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Risk-Based Capital for Health Entities

Track: Health

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Summary: As the number of states adopting health RBC continues to increase, an understanding of the workings of health RBC is essential for any health insurer. In this session, panelists discuss such topics as general concepts of the risk-based approach to solvency regulation, recent and emerging developments in the health RBC formula, interpretive issues regarding the health RBC formula, differences between the health and life RBC formulas and strategies for improving one's health RBC position.

MR. ROWEN BELL: I'm with the Blue Cross Blue Shield Association, where my duties include following the developments in risk-based capital that are going on at the NAIC on behalf of the various Blue Plans. In addition to that, I am actively involved in the Academy's Task Force on Health Risk-Based Capital, so I keep involved on both sides of the table. I'm going to lead off with some generalities and additional specifics on the health RBC formula.

John Lloyd is a senior consultant with Ernst & Young, and he's their health actuarial practice leader for financial reporting. He has lots of hands-on experience working with clients and their risk-based capital issues. Prior to his time with Ernst & Young, John spent a lot of time in the Blues and in the commercial industry, mostly with Anthem.

Donna Novak is someone who has a tremendous amount of experience in this issue from a variety of different perspectives. She's worked in the commercial industry,

Note: The chart(s) referred to in the text can be found at the end of the manuscript.

she's worked with the Blues Association, and she's worked for a couple of public accounting firms. Very recently she—formed her own firm called NovaRest, where she does consulting for regulators as well as for small health plans.

We have some different perspectives, and we should be able to give you some useful information.

I'll start with some general basics. I suspect this will be familiar to most of you, particularly if you've taken the SOA exams fairly recently.

The risk-based capital concept is deceptively simple. The idea is to calculate a minimum level of required capital for an insurer, based on that insurer's particular business characteristics: the types of insurance it writes, the types of assets it invests in, and other types of risks on both the asset and the liability sides of the balance sheet.

This is being done for regulatory purposes. The primary regulatory objective behind having a risk-based approach to capital measurement is, quite frankly, that regulators are concerned with solvency. They don't want insolvencies to be a surprise. They want to have some form of early warning mechanism; they want to have intervention thresholds. They want to be able to identify the companies that are weakly capitalized and therefore are at a substantially raised threat of becoming insolvent in the future.

Having said that, I would simply remind everyone that risk-based capital is not a regulatory panacea. It's not the only solution to the idea that regulators need tools to understand the companies that they monitor.

A classic example of that is the fact that risk-based capital does not include any sort of operational measure of liquidity. I see Donna nodding, because she is currently heading up an Academy project, at the request of the NAIC, to look once again at the idea of developing liquidity standards for health companies. A company can be in a perfectly solvent position, can be perfectly fine with respect to risk-based capital, and yet not have the day-to-day operational funds to pay claims. So risk-based capital is not the only metric that should be of regulatory interest.

Also, it's important to note that since risk-based capital was developed and is maintained solely from the perspective of identifying weakly capitalized companies, it's really not a very appropriate tool to be used to make comparisons between healthy companies.

People do this all the time, however, and that's partially spurred by the fact that the output of the risk-based capital formula is part of the annual statement and therefore is publicly available. I think there are many people within the actuarial community who would say that making those numbers public was a tremendous mistake. By publicizing the number, you automatically encourage the sort of

comparison where one company says, "Well I'm at 500 percent, so I must be better than you, who are only at 475 percent."

The issues involved in looking at the optimal level of capital for an organization, or in trying to find out whether a company might be over-capitalized (whatever that might mean) are very different than the ones that are considered within the risk-based capital formula. As for the amount of capital that the company needs, there are going to be issues in terms of what sort of information technology needs they have, and what sort of macro risks there are to the organization that aren't measured at the micro-level within the risk-based capital formula.
Risk-based capital has its limitations and it's important to keep in mind that it is geared for regulators to identify the weakly capitalized companies. It's not geared to make differentiations between healthier companies.

The construct in risk-based capital is that you have this "black box" called the risk-based capital (RBC) formula. You bring in a lot of inputs, and out comes a number. That number is the authorized control level risk-based capital (ACL RBC), which is also referred to as the 100 percent RBC level.

There is, especially among life actuaries, a jargon problem here, as to whether 100 percent is used as the baseline or whether 200 percent is used as the baseline. That jargon problem, I think, comes from the days when risk-based capital was first developed. My understanding is that, at the time, it was thought that what we now think of as the 200 percent level might be used as the baseline. So occasionally you'll see analyses that refer to the 200 percent level as if it were the 100 percent level. If you ever don't like a number you see, multiply it by two, or divide it by two, and see if you get an answer you like better.

At any rate, the schedule of regulatory actions found in the NAIC Risk-Based Capital Model Laws all tee off of this number called the ACL RBC, and more specifically, tee off of the RBC ratio: the company's total adjusted capital divided by its ACL RBC. Any actuarial student could probably recite the meaning of the company action (200 percent), regulatory action (150 percent), authorized control (100 percent), and mandatory control (70 percent) levels — at least they could for three days in May, and/or three days in November, depending on which exam this is on.
The basic difference between these four levels is what actions either the regulator takes or the company takes. It all starts at the 200 percent level with the filing of the action plan by the company, where the company has to defend to the regulator what it intends to do to improve its capital position; ultimately it ends at the mandatory control level, the keys to the company's front door get turned over to the regulator.

As I alluded to a minute ago, the output itself — the total adjusted capital and the authorized control level RBC for the company —those numbers, and therefore the ratio determined by those numbers, appear in the annual statement, thus making it public information. By contrast, the calculation itself is a confidential filing, shared

only with the regulator.

Just to remind you of the general time line here: With respect to what I will call the life insurance industry, meaning companies that file the blue blank, which of course includes many companies whose primary or secondary business is health insurance, risk-based capital has applied to them since the early to mid-1990s. The same is true for companies filing the yellow property & casualty blank, which again includes a small number of health insurers.

During this time, work was conducted on developing an analogous risk-based capital formula for other health insurers, which includes both HMOs as well as the hospital, medical and dental service or indemnity corporations (HMDI) , which is to say the companies that filed the old white blank. All those companies now file the new health blank, the blank that is common to both HMOs and these HMDIs, which are mostly Blue Cross/Blue Shield-type organizations.

However, when the work was originally done on risk-based capital for these types of entities, there were the two different blanks; and consequently, when that work finally was implemented in 1998, there were actually two variants of the same health risk-based capital formula. They were basically doing exactly the same thing, but one was tied to the references in the orange HMO blank, and the other was tied to the references in the white HMDI blank.

The health RBC formula did not come into effect until 1998, despite the fact that work had been going on for several years before that. The Academy had undergone a tremendously long and difficult effort in making its report to the NAIC, after which the NAIC did eventually pass a form of risk-based capital for health entities but did not incorporate all of the features that the Academy's report had included.

