deals with RBC issues, makes recommendations to the NAIC on what the Academy thinks are appropriate RBC standards or advises the NAIC on their questions regarding what makes sense from an actuarial standpoint. I'm going to talk briefly about how the rating agencies are dealing with RBC changes and also spend a few minutes on what's being discussed for next year.

Jim Reiskytl, our first speaker, is currently vice-president of tax and financial planning at Northwestern Mutual. He is very active both in the Society, where he

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has been on the Board of Governors as vice-president, treasurer and secretary, and in the Academy, where he is involved in several task forces.

MR. JAMES F. REISKYTL: How many of you have actually done a RBC calculation? It looks like about half the people here at least know what we're talking about, and that's good.

MR. LARRY GORSKI: The question is, which half should we be concerned about?

MR. REISKYTL: You might wonder why we keep changing RBC. Well, if the world would just stand still, we would stop changing it. But the world keeps changing and we try to improve it. And I think we try to recognize the amount of work that goes into making changes and try to make changes that are most effective.

What's the focus of RBC? Hopefully, you're well aware of it. But I want to reemphasize that it's to identify potentially weakly capitalized companies. There's no intent to tell you how much surplus you should hold for a well-run company. Previously, you needed \$1 million–\$3 million and you were in business. That obviously was a pretty sloppy measure of how much capital you should have or when you should be taken over.

The RBC formula will not tell you everything you need to know. That's where the regulator has the ability to come in and review in detail what a company is actually doing and then make a decision—hopefully, working with the company to resolve the issues that are leading it into a weakly capitalized position long before it would reach insolvency or a takeover point.

So that's background. Here is the list of changes that I will touch on today there are some others: C3 Phase 1, the interest rate change risk; common stock covariance; the recognition of deferred taxes; disability income refinement to the formula; and separate accounts that guarantee an index. I want to expand on the first two.

Codification, of course, was designed to produce a consistent treatment throughout the industry in an accounting structure. That consistency led to changes in RBC, only because it could affect the amount of total adjusted capital or it could affect when you take write-downs or whatever may occur.

And that varies from company to company. There's no one way of measuring exactly what codification did to any company, since it's dependent on what its practices were relative to what the codification requirements were after they were completed. And so the results there will show up in one number, as you know, at the beginning of the year as the codification changes.

As we went through the codification changes—an opportunity to review everything that occurred in the formula and in the process—we found, from time to time, a few inconsistencies. Things where we have put things in and they logically should have carried over to other lines of business or whatever it may be. So we took the opportunity to make the format as consistent as we could.

As you know, there are three formulas: life, property/casualty (P&C) and health. We have identified the differences in the three and attempted to either define why they're different or take some actions to minimize those differences.

Separate accounts that guarantee an index. You might start with a premise that that should be fairly easy to do. In fact, the original formula assumes only that your investment strategy was consistent with whatever your guarantee was and, hence, the RBC factor was very low. We found out that a number of companies were, in fact, investing in T-bills and Standard & Poor's (S&P) futures. They were doing a variety of things.

So, how do you get at this variety? What this proposal does is to look at the tracking year between the performance of your funds and whatever you guaranteed—look at it over 100 months or 100 periods (different rules apply depending on how long your fund has been in existence in an attempt to move to this 100 month standard).

Basically, it is attempting to look at where your credit, your duration or your risks differ from whatever you guarantee, establishing an annualized mean and the standard deviation in coming up with a risk factor to reflect the differences between what your investment strategy and the results are, as compared to what you guarantee. And that change, we feel, was appropriate in moving the formula in the right direction.

C3 Phase 1: To identify the weakly capitalized companies, we concluded that one could not get at the variety of ways that the cash flows of the company were being measured relative to the risks by using a simple formula.

So we had to look at the company's own experience and the products that would be affected. We tested all the products, or at least a representation of all the products, and concluded there were two that needed further work: annuities and single premium life. We also realized that there were some assets, independent of product lines, that were extremely interest sensitive: callable assets, interest onlys (IOs) and others that should deserve separate treatment because of their relative riskiness.

So, for the first time, we recognized a lot of what the actuary was doing now for asset adequacy testing and simply expanded it to cover the RBC needs for this criteria.

The actuary would have to assess whether the assumptions built into that cash-flow testing were appropriate in the tails of the distribution. He or she may have to change assumptions and make them more dynamic. They may have well worked for reserve purposes, but may or may not be as effective for capital measures. So we put the burden on the actuary to say, "Yes, I believe that these are appropriate representations in the tail."

We also put in, which made it challenging but absolutely essential, that we avoid double counting because, if you do cash-flow testing, you can be picking up a lot of different criteria; and you may accidentally pick up areas that are reflected elsewhere in the formulas and already being accounted for.

First we needed some interest scenarios. We developed scenarios to test and have done a lot of work to figure out exactly what scenarios we may want to test.

We developed the scenarios, including real diverse things like barbells, and tried to deliberately mismatch as much as we could. Because we were focused on weakly capitalized companies, we didn't require everyone to perform cash-flow testing. We're mindful of the work pressures that you're under and all the things you have to accomplish. Hence, we wanted to have only selected companies do it, those that would be most potentially vulnerable. We put in a couple of tests to get at who should do this work, and the number of companies that remained to do it are relatively modest and I think that's good. We accomplished our goal of indicating where companies may need further work.

Now I'm going to move to three changes we made in unaffiliated common stock. The first was an adjustment. As you may know, if you have looked at the formula, the factor is 30 percent. I will quickly point out when we get to taxes later that what I'm talking about here is all pretax numbers, so it converts to 20 percent later, but that's the next part of my presentation. At the moment, just realize that these are pretax numbers.

Beta adjusts for the relative volatility of the individual stocks in your portfolio. If you've been doing the asset valuation reserve (AVR), you use the same data that's being used there. The resulting beta recognizes the relative riskiness of your portfolio. There is a floor at 75 percent and a ceiling at 150 percent, which translates into factors of 22.5 and 45. If you don't even want to do this work, you can simply use 45 percent.

The second adjustment was made to the concentration factor on assets. It's been part of RBC for as long as we've had RBC. We didn't have one for common stock because common stock was the highest factor, and we accepted the maximum as the common stock factor.

Now that the common stock factor can vary and because of the next change, which was a covariant treatment, we added a concentration factor. We're

increasing the factors by 50 percent for the five largest exposures. If you look at the underpinnings of it, we think about one-third of the variance in the returns that were measured couldn't be explained by just broad movements in the market. So we came up with a 50 percent factor and, again, we wanted to make sure that we weren't double counting and that this does not include mutual funds. Mutual funds should have their own diversification; to put them into a concentration factor seemed inappropriate.

The third major change is covariance, in that we finally are recognizing the independence of the common stock from the credit default risk. Additionally, we're going to break up C1 into two pieces, the common stock component and the other component. We'll put all the common stock risk in one and the remaining risk in another factor. What we have done here is, by putting the terms under the radical, it suggests that they are independent of each other. So you have the C1 now with C3, squared, one term, and then common stock in a separate term and so forth.

As I mentioned as I began my presentation, this is one effort to bring the formulas into line with each other. The P&C and health formulas have been doing this all along, and the life formula had not recognized it, so we eliminated one difference between the formulas. This is a significant change in common stock.

Probably the biggest single change that came out of codification is deferred tax recognition. When you look at the deferred tax recognition, you have two pieces: total adjusted capital (and that's the easy part, so I'll talk about that first) and then what it does to the RBC, which is the formula itself and the different risk factors.

This short presentation doesn't do full justice to the many hours that we spent discussing this topic. At first it was a basic understanding of taxes, and then the fact that, with the deferred tax assets (DTAs) and deferred tax liabilities (DTLs), the NAIC didn't simply adopt the GAAP definitions. They put some further constraints on the recognition. And so we had to look over this entire universe, bring everyone to the same common understanding and I'm pleased to say we ended up with a consistent result.

With deferred tax assets and deferred tax liabilities, our major goal as the Academy committee was to say we shouldn't guess what the codification people have decided to do to recognize these. Hence, since they have chosen to recognize them in the financial statement, it seems only reasonable that we would recognize those in total adjusted capital.

I'm pleased to say that all three formulas (life, health and P&C) recognized DTAs and DTLs. That too was the result of a lot of work. Initially, it was only the life group that recognized them, and the joint RBC committee then sent it back to the health and to the P&C groups and said, "Either come up with a rationale as to why you want to be different, or make them consistent." And the other groups, after

considerable discussion, concluded that they didn't have good reasons for making them inconsistent and, hence, agreed to recognize all three formulas.

The other piece of this is RBC. We began this effort by classifying all of the items as either taxable income or taxable capital gain items. Why did you go to all that trouble? And what's the background of these classifications? Well, when taxes were being discussed, the regulators wanted the freedom to either recognize or not recognize taxes. They also wanted the ability to implement future changes very easily. And the simplest way to do that is to develop both pretax factors and posttax factors, so that, if the tax factor were to change on income or capital gains, they could simply go into the tax factor part of the formula and change the factor. Everything could be adjusted without going back and changing all of the individual factors.

So the initial interest, when the NAIC wasn't quite sure how much they wanted to recognize the tax, created this thing, but it also gives us great flexibility for the future if there are changes. The decision on C2, C3 and C4 (pricing and the interest and general contingency risk) was that they are really all taxable income items.

Regarding covariance, clearly, the stocks and bonds are not totally independent, but they are closer to independent than dependent. I think the factor we came up with was 20 percent.

Is every component in C2, C3 and C4 an income item? They generally are and, therefore, it's a surplus treatment. Likewise, all the capital gain items were C1, which we needed to be investment capital gain treatment.