You know, there's a typical interplay here between actuaries going away and studying an issue and reaching a certain level of complexity and then regulators, on the other hand, saying, "Is all of that complexity really necessary? Can we try to simplify things, make approximations, meld things together?"

So the formula for health risk-based capital as it exists today is, I think, a very reasonable formula; but it does not incorporate all of the things that the original Academy report had in mind.

This formula, when it first came out, was called the managed care organizations risk-based capital formula (MCO-RBC) and was only renamed health RBC in 2001, when the new statement blank came to pass.

The main Risk-Based Capital Model Law applies to life and P&C insurers; so if a state wants to expand the risk-based capital concept to health insurers, to its HMOs or to its Blue Plan(s), they have to go ahead and either pass a separate law or possibly, in some states, do this via regulation.

As of the beginning of 2002, there were only 22 states in which risk-based capital for health entities was the law of the land. Washington passed it in 1998, after which there was a bit of a groundswell of support going through 2001. There was relatively little activity in 2001 itself, and I'm not aware of any states that have taken any action on risk-based capital for health entities so far in 2002. State legislatures have somewhat more pressing matters these days with budget crunches, so solvency standards for HMOs and the like may not be high on the legislative priority list.

This begs the question, why is risk-based capital for health entities only in force in 22 states? Why isn't it sweeping the country? I have two theories.
First, the NAIC has a financial accreditation program. This is where the NAIC certifies, through something that I think of being akin to a *"Good Housekeeping Seal of Approval"*, that an individual state regulatory department is doing all the things that the NAIC feels it should be doing, in terms of ensuring the solvency of its companies.

There are a series of model laws and regulations that each state needs to adopt to maintain its accreditation.

For example, you've all heard of codification, the new set of accounting standards developed by the NAIC with an intended effective date of 2001. Those standards are more or less in universal acceptance at this time. Part of the motivation for that may be the fact that, as of 2004, adoption of codification is going to be one of the NAIC accreditation standards. So if a state didn't get it adopted by 2004, it would lose its accreditation. Knowing that, they more or less all decided they may as well implement it at day one, in 2001, which is when the new accounting was intended to take effect.

From a risk-based capital standpoint, the original model law that covers the life and property/casualty industries is an accreditation standard. Consequently, risk-based capital for life and P&C insurers is in place in almost all of the 50 states. New York is always a little bit of a strange bird when it comes to some of these things; I believe they have passed RBC for life companies but not for P&C companies. But for all intents and purposes, it's in universal acceptance.

The health risk-based capital model law is not at this time one of the NAIC accreditation standards; it’s not on the laundry list that the NAIC uses to hand out its "seal of approval". As a result, there's not a particular stick hanging over a state's head to say, "You should adopt health RBC, or else." It's quite conceivable that at some point in the future this will come to pass, and at the Blue Cross Blue Shield Association we are in favor of that coming to pass at some future point, but the time is not yet there.

I would say a secondary reason, and probably on a state-specific level the

overriding reason, why a state hasn't adopted health RBC yet is the fact that, if they did, they might have a lot of extra work on their hands. At year-end 2000, of the 578 HMOs and HMDI companies that filed health RBC, 140 of them — almost one in four — were below 200 percent and therefore would have triggered one of the four action levels

Let me point out that this does not mean that these 140 companies actually were subject to one of these four action levels, because all of the companies throughout the country are filling out the health RBC formula and submitting their data to the NAIC, even if their state hasn't yet passed the Health Risk-Based Capital Model Law. So when the NAIC says that 26 companies throughout the United States had a health RBC ratio below 70 percent, we have no way of knowing how many of those 26, if any, were actually located in states where the health RBC model law was in effect. There's an important distinction there.

I should point out that a couple of weeks ago, at the summer NAIC meeting, the corresponding data for 2001 was released, and it showed significant improvement. Only about 15 percent of health entities had a 2001 health RBC ratio that would have triggered one of the four action levels if health RBC were in effect in its state.

The reason that this comparatively high figure for health companies is relevant was the fact that, in both the life and the P&C industries, a very small number of companies trigger one of the action levels. In both 2000 and 2001, it was around 2 percent for blue blank filers and slightly higher, something like 3 or 3.5 percent, on the property & casualty side.

So I think those two different drivers help to explain why health RBC compliance may not yet be an issue in the particular state of domicile for your company.
I now want to talk a little bit about the health RBC formula itself, using the life risk-based capital formula that preceded the health formula as perhaps a more familiar benchmark.

The life RBC formula relied on the classification of risks that had been done by a Society of Actuaries committee back in the 1970s. Various risks were classified into the C1-C4 buckets: invested asset risk (C1), insurance risk (C2), interest rate risk (C3), and business risk (C4).

The concept within risk-based capital is to first look separately at each of these categories of risk and determining the amount of capital that a company would have to hold to achieve a particular assurance that the company would have enough capital to survive that specific risk. This is typically thought of as a probability of ruin from that risk of less than 5 percent over some time horizon in the future. When the Academy does work to determine what these risk factors should be, that is usually the paradigm in which they are working.

Now, this is important: The total capital that a company would require in theory

should be less than the sum of the various pieces. This has to do with the assumption that not everything is going to go wrong for a company at the same time. Its asset portfolio is not going to fail at the same time as its pricing fails, because those really in theory are independent events.

One thing that became apparent immediately after the tragedy of 9/11 was that there can be some correlation between these events. The 9/11 tragedy created both a mortality, or morbidity, spike and a decline in asset values. So clearly, it's not true that in all circumstances asset risks and insurance risks are independent. However, remember what I said a minute ago: With risk-based capital, we're really talking about the 95th percentile of events. Things off at the extreme tail are not really within the purview of the risk-based capital formula. I think we would all, with our fingers crossed, agree while 9/11 may not have been a "100-year flood," it certainly was an extreme event and that it's not necessarily appropriate for the risk-based capital formula to be trying to incorporate the excessive level of conservatism that it would need to cover events of that magnitude.
What I discussed a minute ago was the original SOA classification of risks, and when the life formula was first implemented in the early 1990s, it followed that structure. Since then there have been a number of additional clarifications and refinements to the point that we now have a risk-based capital formula that I don't think we would want to make our actuarial students memorize (Table 1).

Table 1

The Life RBC Formula *con't.*

- Refinements of classifications over time:
  - Separate insurance affiliates out from C-1 (new C-0)
  - Separate health credit risk out from interest rate risk (new C-3b)
  - Separate health business risk out from business risk (new C-4b)
  - Bifurcate C-1 into common stock risk (C-1cs) and other asset risk (C-1o), in 2001
- Current covariance structure in Life RBC:

$$C0+C4a+\sqrt{(C1o+C3a)^2+C1cs^2+C2^2+C3b^2+C4b^2}$$

First, the insurance affiliates were separated out from the C1 risk, under the theory that what happens to your insurance affiliate really is perfectly correlated with what

happens to you.