Recognizing deferred taxes changes most of the C1 factors. To decide what were the appropriate factors, we actually went back to the original development of the factors. Fortunately, Mike Zurcher and Joe Dunn were able to reproduce the original models so we could show both what would have been and what would be the new tax recognition. The original work assumed 50 percent recognition, with a one-year delay. If you had a bond loss, we said the write-down may occur before you actually sell it, so we just put in the one-year delay. It had to be somewhere between zero and 100, and 50 percent seemed like the logical thing.

We realized, with a new deferred tax recognition, if it was complete, you'd say it ought to be 100 percent. But, because there were some restrictions on it, we said it should be somewhat less than 100 percent and used 75 percent for recognition.

We assumed full recognition on equities—that was built from the assumption and the premise that, in general, you would only invest in common stock if you were able to achieve capital gains over time. And most of the time you would have large unrealized gains; hence, full recognition was appropriate. Although there could be rare instances when your entire portfolio was under water.

Real estate had already been fully tax adjusted so there was no change in that factor. As I said earlier, we reran this original bond development with the new assumptions and didn't change anything as far as the experience. We didn't try to update the defaults or the write-downs to change that at all. We simply looked at that and also found that we had to make a few other improvements.

One of the changes we had to make was that, when the original work was done, the AVR had a little different form, so we adjusted the AVR factors to reflect what was subsequently refined.

One of the things that we found was rather surprising, at least to some of us. It will remind us what will happen that if you don't have an AVR, or if you didn't have an equivalent structure where you set aside your risk premium each year. What am I talking about? Say you have a class-six bond in a Treasury and you get paid more in the class-six bond than in a class-three bond—that difference we'll call the risk premium. Well, clearly, risk premium means you expect to have some losses because some people aren't going to pay off on those obligations.

So the AVR equivalent structure has to set aside that amount each year so that, when losses occur, you have the money there. If you don't set that money aside, then each year all that extra yield goes right out through the gain and you don't have it; and, hence, losses occur. It's fairly logical that you're going to have a larger risk factor than if you have set aside some money.

It's also an interesting fact that the one-year delay factor also had a very large impact. It was as large an impact as going from 50 percent to 75 percent in the tax rate recognition. The old and new factors are fairly close until you get to the high risk classes, like a common stock with 30/20 percent. The two biggest changes are on common stock and high yield bonds.

We don't have to do anything to C2, C3 and C4 because they already have full tax recognition, except for health insurance where the tax factor was assumed to be zero. We found a disproportionate number of health companies that were in a weakly capitalized condition. We also found that many of them were not taxpayers, and, hence, we use zero except for disability income and long-term care.

The new asset concentration factor now has a minimum of 0.8 percent and a maximum of 45 percent.

And, to give the regulator one additional tool, we introduced a new sensitivity test. We're going to do everything pretax for RBC and for the total adjusted capital; that is, we would eliminate the DTA and DTL effect.

We also looked at the impact of subsidiaries. This would give regulators the ability to look at an individual company, and their own tax agreements and everything else within the companies, and their actual tax structure, to decide as you moved into the weakly capitalized position, what appropriate recognition was. If you had both no recognition and the full recognition, as recognized in this formula, you could use anything in between that was appropriate for a particular company's situation.

A few comments on disability income: We've introduced a number of new categories between 9K and guaranteed renewable, and major changes on the group factors for credit monthly balances, long-term and short-term.

MR. LONGLEY-COOK: Larry Gorski also needs very little introduction to most of us. He is chief actuary of the Insurance Department of Illinois and very active in both Society and Academy issues, particularly with regard to RBC. He chairs the Risk-Based Capital Working Group that interacts with the Academy committees and subcommittees on RBC.

MR. GORSKI: My responsibility is to talk about the regulatory responses to the changes Jim discussed, but I'm going to go a little deeper than that. I'm not only going to talk about those specific changes but also about the fact that things are changing. I want to set the stage by taking you back 10–12 years ago when the RBC formula was developed.

The primary focus then was on traditional default risk and the traditional risk associated with health products—the C1, C2 components. Asset adequacy analysis was in its infancy. I don't think any companies had actually submitted a Section 8 opinion by the time the RBC formula was implemented. If they did, it was during the first year or so. We didn't have X factors for life insurance reserves. Certain products that are common now were not even thought of 10, 12 years ago, primarily equity-indexed annuities and the guarantees on separate account products.

Risk management was something that a few people talked about, but clearly it was not on the agenda of 50 percent of the SOA sessions. So the world was quite different and there were different principles that were used as the foundation for RBC.

Here is where my story begins: basic principles. RBC was not intended to rank insurers, but simply to differentiate between well-capitalized life insurers and poorly capitalized life insurers in a way that reflected the risk characteristic of the insurer.

One of the principles was that the RBC formula should utilize annual statement information. That principle was probably violated on day 2 in development of the formula, but it still is something in everyone's mind as we go through the evolution of the formula.

The RBC formula assumes a well-managed company and the RBC factors reflect the statistical variation experience. I think this fact is probably over looked by regulators more than anything else. Many regulators expect a lot more from the RBC formula than it was ever intended to deliver. RBC is a regulatory tool—it should only be used in the context of the RBC law.

So those are the principles that were guiding the developers of the formula 10–12 years ago. How has the formula evolved over time? Insurers use the RBC formula for capital adequacy and capital allocation purposes. Regulators use it to form decisions concerning the approval of stockholder dividends.

The RBC formula is much more dependent on company records and internal models than originally expected. This comes as a surprise to many regulators, who are the users of the RBC formula. I'm speaking from my own experience in Illinois. We have financial analysts, examiners and the actuarial staff. I think the actuarial staff is quite knowledgeable about the foundations of RBC. But once you get to the analyst and examiner stage, all they know is the ratio and that's it. They have no idea how one gets to that ratio and, hence, they have no idea that there is a lot of nonannual statement information behind the results.

Jim mentioned the C3 Phase 1 project. The C3 Phase 2 project—when I talk about management skill, that's what I'm referring to. Jim did a good job in describing the C1 project and the changes there, the impact of codification on DTAs and DTLs. Later, I'm going to present some quantitative information on both those changes. Because that information is only contained within the RBC report, it's confidential. Jim and the other Academy committee members don't have access to that—only regulators do—so the last couple of years I've made it my practice to disseminate information so we can see how that's playing out.

Dependency on company records—that's the thing that most regulators, outside of the few of us who are actually involved in working on the formula, really have a good feel for. So, I identified some examples just to point out that dependency on company records really appears in all parts of the formula.

Managed care credits, for example, deal with the recognition of different approaches to management of care within the health care environment. To do this calculation, you have to rely on company records by allocating your claims by different managed care techniques, and it ends in an adjustment factor to your health component of RBC.

Multiyear premium guarantees—again, it's a health insurance item, but it would tend to increase RBC to the extent that a company is making multiyear premium guarantees on it's health products.

Callable, prepayable assets—Jim alluded to that issue cropping up two years ago in the RBC formula when we were working on the C3 Phase 1 project. I've got quite a bit more to say about this in a few moments.

C3 Phase 1 Jim has talked about, and I'll give you some results later on. Jim didn't mention this one, but I'm going to: transfer of risk and modco reinsurance and coinsurance with funds withheld. Maybe five years or so ago, the RBC formula began to recognize the fact that, in a modco treaty or coinsurance with funds withheld, technically the treaty is supposed to transfer risk to the assuming company, and in fact it's doing that. The RBC formulas should recognize the fact that the ceding company's risk exposure is decreased and the assuming company's risk is increased. That's sort of an ivy-tower approach to insurance regulation, as I found out this past year, so I'll have more to say about this item in a few moments also.

Alastair will be talking about the C3 Phase 2 that's on the horizon at the next session and maybe at the workshop, so I really won't say anything about that.

There are other items that have been changed. Let me just mention here the asset concentration factor and the common stock concentration factor. And the reason I'm including this within the list of the changes or the evolution of the RBC formula, is that each of these, to one extent or another, depends on company records, as opposed to directly based on annual statement information.

The upshot of all my comments is that regulators are somewhat concerned over the direction in which the RBC formula has moved, maybe on a hit-or-miss basis for several years. Maybe it's now on a more organized basis. And the fact that the formula is becoming so dependent on nonannual statement information that we're starting to be concerned over the quality of the RBC report has some implications, which I'll get to.

The first implication is that it's more work for regulators. As I said, companies use RBC for capital adequacy and capital allocation purposes. That means it's often used by companies to justify or support at least the magnitude of stockholder dividends, particularly extraordinary dividends. These transactions often take place early in the calendar year. That means regulators have to do an awful lot of work verifying the information that goes into the RBC report.

The fact is, we can't do all that work in a short period of time. We may need certifications from actuaries and other professionals to accompany the RBC report. Right now, there is one certification that's required for the handful of companies that have to do the C3 Phase 1; it's a very simple certification. Based on my experience this past year in reviewing RBC reports in much more detail and, in particular, the validation area reports that are produced by the NAIC, there are validation error problems with the RBC reports. I'm beginning to think that we need

a much more structured framework for certifications that may be somewhat similar to what exists for the annual statement.

Jim started his comments with a question about how many people actually had performed an RBC calculation at the beginning of the year. Based on the hand count, he said about 50 percent and I, only half jokingly said, "Which half should we be concerned with—the ones who did the report, or the ones who didn't?" I said that because, based on my experience this past year in reviewing the RBC reports, I'm not a happy camper. That's all I can say.

To give you an example of the poor quality of the RBC reports, let's consider the common stock concentration factor—which, albeit, was a change to the RBC formula this past year and is dependent on nonannual statement information to some degree. Some companies with common stock exposure simply decided not to do the calculation. It's kind of funny to say, but that's true, and I don't know how else to say it.