Various other things were done over the years, the most significant of which occurred in 2001, when the old C1 asset risk was bifurcated into two pieces, the common stock risks versus the other asset risks.

Whereas in the past, the covariance—the independence of various risks in the risk-based capital formula—was expressed through a very simple formula, it has now gotten exceedingly complex within life RBC (see Table 1).

On the health side, however, things are a bit more simple. When the health formula was developed, they started with those four original SOA Risk Classifications, but adapted it to the needs of the health industry (Table 2). Interest rate risk, the C3 risk, is not believed to be a substantial risk for health insurers. Let me just remind you, when I'm talking about health insurers, I am talking about companies that file the health statement. These companies typically write only minimal volumes of product lines such as disability income and long term care. So we're really talking about companies for whom medical and/or dental insurance is the primary insurance risk.

So in place of the C3 interest rate risk, credit risk was developed as a third core category from the viewpoint—especially with respect to capitations and other cessations of risk to downstream entities that typically are not insurers—that there is a substantial risk of not being able to recoup the various receivables that a health insurer has on its books.

The only modification to this set of four criteria is the one I alluded to a minute ago on the life side, where they pulled out the insurance affiliates. So we're left with the formula that you see in Table 2. This "square root of the sum of the squares" approach is mathematically a manifestation of the idea that each of those four main buckets is independent from the others.

Table 2

The Health RBC Formula

- Modification of original SOA classifications:
  - H-1: Invested Asset Risk
  - H-2: Underwriting Risk
  - H-3: Credit Risk
  - H-4: Business Risk
- Only subsequent modification was separation of insurance affiliate risk (new H-0)
- Current covariance structure in Health RBC:

$$H0+\sqrt{H1^2+H2^2+H3^2+H4^2}$$

Asset risk is assumed to be perfectly uncorrelated with underwriting risk. However, the insurance affiliate risks—your H0 risks, are assumed to be perfectly correlated with the totality of risk from the parent's own operations. So that's what this formula is trying to say mathematically.

Let me speak for a moment about the drivers of the health RBC formula. If you've ever played around with this mathematically, anything that involves the square root of the sum of the squares has some interesting dependence relationships. As you tweak one component, the effect on the sum varies, depending on the relative weights of the subcomponents to begin with.

The numbers that you see here under the second bullet point are culled from Blue Cross Blue Shield Association data (Table 3).

Table 3

Drivers of HRBC Formula

- H-2 component (underwriting risk) dominates
- For every $1.00 of H-2 risk, the average BCBS Plan (as of 12/31/01) had:
  - 34.9 cents of H-1 risk
  - 15.9 cents of H-4 risk
  - 8.6 cents of H-3 risk
- Thus, marginal increase in HRBC from a $1000 increase in each risk component is as follows:
  - H-2: $931
  - H-1: $325
  - H-4: $148
  - H-3: $ 80
- For average HMO, effect presumably more extreme

What we have found, looking at an average Blue Plan, is that for every dollar of underwriting risk, the company has about 35 cents of asset risk, 16 cents of general business risk, and 8.5 cents of credit risk. Again, your mileage may vary. These are aggregated numbers for a typical Blue Plan, and I should point out that Blue Plans tend to invest more heavily than typical health entities in some of the "riskier" asset classes such as unaffiliated common stock.

So if we were talking instead about a typical HMO, we might come up with a very different series of numbers. For a typical HMO, I think we would be likely to have less H1 risk, relative to the H2, and I also think we would be likely to have higher H3 risk, higher credit risk, reflecting capitation arrangements at the HMO level.

However, using these representative numbers, if you play with the formula and say, "OK, I'm going to increase one of the components by $1,000 and leave the other ones the same," the third bullet point shows the impact this has on the output of the RBC formula. (A similar analysis for the life RBC formula appears in Tony Zeppetella's article entitled "Marginal Analysis of Risk-Based Capital" from the April 2002 edition of The Financial Reporter, the newsletter of the SOA's Life Financial Reporting Section.)

If you increase H2 by $1,000, most of it comes out the other end of the black box; you get an increase of $931 in the formula output.. Compare that with H3: if you increase the H3 component by the same $1,000, the overall risk-based capital

requirement of the company would only increase by $80. So there's a tremendous difference.

From your standpoint as a company actuary, I think this really means that you should be focusing on the H2 risk. If risk-based capital is something that you're trying to manage to in your company, it's the underwriting side of the formula that is most likely to have the biggest impact. The effects of changes that affect your H3 or H4 components are likely to be "covarianced out" to almost nothing. Things that affect the H2 are the ones that really are most likely to have a substantial impact.

Now that we've isolated the H2, the underwriting risk, as being the most important area that you should focus on as you are trying to manage your risk-based capital, I think the following observation is important: In a very rough sense, the change from year to year in a company's H2 is going to be a product of three things.

The first is your trend. The H2 risk is really driven off your company's total claims. So if you isolate that into claims per member, times members, you have trend as one of these three factors, followed by the second factor, which is the change in your company's enrollment. The third factor that is important relates to the change in how much managed care credit you are able to take within the formula.
The H2 section of the formula does have a managed care adjustment in which, based on the contractual characteristics that the company has with its providers, the company gets differing discounts from the core factor. A staff model HMO gets a tremendous discount, because the variance in claims costs has been reduced considerably.

On the other hand, if a company is just paying billed charges or some discount from billed charges, it hasn't done anything to reduce variance. That's really what the managed care credit is trying to assess—the extent to which managed care techniques have controlled the variance of the company's claim costs.

Now look at where we currently are. We've got trend running anywhere from 12 to 15 percent, possibly upwards, depending on who you talk to. We've got managed care credits wearing off, as providers are less and less willing to take risk. So contracts that may at one time have received a high-managed care credit are now getting pushed back to being simply billed charges or discounts thereupon. Consequently, when you've got high trends, and when you're trying to get some sort of enrollment growth, and when you have managed care wearing off, you need to generate a substantial amount of margin from your business just to stand still, from a risk-based capital standpoint, to say nothing of trying to improve your relative position.

If your H2 is going up by 20 percent a year—and it's really easy to imagine that it could be under the circumstances I just described—you have to make something like 3 percent of premium per year in after-tax profit simply to stand still. In the medical business, that's not a trivial thing to accomplish, as I'm sure we all know.

You have to be able to do that year in, year out. That just can't be your good year.

So risk-based capital, especially in a high trend environment, I think, puts tremendous pressure on margins. Personally I think that part of the current stability that we appear to be having in the health insurance marketplace right now is caused by increasing emphasis on health risk-based capital as companies are managing to RBC more and more.

I wanted to make a few comments on differences between the health and life formulas. If you want further information on this, I would refer you to the Academy's web site. There was a report comparing all three formulas that was updated earlier this year by the Academy's Joint Risk-Based Capital Task Force.

We've talked about the covariance formula differences. There's a substantial difference that has just crept in last year, dealing with tax impact.

Life RBC still has a surcharge of 20 percent for individual health policies. That does not exist within health RBC. It's an example of, if I recall correctly, something the NAIC decided not to implement when health RBC was being developed by the Academy.

On the asset side, the common stock factor difference is quite noticeable. Health RBC historically has had a 15 percent factor against common stocks. In addition to that, common stocks were part of the asset concentration calculation, which meant, in effect, that if you invested a lot of money in common stocks, you could have a doubling of the factor—it will be 30 percent for certain of your larger holdings instead of 15 percent.

By contrast, in the life side, the formula was 30 percent, without a concentration factor. This has been changed somewhat at 2001. The life formula has introduced a beta adjustment in which the common stock factor varies based on the perceived riskiness—the "beta"—of the company's portfolio. A concentration adjustment has also been added. But at the same time, as part of this tax project I alluded to earlier, the core factor has effectively been reduced down to 19.5 percent.

With the treatment of affiliated insurers, there's a quirk between how it works in the life formula and how it works in the health formula.

I think this is interesting. For life RBC, it's very simple. You calculate the subsidiary's own risk-based capital, and you just roll that up into the formula. That reflects a belief that all of the insurance risks borne by this subsidiary ultimately accrue to the parent.

On the other hand, in the health RBC formula, there's actually a cap, where you do the same thing unless the amount of risk-based capital requirement by the subsidiary is more than the value at which you're holding the subsidiary on your

books, in which case the capital requirement is simply that carrying value. That's reflecting a belief, I suppose, that the most you can lose—the greatest risk you have—is writing the asset down to zero. I'm not sure that's the correct theoretical approach, but it has some interesting implications in practice. For example, if the parent is running an HMO subsidiary at an RBC ratio of less than 200 percent, this effectively means that the full risk of the subsidiary is not rolled up to the parent.

You could achieve the same effect with a well-capitalized HMO subsidiary if you were to use internal surplus notes as a means of capitalizing that subsidiary. If you have an HMO subsidiary that has almost all of its surplus funded by a surplus note that you, the parent, have bought from it, then the carrying value of that subsidiary on your books is very, very low. You have the surplus note on the asset side, and then a very small carrying value for the subsidiary itself. That gives you a tremendous health RBC advantage at the parental level. There are some interesting strategies that one can do to exploit this aspect of the formula.

I want to close now with a couple of thoughts on some recent developments. Generally speaking, it's the NAIC that governs the three different risk-based capital formulas used for the life, P&C, and health industries, usually with input from the Academy.

The Academy made a number of reports on various issues throughout 2001, one of which was a recommendation to maintain the health RBC common stock factor at 15 percent.

As for the covariance structure, you'll recall that I mentioned earlier how the life formula in 2001 split its C1 risk into two pieces. They did that under the belief that equity losses are not correlated with bond defaults.

On the property and casualty formula, that assumption has been implicit for years. The property/casualty formula has R1 and R2 risks—two different types of asset risks that are both separate components under the covariance adjustment.

The Academy recommendation said, "If you have this belief for P&C companies, and now you have this belief for life companies, then from a consistency standpoint, we should exhibit the same belief on the health side, and we therefore should split the H1 component into two different pieces."

For the reasons I mentioned earlier, this is unlikely to be significant to too many health insurers. The H2 tends to dominate. So making a change to the covariance structure by splitting H1 is not going to have a tremendous impact on most companies. As a result, the NAIC has not yet acted on the Academy proposal, although the Academy is in the process of testing the proposal and providing some data on the impact to the NAIC.

As a result of some of the accounting changes that happened with codification, the Academy revisited the appropriate treatment for health care delivery assets, these being the assets that a health insurer owns that are actually used in the delivery of care. Again, the NAIC has taken no action yet on the Academy's recommendation.

The Academy recently completed a large project to restructure the RBC treatment of disability income insurance. In fact, the new treatment was implemented in life RBC for 2001, and the health formula is going to mirror that in 2002.

In a recent report, the Academy's health RBC task force decided that, with respect to asset and credit risk issues, as a general principle we should try to retain consistency with the P&C formula, as opposed to life formula, where there's a difference. The theory here is that the asset risks for health companies are more similar to the asset risks for P&C companies than they are to the asset risks for life companies.

For those of you who do follow the life RBC formula, you will have noticed at year-end 2001, it looked tremendously different than it did in the past. Suffice it to say that a series of very extensive changes were made to the life formula under the banner of "tax consistency". Those changes were not duplicated on the health side, at least not at that time.

I will close with a couple of comments on some things that are still on the horizon for health RBC. I think that within the next several months, the Academy will have finished its work on two long-term projects. One is a new factor for stop loss coverage, and a second is a new treatment for long-term care coverage.

As was true of the disability income project, these two projects are being done on a joint basis between the life and the health councils of the Academy, with the intent that the results be implemented in both the life and health formulas. Certainly with long-term care, most of the writers of that product file the life formula as opposed to the health formula. I think the same is true of the major writers of stop-loss coverage.

But for those health plans that have small amounts of these coverages, they'll have to conform with the new requirements.

There are two accounting treatment changes that may have spun-off effects in RBC. The SSAP 84 on healthcare receivables was recently passed, providing greater accounting guidance on when these types of assets can be admitted by a health insurer. I think we will see potential changes in health RBC with respect to that. The same holds true for another accounting issue, SSAP 85, which was passed earlier this month, on cost containment expenses. So perhaps in a year's time, someone will be standing here talking about the recent work in those issues.

MR. JOHN LLOYD: I was asked to summarize some thoughts on some practical

considerations we're seeing as RBC has kicked in to some degree.

As Rowen already described, what we're really looking at is a standard that regulators try to develop to trigger some response to measure the relative financial strength of an entity. It was an index that they wanted to figure out if this entity could withstand some unanticipated adverse financial outcomes.

The RBC ratio is the ratio of the total adjusted capital (TAC) for which they had to go through a little exercise to throw back in some assets that sometimes don't get included in statutory accounting, to the RBC measure, which is a factor driven index of the relative risk of a managed care organization's operations. A great deal of work was gone through to try to develop regulatory triggers that made sense to people, based on this ratio.

The ACL level is when the ratio is 100 percent. Essentially, the regulator is authorized to take action deemed to be in the best interest of the policyholders. The company action level is the 200 percent, where the managed care organization (MCO) is really required to submit some financial plans, what its corrections are going to be.