Once I really got excited about this presentation today, we started doing all kinds of audit work, which we've never done before in Illinois. Probably other states don't do it either. We simply ran a report on companies who were reporting unaffiliated common stock, just to see if there was a common stock concentration factor amount in the RBC report (I think it's page RR11). I was surprised by how many companies report common stock, unaffiliated common stock and it's nonmutual funds, who simply didn't do a common stock concentration factor.

The mortgage adjustment factor is another point. Again, it utilizes nonannual statement information and basically we have to accept the factor that is in the report—there's no question that people are using the right factor. But you have to adjust the factor based on your company's specific default and bad-loan experience relative to industry experience. The industry experience factor, the denominator of the calculation, is published each year by the NAIC on it's Web site in December. That's something amenable to a cross-check process.

Well, I decided to see how many companies are using the wrong denominator in this adjustment factor. My guess is that probably 20 percent of the industry uses the wrong factor. Here's what is needed:

More frequent reporting. Maybe I should say more frequent and comprehensive reporting, is needed. Comprehensive means that we may start asking for disclosures of the worksheets that go behind some of the nonannual statement company record components of the RBC calculation. And, for those companies who utilize RBC results to support or justify extra dividends, we may start requiring RBC calculations throughout the year, rather than just as a one-time event.

More transparency. Maybe the best way of dealing with the issue of poor quality RBC reports is to make the whole report public. We simply put it out there and let companies look at what the other guy is doing, and that may make everyone take the whole thing a little more seriously.

More work for regulators. Usually, on one hand, when I say that some initiative is more work for regulators, the industry response is, "Well that's what you have examiners for." And that's true, we do have examiners for that purpose. On the other hand, RBC is a tool for real-time decision making. The examination process is usually a year or two behind, so we can't really use the examination process for most of the RBC review process.

Reviewing memorandums supporting the RBC certification. That really goes hand in hand with the next item, reviewing the certifications themselves. Again, this refers to the C3 Phase 1 project. Later on I'll give you some information on how many companies had to do the cash-flow-testing-type C3 calculations—it was something like 42 or 43.

Reviewing the certifications. A certification is required in conjunction with that. And companies should have a memorandum supporting the actuaries' work. Illinois had one or two companies that were required to do that, so it's quite easy for me to review certifications and memorandums. I don't know how much other regulators review them, because I'm not sure how aware they even are of that component of RBC. Nevertheless, for those that do, I think it's necessary to dig into both the certifications and memorandums, read between the lines, make sure that the assumptions being used for RBC purposes make sense, etc.

Creative use of annual statement data. There is only a limited number of situations where we could use that. As Jim said, two years ago the C3 component was modified in two different ways. There was a requirement to do cash-flow testing for some companies and everyone had to recognize an additional RBC charge for callable and prepayable assets.

I think we all know what callable is. When I say prepayable, I'm talking about mortgage-backed securities and focusing in on the exotic mortgage-backed securities, the IOs, the principal-onlys, things like that.

The work we did this year was with only one of our domestics. And, when I looked at the RBC report, I couldn't believe the amount it put down for callable and prepayable assets. It was way, way too small based on the size of the company and the knowledge that I have about that company. The procedure we use is dependent on the annual statement definition of par value. The instructions indicate the par value for bonds should be based on the amount of principle that the bondholder has claim to.

So in the event that you're talking about an IO, if there's immediate prepayment of all the underlying mortgages, the bond has a par value of zero. I'm not sure all companies follow that instruction; they're supposed to, but whether they do or they don't I don't know. This particular company, I was pretty sure that it did, so we were able simply to tabulate the difference between the statement value and the par value, and that is the basis for the RBC chart. You simply take 50 percent of that difference.

So we did that and, once we got done with that calculation, we compared the amount that we calculated with the amount that's reported on page LR 23 of the RBC report, line 1631. We were off by \$59 million or so. We called the company and said, "We've got a difference here, and I'm pretty sure we're right, so why don't you take a look at how you did your calculation."

We were right and, in that particular case, it really wasn't significant, but it was very disappointing because the company had been a very active participant both in the NAIC process and in the Academy process. So, for a company that should be very knowledgeable in this part of the formula to perform like it did, was a major disappointment.

Some results. Just to put things into context, the C3 Phase 1 took all of the products that were subject to the C3 charge and put them into two camps: tested products and all other products and surplus. The RBC factor for the callable, prepayable assets allocated to tested products was a little less than \$0.5 billion. And, surprisingly, almost the same amount was allocated to other products and surplus. So you're talking about a little less than \$960 million, or a little bit less than \$1 billion, that comes out of this one component of RBC. And based on my experience with one company, I'm pretty confident that there may be some significant errors there.

To put this number into context, for 2001, RBC on its reported basis before the covariance adjustment was something like \$97 billion. So we're talking about 1 percent or so of the RBC before covariance. After covariance, I think it was about \$76 billion. So, again, on a percentage basis, it may not be very much, but for a particular company, it may be. And if you start adding together all these nickels and dimes, you come up to a dollar sooner or later.

One thing that Jim didn't talk about at all is the C1 RBC and modco and coinsurance with funds withheld. The current rules basically say that the ceding company is supposed to quantify how much of a reduction in RBC is allowed, because of the reinsurance treaty, with the assuming company. Responsibility for compliance rests with the ceding company. Of course many these transactions take place at the end of the year when the ceding company is very well motivated to reduce its RBC. The assuming company may have closed out its books and is probably not as motivated to increase its RBC.

There's no penalty for breaking rules. What's the regulatory response? Well I think the immediate regulatory response is going to be a suggestion to eliminate this from the RBC formula, and not give any credit for this transaction. There are two reasons for that. One reason is that the performance, to date, as measured this past year, has been less than stellar. And, secondly, in looking at the reinsurance treaties that generate this element of the RBC formula, I question whether risk is really being transferred in some of these treaties.

If we take a look at the regulatory framework to transfer risk for these kinds of treaties, it spells out some pretty explicit instructions. I looked at a couple of reinsurance treaties involving domestic companies that, unfortunately, had been approved by our department because of a lack of experience in this area. And I know that credit risk wasn't transferred.

Regulators can do some auditing to try to detect the most odious abuses of this—it's cumbersome, but it is doable. We have a facility called "Pick a Page" that allows us to look at specific pages of annual statements and RBC reports, not only from domestic companies but also from foreign companies. And, since we don't get the RBC reports from nondomestic companies, this is really the only way to see if a nondomestic company is putting up the RBC that it should be. But, again, this is on an aggregate basis and not on a company transaction basis. It's not like Schedule S, where you see reinsurance reserve credits and reinsurance additions.

This is probably an area ripe for some kind of certification, if we get over the hump of simply disallowing this. And it may be also be ripe for more frequent and comprehensive reporting.

I did pull some information from the year 2000, and the RBC, after covariance adjustments but at the company action level, is about \$76 billion. That gives you a baseline.

The reinsurance reduction in C1 RBC for all companies reporting any, was \$2.7 billion. The flip side is how much was added by the assuming companies, \$0.4 billion. Now, my first reaction was to chuckle, but once you think about it, you should not expect equality because some of that reinsurance is with off-shore companies and we don't get any RBC from them. So I wasn't expecting a dollar-for-dollar item, but I was expecting something maybe a little bit closer—\$2.7 billion to \$0.4 billion! And this feeds into my concern about the whole process.

C3 2001 results. First, I'll give you some information on the companies that had to do the cash-flow modeling approach: 43 insurers. For year-end 2000, it was 48, so it was fewer in 2001. To break things down by size, out of the 40 insurers that had \$10 billion or more in assets, seven of those companies had to do the testing. Of the 37 who fell between \$5 billion and \$10 billion, again seven had to do the testing. Of the 127 companies between \$1 billion and \$5 billion, 15 had to do the

testing. Fourteen companies had less than \$1 billion dollars and had to do the testing also. So that gives you some sense of how many and what categories companies are at.

Now for the results. There's a two-step process. You do your C3 cash-flow testing and come up with an RBC based on modeling. Then, when you put that all together, it's subject to a floor and a max. The percentages I'm giving here are prefloor, so these are not adjusted for the flooring and the ceiling process. So, 19 insurers claimed that, as a result of cash-flow testing, they should be able to hold no RBC for the products tested; 14 insurers, somewhere between zero and 25 percent; three insurers, 25–27 percent; two insurers, 70–100 percent; and five insurers in excess of 100 percent.

I can only hope that the regulators in which these insurers are domiciled are taking a close look at all these results—not only the ones in excess of 100 percent, but also those below just to see if the work is being done appropriately.

Of the five insurers that reported RBC in excess of 100 percent, I think two, but maybe only one, was subject to the maximum. There was one company that, if they had to report RBC on the modeling basis, would not be subject to the ceiling. I think its RBC would have been about 600 or 700 percent of what it would have been on the factor basis. So I hope that that state of domicile is looking very carefully at that company.

What does this mean for regulators in terms of additional work? We should be reviewing the memorandum of support of the certification. Reviewing memorandums, you immediately become aware of the fact that many people have a hand in putting together the C3, so you have to start determining who is responsible for what. That may require some certifications—obviously, there a need to review assumptions and compare them with what is used for the reserve testing and asset adequacy analysis.

We should be testing the allocation of callable and prepayable assets. Make sure the interest rate model was used correctly. We may start looking for second opinions on this part of the regulatory framework. And, lastly, as regulators get more involved and more used to this work, we may start asking whether we should develop a review manual for regulators so we can do a good job here. But, also, once we start moving to C3 Phase 2, there may be a need for the review manual to take that into account.

Jim spent a lot of time talking about the impact of codification. And some regulators have expressed concern over the recognition of DTAs and the tax-affected RBC factors. And I will conclude my comments in that area.