Again, we're back into "is the number 200 percent or is it 100 percent?" My personal view is that they picked 200 percent because being in trouble at 100 percent sounds better than being in trouble at something less than 100 percent.

Is managing to the RBC ratio the best form of capital management? Probably not. There are a lot of other measures of capital allocation—target capital—that may be more appropriate for certain applications. But RBC is an agreed upon standard. It's gone through quite a bit of work for people to develop this formula; and so to some degree it's a good compromise that at least provides an index for people.

In practical reality it is a visible number, for better or worse. Is having 500 percent better than having 200 percent? I don't know. I used to tell people when they asked about my exam score that it was bigger than a six. If people want to talk about having a 10, that's fine. But I don't know if 10 is necessarily better than six.

Let's talk now about practical implications for most MCOs. The H0, the affiliate risk, isn't in play that much unless you have a lot of affiliates. For the H1 asset risk, unlike life and P&C companies, health insurance is basically a cash business. You very seldom see people with intricate asset structures that require the formula to value the different types of assets being held and come up with significantly different problems on that.

You do get some problems for the H3 risk if you're heavily capitated, because essentially H3 measures whether or not you are shoving risk to somebody that may not be able to cover it.

The H4 risk can come into play if you're growing really rapidly or if you have a fair amount of administrative service contract (ASC) business.

That leaves the H2 risk, which is, for all practical purposes, the big kahuna. In general, it runs about 9 percent of whatever your claims are. That's not exactly right. It's scaled a little bit. If you're under $25 million in premium, it's 15 percent, and then it's 9 percent of the excess over the first $25 million. Medicare supplement and dental have a little bit lower factors. Also, reinsurance can limit it. But for the most part, you can, as a rule of thumb, go around saying it's going to be about 9 percent of claims.
Where it gets a little more complicated is, "How much risk do you have if you're a managed care company?" In general, the formula says that if you're salarying all your providers, you get a 75 percent credit off your risk, saying that you essentially dispensed it in salary. Same for direct capitations, which get a 60 percent credit. It grades down pretty quickly. You get 25 percent credit if you're using withholds, and actually, they have a little wrinkle that says, "You have to have actually paid withholds to get credit for the withholds." They look at what you did the prior year. Last, there's a 15 percent credit if you've got something like DRGs or per diems, or some kind of a basically a fixed reimbursement schedule.

There's also some additional RBC for rate guarantees that are of any length—DI, long-term care—If you're doing something other than managed care.

So what do we see happening in the marketplace based on this formula?

Well, first of all, there are certain market expectations, like when you publish a number, whether it's a six for an exam, or 200 percent or 100 percent or whatever your magic number is. People tend to hang on to a number once it's out there. Also, the Blue Cross Blue Shield Association has a somewhat higher RBC expectation to make them happy.

We see a lot of investors and reinsurers that set triggers based on RBC. If they're going to do a deal with you, at some point, they want to pick some number to decide whether you're going to have trouble fulfilling your end of the bargain. So we see some reinsurance triggers that have been basically set at an RBC level.

What we also see is a fairly liberal interpretation of the managed care credit. When is something a 15 percent credit fixed fee schedule, and when is it just a discounted PPO, and which one gets credit? I'm not real sure how carefully that's being monitored, but you do see some liberal interpretations every now and then of how much credit you get for something.

One of the most common things that can change your RBC level is what I'll call aggressive claims reserves. If you think about it, you can boost your earnings by cutting your claims reserves, which increases your assets, maybe inappropriately. It also cuts the claims incurred; so therefore, your RBC goes down. So you actually

pivot your ratio fairly significantly by understating your claims reserves.

We also see certain reinsurance and asset management strategies.

Having said that, the question is, "Now it's out there, and it's not a perfect measure. Is it impacting anything in the way people manage their business, at least from what we've seen?"

We did a sample of various state filings for a lot of different companies. These are ones filing the new combined HMO/HMDI blank, and there were about 27 of them that we were able to identify as being commercial managed care organizations. So I'm not real sure how good this necessarily is as a measure, but I included it for completeness.

As you can see (Chart 1), there's a significant group between 200 and 300 percent, and then there's some kind of noise going on at about 900 percent. But that's a fairly small sampling.

Of greater significance are the 200 HMOs that we looked at (Chart 2). Of the 200 HMO's, for their 2001 RBC level, you see that the magic 200 percent is a fairly significant number with about a third of them. One of the practical realities is, a lot of these smaller HMOs are provider-owned, and the RBC process is one of determining how much you need and then getting capital shipped down from the hospital chain to support it. So one would assume that 200 percent is fairly significant to them.

You also see that there are quite a few of them that are below the 200 percent range; in which case, they may now be talking to their regulators fairly frequently.

The other thing it indicates is important: If you have an expectation of return on capital, why would you use more capital than you need to? That's one of the issues of, is more RBC a better thing or not?

The more you load into these assets, the more you're going to be expected to earn against them; so one of the things you see is that you'll only fund it up possibly to 200 percent, because you can earn more money some place else if you're a hospital. Second, if you're an HMO and you got a wad of money, you have to earn something against it.

To show another impact, we polled 37 Blue Cross/Blue Shield Plans (Chart 3). These are the plans filing what used to be the white blank, so it doesn't include the P&C filers and things like that.

You can see the influence of the secondary threshold on these. Blue Cross/Blue Shield plans, being—for the most part—nonprofit, subject to the Blue Cross Blue Shield Association's suggestions as to what appropriate capital is. They're skewed a

little upward.

If you compare for-profit versus nonprofit, you can see that the nonprofits definitely are stronger on the amount of capital they're holding than the for-profits. This is attributable to the fact that there is a return on expectation associated with your capital.

We got very excited about the potential impact of health RBC on HMOs when it first came up, because we knew there were a lot of HMOs with statutory capitalization, back a few years ago, of $1 million, $2 million. When this formula kicked in, that was going to be an issue; and so we've gone through some modeling and trying to get them to manage their capital and all that. They were smarter than we were, because they knew it wouldn't get enacted.

Nonetheless, we went through the exercise; but you can see that over the course of the last five years, HMOs have significantly restructured their assets, based on meeting an RBC expectation. They have gradually increased over the last four years their RBC levels.

So what are some of the practical things we see happening that are coming out of this RBC issue?

One of them is that RBC is a measure based on where you are and doesn't really project where you're going to be. It's a point-in-time estimate as of December 31st.

Capitation meltdown is one of the things we saw happen quite a bit in the last couple of years—and it's not just small HMOs—there are some fairly major HMOs that have had similar problems. The common scenario is, you were heavily globally capitated, in which case you shoved off most of your risk to your providers. Then you found out that all of a sudden, your providers in the last couple of years have become very uncomfortable with that, and they want fee-for-service now or some modification of fee-for-service.