There is some interest in recalibrating the formula. The authorized control level (ACL) is 50 percent of the RBC. Some people are suggesting ratcheting that up to some other higher number. Others have suggested leaving the ACL alone and doing some modifications to the company action level and the regulatory control level. The gist of it is that you have some people looking at changing that part of the RBC law.

Others have suggested that risk not addressed in the formula should be identified and/or reviewed with current factors in light of experience.

As a response to all of this, the RBC Task Force formed a subgroup to address concerns that have been expressed and make sure they're addressed in a consistent fashion over all three of the formulas. Since the health formula is the most current, it's probably going to get a pass this time, but the life formula and the P&C formula are definitely being reviewed within this context

To pick up on Jim's comment about both the reported RBC and the sensitivity test, this gives you some information on the impact of recognizing DTAs and DTLs in the total adjusted capital. You see the impact of pretax versus posttax factors, and you can see what happens to the RBC ratio—it basically changes by 230 percent.

On the sensitivity test, which is more conservative because you want to eliminate the DTAs and DTLs and go to a pretax factor basis, the RBC ratio was 465 percent. On a reported basis, it's almost 700 percent, and that difference is what's driving the regulatory concerns over recognition of DTAs, DTLs, and pretax and posttax factors. This gives you a little bit of information on just the DTAs and DTLs to get some magnitudes there.

Lastly, in terms of impact on companies, if you look at an RBC ratio of 2 as being the dividing line between well capitalized and poorly capitalized, we're looking at the authorized control level versus total adjusted capital. On a reporting basis, two companies failed the test, two companies would have been deemed poorly capitalized. On a sensitivity basis, the more conservative of the two approaches, it was 20 companies.

MR. LONGLEY-COOK: Thank you Larry. First I'll talk about the rating agency reaction. There were various quotes from Moody's and S&P, which were part of their commentary letters, basically supporting the changes that were made, but not really going further than that in their commentary. What is important, however, is that the rating agencies are going in the same direction that the regulatory RBC standards are going. That is to say, in the past—and still today for many of the companies—as they review and rate, they have relied on public information. That allows them to plug that into their computer models.

What they are moving toward now is a greater use of company specific-models. And both of them are saying that, "If you're happy with the factors then that's fine. But, if you want to justify or convince us that you need less capital than what those required because of your better asset/liability management or your better hedging or mitigation of risk, then show us the models and the results and we will consider giving you credit for that." That's an evolving process, but that seems to be the direction they're heading.

With regard to the proposed RBC changes for 2002, there's material on so-called Phase 2 that we're going to cover at a later meeting. We'll get into more detail on that if you're going to attend that meeting or the workshop. There also will be some information on the proposed change to the guaranteed index separate account requirement, which Larry and Jim referred to.

I'm just going to speak briefly about where Phase 2 is going. Phase 1 was just looking at interest rate risk. And the way it was approached was to create a model on the Internet that you could download and run your assets and liabilities through. The 50 required scenarios were representative of the worst. The RBC requirement was based on the average of the 92nd through 98th percentiles. So, it's sort of an average 95th percentile requirement, based on present value of surplus in the worst of the years in those scenarios discounted back at a short-term rate.

You may say, "I'm not one of those companies, so what do I care?" What I'd recommend is that it would still be a good idea to run those tests because (1) that would give you a good feel for your exposure to this risk in your company, and (2) who knows, maybe those exemption rules will change and you may find that you're not exempt anymore.

Unlike Phase 1, Phase 2 is looking at the guarantees in variable products, such as guaranteed minimum income benefits, guaranteed minimum accumulation benefits and guaranteed minimum death benefits, that are to be found in today's variable annuities, and perhaps variable universal life.

Rather than dictate a particular model, the proposal the Academy has made is that companies use their own models, but they need to validate them according to certain standards to make sure the tails are fat enough.

The other difference is that, rather than a 95th percentile, we're recommending 90 CTE, which would be the average of the worst 10 percent of the runs. Many of these risks only show up once you get out far in the tail, say the 97th percentile, 98th percentile, at which point things go very, very wrong, very, very quickly. And so therefore, the 90th or 95th percentile might not be enough.

I'll just close here and then we'll open up to questions. The recommendation is before the NAIC; it has its meeting in Philadelphia next week and the various

Academy task forces will be present talking about not only this recommendation, but the issues still to be resolved.

But there is one issue that has evolved since this list was created: The work we've done so far indicates that if you run this analysis and floor the reserves using the proposed VAGLB MMMM, the requirements for RBC become (a) very volatile and (b) relatively high. Are they too high? Who knows? But they are relatively much higher than they are without the flooring. So that has caused some rethinking on the part of the Academy committees, but more specifically the Life and Health Actuarial Task Force, as to the feasibility of having a structure that has MMMM and C3 Phase 2 together.

That will be the subject of a lot of discussion in Philadelphia, so stay tuned. That is an evolving dynamic issue and one that may move us forward toward a method of doing reserves and capital for these products in a way that is more dependent on specific stochastic analysis than some of the deterministic approaches that have been proposed.

Mr. BRUCE STARLING: I work for Brooke Seminars and part of my job is to orient new CPAs to the insurance industry and explain the accounting, financial reporting and RBC. I just have one small question for Jim. Could you help give me a layman's explanation of why some of the tax adjustment factors are at 35 percent and others are at 75 percent over the 35 percent?

MR. REISKYTL: The only factors with full recognition are the income factors. It has always been that way—the fact is that they are income and they're fully recognized.

When you're dealing with asset credit risk and write-downs and changes in classification, obviously, that is not necessarily a taxable event. You have a recognition factor. What do you assume? When will it be sold and the loss at that time? At the time, of course, the tax basis can also be different than your annual statement basis.

So we recognize the difference in the two and act on each, as I tried to say earlier in my comments. It was primarily due to the fact that, in most companies in most situations, you'll have a large enough unrealized gain that you can fully recognize the losses, in fact, when you sell the assets. In the case of common stock, of course, it doesn't matter because everything is marked to market. As with class-six bonds, if they're marked to market, then of course you're going to be in the 35 percent recognition bracket.

MS. HELEN HOFMANN: I have two questions. The first is, can you bring us up to speed on long-term care? Some time back there was talk about the fact that the reserving in combination with RBC requirements was sort of onerous. And the

second question I have is regarding the comment that you made that certain assets could pass cash-flow testing, but wouldn't pass for RBC. I was wondering how that could happen.

MR. GORSKI: I'm not sure I understand your second question.

MS. HOFMANN: Then maybe I misunderstood. It says certain assets may be OK for reserves, but not for RBC. I thought that's what you said. I obviously misunderstood, why don't you just go on to long-term care.

MR. GORSKI: What I think I said, or should have said, was that the callable asset piece of the formula was independent of the other piece of the annuities and single premiums. In other words, certain products you had to test, you didn't want to double count, but if you had these assets, you had to set up the C3 Phase 1 RBC, regardless of the products that were supporting them. So, perhaps that got translated into reserves in your mind, or I said something incorrectly, which is possible, but I don't know what else it could have been.

On to long-term care, I could probably answer that in two sentences. Currently the factors are the same as the disability income. As you're probably aware, there is a group working on it, which I also happen to be part of. It's making some real progress. As you know, the data is limited to date, particularly with the changes that have occurred. So when you get the historical data, the products that it represented or the price that you represented, may not represent what's occurring today.

The goal is to have a recommendation by the end of the year to change that factor. And when I say "goal," it will then go through an exposure period, a discussion period. We've made some real progress with the difficult areas and the data is scanty at this point.

MS. HOFMANN: Thank you.

MR. MAX RUDOLPH: I had one comment on the 50 interest rate scenarios. One other use that we found for them is to show this to the rating agencies. Because we have good results it's a very powerful thing, especially if you can convert it into a graphical tool.

Then I had one specific question. On the C1 common stock concentration factor, how do you address venture capital? Is that treated as mutual fund or is that treated as an individual stock?

MR. GORSKI: With the venture capital, the reported Schedule BA or Schedule D, I'm testing it right now as a Schedule BA investment.

MR. RUDOLPH: I guess I'm thinking more of the theoretical—more of what should it be as opposed to what it is? I know, at least for us, where we reported it was common stock. But it seems like it makes more sense to put it in with the mutual funds. You might have 100 companies within that one venture capital fund.

MR. GORSKI: If I understand the spin you're putting on the question, it would be treated as common stock. And I guess the fact that its venture capital, you're probably dealing with startup companies with uncertain futures, which supports my view that it should be treated in the way that it is. Whether it's diversified or not, I don't think there's any requirement that the ownership interest in some venture capital project requires diversification. It does with a mutual fund, and so personally, I would not view it as comparable to mutual fund investment.

MR. BRENT MARDIS: With regard to the C4 component and the treatment of annuity premiums post-codification, are you seeing any consistency from large annuity writers and how those premiums are treated in that component?

MR. GORSKI: I'll give you a little bit of personal experience in that area. One of our domestics for many years was reporting its deferred annuity premium considerations as premium considerations. And, in fact, I know it is traditional deferred annuity business for 2001. Based on some obscure interpretation of codification, it was reported as deposit type business to avoid the C4 business risk components.

I quickly called them and told them the error of their ways. And they said they just made a mistake and they're going to report it correctly. That was one individual company. On the other hand, companies have approached our department through lobbyists, through accountants, what have you, to make some changes to the C4 business risk component. There's a request for change that was reviewed by the Academy early this year, and the Academy stood its ground on the recommendation.

So there is no change coming with the formula. But I do know that at least one regulator in one state granted a company a permitted practice to report its deferred annuity business as deposit business and escape the C4 component. I sent an e-mail message to the person who told me about that saying I think that was a tragic mistake.

And I suspect there is some inconsistency. I suspect the inconsistency may be driven by some possible ambiguities or misreading of codification and possibly some regulatory action in permitting some of the permitted practices.