A lot of these HMOs found they were paying a lot of fee-for-service claims, and a lot of them found out they weren't very good at it. They were used to paying capitations; and so they got an influx of fee-for-service claims in an operation that hadn't seen any fee-for-service claims except for out-of-area.

They lost track of claims inventory and quality control. They weren't sure who they paid what sometimes, and their IBNR estimates got out of whack, because frankly, they never had a lag before, because they never paid a fee-for-service claim.

So the bottom line is, a lot of them did their numbers in good faith and found out that they were wrong. Their loss ratio increased at the same time their surplus dropped. So if you think about what happens to their RBC formula, the managed care credit, now that they're no longer capitated, becomes the fee-for-service; so

they go from a 60 percent credit to at best a 15 percent credit.

Their volume of business, since they probably haven't got their pricing straight yet, isn't necessarily tailing off. You had somebody who was getting hit at both ends—the numerator and the denominator. Bottom line is, their total adjusted capital (TAC) drops faster than their RBC rises, and a lot of them triggered action levels.

A less dramatic impact, has been just to keep growing and shift the business.

If you take a plan that's 20 percent directly capitated to physicians and the balance of it on some kind of a global capitation, and let's say they didn't have the capitation meltdown, but you had a 15 percent cost increase and 20 percent of the physicians decided to move to withhold and the balance moves from capitation to some kind of contractual fee arrangement—what you got was about a 225 percent to 250 percent increase in RBC.

So fairly recent changes in the way we do business have made it difficult for regulators to keep up. You may have been fine last year; you're not so good this year.

One thing we have seen happen is financial reinsurance, surplus relief reinsurance.

This was a mechanism in which you essentially enter into a quota share reinsurance and sold off a profitable block of your business. What you got for it was a ceding commission based on the future profit stream, and you go to transfer the risks through the reinsurer, usually on a modified coinsurance basis, so there never really was an actual change in the way you did business.

What you get from that is a pretty significant improvement in your ratio, because you get to increase your surplus by the commission, while the RBC requirements decrease by the amount of business you've laid off. So you get a double whammy for it.

We're seeing less of this now. For one thing, reinsurance capacity probably is not what it was before 9-11. But even at that, it is a short-term solution, because you're giving away a profit stream. Theoretically, reinsurers will only buy profitable blocks of business. Secondly, you had to convince your regulators that there really was a true transfer of risk. Sometimes you could do that and sometimes you couldn't.

The bottom line is, what we're seeing happening out there in the real world is that health RBC is a visible measure, whether it's adopted or not; so you need to be aware of it. We see people moving toward it; so management teams are indeed using it as a benchmark.

The current business environment has increased the RBC impact, however, because

managed care credits are dropping off and some of the smaller HMOs are struggling—if you're heavily into certain markets, you're having financial troubles sometimes.

Last, 'there are some techniques in RBC management. You need to be aware of what the impact of some of these things like capitation meltdown is going to be on your business, but there are some other techniques that Donna will talk about.

MS. DONNA NOVAK: I played a key role in the development of health RBC for the Academy, so I thought there were a couple of interesting things about the points that were made earlier.

One is the question that often comes up, "Why do you multiply the RBC after covariance by one-half to get the ACL RBC?" That really was an outgrowth of the life RBC, which preceded the health RBC. It was decided that saying that I am at 200 percent of the benchmark sounded so much better than I'm at 100 percent of the benchmark. Although it didn't change the reality of anything, for perception purposes we divide by two and then say one is 100 percent and the other is 200 percent.

Also, it was mentioned that there is a factor in the life formula for individual business that is not in the health RBC.

When we developed the health formula, the NAIC told the Academy to develop a theoretically ideal formula, and they would handle simplifying it. That works fairly well actually, although simplifying what we came up with was a bit of a challenge, but it worked fairly well, as far as some of the simplifications.

When we were developing the formula, the life formula already had the separation of individual versus group factors. When we did our modeling, however, we really couldn't find a statistical reason why individual would be any riskier than group would be. The intuitive reason, or the reason from our experience, was that the way some states regulated individual insurance versus group caused a risk in getting the rate increases that you needed, when you needed them.

We put in the formula a factor based on regulations in the state. Well, no regulator is going to have a formula that has an increase in capital requirement because of the regulations in their state; so that was one of the first simplifications that the NAIC did with the formula. They got rid of the individual factor based on regulations in the state.

When the health formula was folded into the life formula, with the idea of keeping the formula as consistent as possible, the life regulators who had always had this difference between individual and group did not want to give it up for the health formula and insisted on having that inconsistency between the two formulas.

Both Rowen and John talked a little bit about the percentage of companies that are within the monitoring levels.

When we first tested the data as the formula was being implemented, the number of companies not passing was very, very high. It caused a bit of a stir, and the Academy did an analysis of it. I was actually one of the individuals that got the data from the NAIC and did an analysis. It was really clear that it was not that companies, per se, were under capitalized. What was often happening was, in a family of companies, there was not a lot of capital being put in the subsidiary, with the parent company keeping as much capital as possible to manage in one bucket instead of putting it in a lot of smaller buckets and then having to manage it independently.

Of course, once RBC is passed in a state, it forces those companies to put that capital down at the subsidiary.

When the capital is moved down to the subsidiary, it is not used as efficiently. One of the big efforts in the industry right now, with companies that do have multistate health entities, is to try to find out how they can now get back to combining some of that capital in some way—looking at captives and/or reinsurance arrangements, as a way to consolidate that capital and be able to manage it and get a better return on it. But for right now, they're being forced to have capital, as well as deposits, in multiple states.

Those were bonus comments. To get to the topics that I had originally prepared, we're going to talk about five reduction techniques. Then we'll also talk a little bit first on the limitations of those and factors to consider.

In reducing risk-based capital, the way you do it is to reduce risk. But there isn't always a one-to-one correlation of the amount of risk that you're reducing and the amount of risk-based capital, because of the way the formula works and because of some of the techniques themselves. That all has to be modeled out. I do have a couple of rules of thumb to talk about.

The first factor to consider, of course, is the cost of this reduction. It's always a cost tradeoff between the cost of reducing the risk—because that usually means you're giving it to somebody else and they're going to charge you for that. You also need to consider the cost of capital for keeping the amount of capital in the target.

There are two big factors here that have an effect. One is, what is the RBC target? If your target is 200 percent, then for every dollar of ACL that you reduce, you've actually reduced your target by two dollars.

If your target is five times—and we saw that a Blue Plan's target can be very high—then that leverage is up to five times effect on your target and makes some of these RBC and risk reduction techniques more effective and hence more cost

effective than borrowing money or surplus notes or other mechanisms for raising capital to meet the targets.

Some of the techniques also have a larger or smaller effect, depending on the company. Basically RBC, as we saw above, is driven by the underwriting risk (H2). As a simplification, H2 is a combination of your claims level, the underwriting risk—which is two-tiered, 9 percent to 15 percent—and the effect of the managed care reduction.

If you have a lot of managed care, that sometimes buffers the effect of some of these techniques, because you're only at 65 percent or 85 percent of what you would have without the managed care. There's no reason to unravel the managed care, but it'll have a different effect.

Also, if you are a very large company,—you're at a 9 percent level because you're so much above the $25 million—it's going to have a lot different effect than if you are a smaller, single-state HMO, maybe a Medicaid HMO, that is saving 15 percent instead of the 9 percent.

Also, the covariance has a large effect. For one thing, you do not necessarily have additive effects between difference risk reduction activities. If you look at four different ways to reduce your risk, and therefore your RBC, you can't look at each one of them individually and add them together, because of the covariance and because of these other factors.

The bottom line is, these are factors to consider, and you have to do the modeling. You have to go ahead and model anything that you're trying to do because of this.

I'm going to talk about five methods.

Again, any methodology of reducing risk has a cost associated with it. So it's a matter of how much you're going to be able to reduce your risk, what that's going to cost, and what the effect is going to be on your RBC.

The first technique is doing an asset sale or leaseback, for assets that are only partially admitted.

This technique affects the numerator rather than the denominator. It has the largest effect on the TAC. Most of the time, when you're looking at what you can do to improve the RBC ratios, you look at the formula and the RBC requirements. This particular technique has more of an effect on the surplus side.

I was talking to one company that said, "Donna, we did sale/leasebacks already. As a matter of fact, last year I know we sold assets we didn't even own." They had gone through every asset that they weren't getting full credit for, and it was sold and leased back.

Again, there's a cost to this. You can sell and leaseback or securitize anything, but the financial people will charge you for it. But perhaps you can do an asset and leaseback to a holding company, to a sister company, to a noninsurance company. If you can get one of your sibling companies or a subsidiary to securitize some of the health care receivables that are not being fully admitted anymore, it is a way to increase your RBC ratio by increasing your TAC without having an economic cost.

As I mentioned, one of the things that happened when RBC was implemented was that companies were forced to fragment their capital significantly. The formula, because of the steps—15 percent of the first $25 million and then the 9 percent—causes that fragmentation to be even worse, because as you have smaller subsidiaries, their RBC requirement turns out to be more in total than if you had it all centralized in one company.

So the second thing that companies can do is combine those subsidiaries. There may be some regulatory problems with this approach. There are a few states that require a license in their state for an HMO—they will not allow foreign HMOs to do business in the state. You have to have a domestic license.

Even where you can do it, there's another consideration, and that is the liability. I've had a couple of clients that just feel more comfortable having the different licenses and the liability segregated between the different states, instead of bringing that altogether in one company.

You also may have a strategic reason for keeping one of your subsidiaries—sometimes, even within the same state. You'll see a company with two or three subsidiaries, in case they want to spin it off or sell it off later or if they're not sure they want to stay in a particular intrastate market or not. Until they're sure how that's going to play out, they'll keep the subsidiaries separate.

On the other hand, the economies of scale from combining subsidiaries into the same computer system and administrative system, as well as the RBC efficiencies, is something to consider when you have a lot of different subsidiaries tying up capital.

A third technique is to increase the level of managed care in your contracts, which is swimming upstream, no doubt about it; that's not the way the industry is going right now. Most of the providers are pushing back on taking on more risk.

But the company action level can be reduced by about 5 percent for every 10 percent of claims that are moved to the capitated discount. This is an advantage for hospital-owned HMOs, where the parent is usually responsible for excess claims anyway and has to fund to the RBC level. Sometimes arrangements can be structured, especially using bonuses and withholds that are palatable to the provider and do reduce the RBC.

Working with clients, there are two managed care discounts that they sometimes can get for free, because they didn't even think of them.

Moving from noncontracted just into contracted gives you a managed care discount. I had a couple of clients in Maryland, where the hospitals actually have state contracts or had Medicaid risk contracts, where they were using the state contracts for the fees. That's a contract arrangement. It's not a contract necessarily that you have with the provider, but it's a contract that is controlling the cost that you're paying to the provider. So they're ones to just make sure that you're taking advantage of if you can.

Next, moving business from insured products to ASO/ASC products has a tremendous impact on the risk you're taking on.

There's some residual risk that is left behind, because the members often still think that you're the one that's financially responsible, and if the entity that you have an ASC contract with cannot fulfill on the payment of claims, you still may end up having to pay them. There have been a lot of court cases that have been lost in these situations.

It does change your risk profile and therefore your RBC. One company that I worked with has developed a partially self-funded product, in which the employers are somewhat at risk, but not totally at risk. The claims are being paid first from company funds, but as an electronic funds transfer that immediately then transfers the employer's funds to the insurance company. Some of these arrangements can be combined with a very low attachment point, but they still can be considered an ASO arrangement.

Sometimes, there's a possibility for moving to an ASO or ASC arrangement where you might not think there is one. For example, some states have expressed interest in moving their Medicaid risk to an ASO arrangement. Rather than just say, "Well that won't work for us," you might want to press through a couple more layers of thought there to see if it, in fact, would work for you, either by the structure or by going to groups that maybe you think would not be interested in ASO.

Finally, quota share reinsurance, which John mentioned earlier, is really probably the most exciting reduction technique for RBC. The problem is, is it cost effective?

I've been working with Marsh McLennan's San Francisco office and they've gone to the marketplace with a product and found that there is a reinsurance market for this product. It is worked on a quota share basis, and it's very complicated. I'm not going to go into how the product works, but there are some characteristics that would tell you if it will work for you or not on a cost-effective basis.

The biggest one is your target RBC? If your target RBC is 200 percent, then this

product probably is not cost-effective. For every dollar that you reinsure, you lower a dollar of your claims; but that only lowers 10 cents of your ACL RBC target.

If you're targeting two times that, now you're up to 20 cents. If you're five times that, then you're up to 50 cents. These arrangements can be structured so that the reinsurance community is talking a fairly low cost for them. So at five times, it can definitely be cost effective; two times it cannot.

I don't know where the boundary is—somewhere in between. It depends a lot on, going back to your original risk profile, how large you are. So what's your underwriting risk factor right now? What kind of managed care credits are you currently getting, and therefore, how much of a leverage can you actually get out of those dollars of reduction of ACL?

It's cost effective, because the way they're being structured, there is not a lot of risk transfer.

We've been very concerned about the regulatory reaction to this. The regulators we've talked to so far have not found a problem with them. This may really not be as big an issue as we thought it was going to be, because usually the effect of the regulator in saying "there's not enough risk being transferred" is that you then cannot admit the reinsurance recoverables. The reinsurance recoverable admission is not an issue in these arrangements, given how they are structured.
So that issue is off of the table, and thus the regulators' reaction may not be quite as bad as we had been concerned about originally.

Chart 1

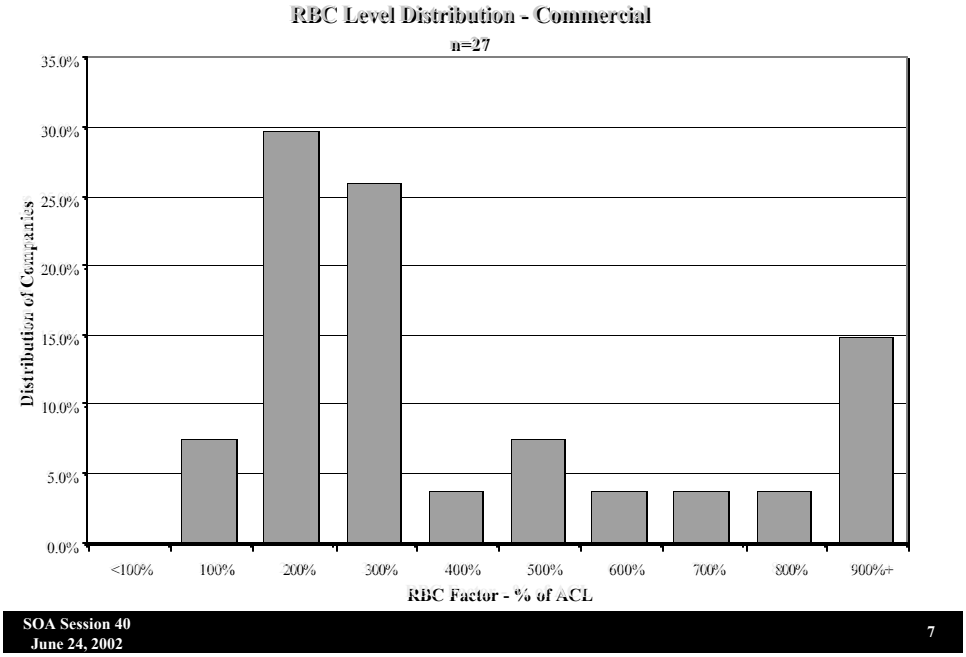


Chart 2

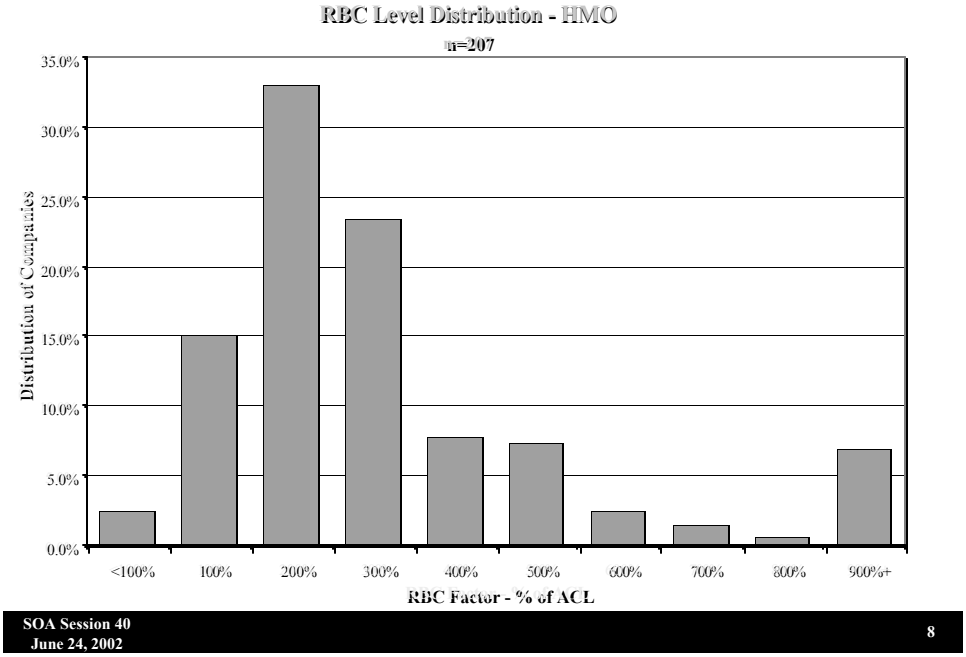
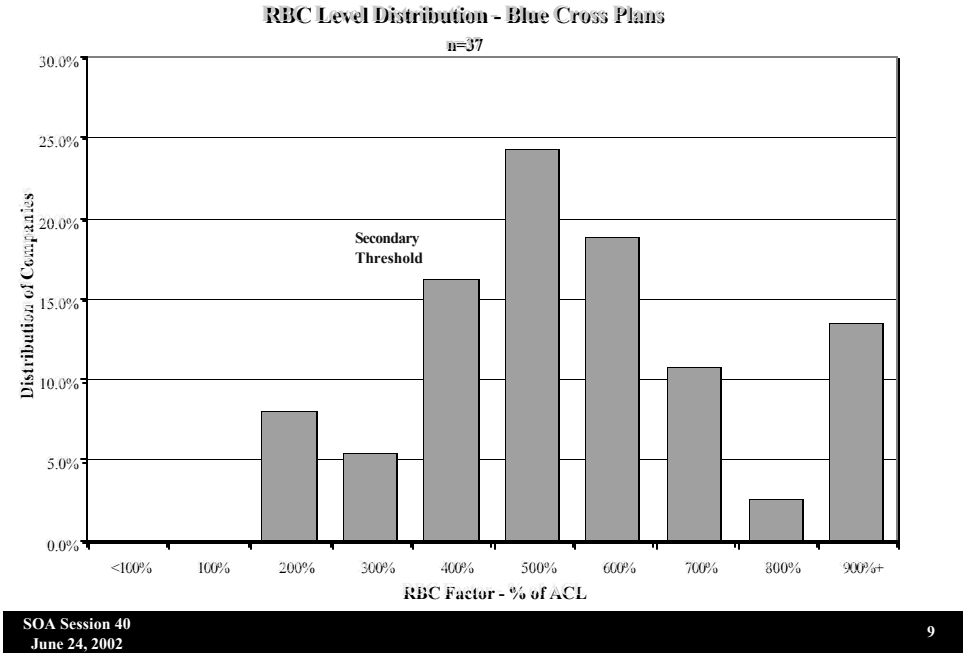


Chart 3


RBC Level Distribution - Blue Cross Plans
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700%
800%
900%+
RBC Factor - % of ACL
SOA Session 40
June 24, 2002
9