

**RECORD OF SOCIETY OF ACTUARIES
1992 VOL. 18 NO. 1B**

EFFECT OF SOLVENCY CONCERNS ON HEALTH INSURERS

Moderator: DANIEL J. MCCARTHY
Recorder: DANIEL J. MCCARTHY

- NAIC proposed risk-based capital formulas
- Typical return on equity for health business
- Rating agency formulas
- Volatility measures for loss ratios

MR. DANIEL J. MCCARTHY: There is much more focus today on solvency concerns for insurers of all types than there was only a few years ago. These issues arise partly from a regulatory focus, hence an interest in NAIC solvency activities; they arise partly from a focus on customers, hence, an interest in rating agency activities; and they arise partly from a focus of looking at profitability or return from the health insurance business in relation to the amount of capital that it takes to conduct that business, that's of interest whether you are in management, or are an investor, or are simply interested in growing your business, be the company stock or mutual or other nonprofit, because retained earnings are in the long run one of the key ways in which you do that. Because the NAIC developments looking at risk-based capital are recent and important and are even now undergoing field testing, that's the first topic that we will talk about. I want to emphasize that on the first two topics our focus will be to look at them from the point of view of health insurers and other similar entities, so that we will focus much more on the elements of those formulas that relate to insurance risk than those that relate to asset risk.

Let's turn to the NAIC formula first. Before looking at the numbers, I think it's important to understand what the committee members that developed the formula said was their intent to do. They were not trying to write a rating agency formula. They were not trying to write a formula that only the best capitalized companies would pass. They were trying to develop something that in the long run would be a regulatory tool in order to identify (1) entities that were undercapitalized that the regulators clearly ought to focus on; (2) entities that were marginally capitalized that might be good candidates for more than routine regulatory scrutiny; and (3) entities that were capitalized well enough so that the regulators would not need to have any more than the normal kind of regulatory oversight that they would be accustomed to apply to well capitalized companies.

In Table 1, there are listed the elements of the so-called C-2 risk portion of the NAIC risk-based capital formula being used for testing. I want to emphasize that. This formula is being used for exposure and testing. It is not a final formula. There is no final formula at this time. Listed on the table are the elements that apply to group accident and health. Some of these, as many of you probably know, are items that do not appear as such in the statutory annual statement blank of an insurance company. That is to say, for example, if you look at all of the categories except the last two, those numbers are embedded in the statutory statement, but they do not appear as separate items. All health insurance premiums, for example, for group insurance are rolled together. You can't easily separate them. You can get claim reserves separately. You can usually identify premium stabilization reserves

RECORD, VOLUME 18

separately, but the premiums cannot be identified separately and the committee knew that. One of the things that it had to grapple with was the degree to which it should lean toward simplicity and the use of numbers that are already public versus numbers that would be meaningful. As you see in Table 1 there is a focus on major medical and hospital kinds of business, that is to say inflation-sensitive medical business, which is deemed to have one element of solvency sensitivity to it. Stop-loss business and the part of a minimum premium contract that is actually booked as premium has a higher degree of solvency sensitivity because in a minimum premium contract, that portion may only be 10% or 15% of the total and this percentage is applied only to that which is premium in the statutory statement, not to the self-insured part of a minimum premium contract.

TABLE 1
NAIC "Proposed for Exposure" RBC Formula
Group A&H

Major Medical & Hospital (premium)	15% of first \$50 million, 7% of excess
Stop Loss and Minimum Premium (premium)	25%
Disability Income (DI) (premium)	25% of first \$50 million, 15% of excess
Med. Supp., Dental, etc. (premium)	12%
Hosp. Ind., AD&D, etc. (premium)	8%
Exhibit 9 Claim Reserves (reserve)	5%
PSR (reserve)	(50%)

For disability income, there is a somewhat higher factor on the first \$50 million of premiums. I'm not sure I can tell you exactly what the logic is for that. People may want to speculate about it; the factor continues to be higher than for medical on the excess over \$50 million as well. In addition to that fact, by the way, if we drop down a couple of lines to claim reserves, clearly, if you have long-term-disability business the claim reserves in relation to the premium will be far higher than for medical and such business. As a result, the LTD business in particular will draw a higher charge than medical both because the percentage on the premium is higher and because you'll get a bigger pickup on the reserve as well. If you put those two together and put them back in relation to premium, charge will step up quite a bit.

There are then two catch-all categories that were deemed to be less sensitive and one of those, called Medicare supplement, dental, etc., in the instructions, says that these categories apply to business for which you would expect rate increases from time to time, that is to say business with some inflation sensitivity to it, whereas, the second category, hospital indemnity, AD&D and so forth, is intended to be business for which at least at the time of writing you would not necessarily expect a secular trend that would give rise to rate increases from time to time; that latter category draws a lower risk percentage. I couldn't begin to tell you, by the way, why it is that the Medicare supplement, dental, etc., category doesn't have a drop-off at \$50 million a premium like the other categories. I just note that it is probably because the committee didn't think it was as important to have to deal with that drop-off whereas, in the other categories above, the committee very clearly felt that there was less volatility, other things being equal, for companies with large blocks of business

EFFECT OF SOLVENCY CONCERNS ON HEALTH INSURERS

than for small. We'll get to some numbers later on that will look at that assumption, but it clearly is an assumption that the committee made.

Finally, the committee assumed that, if there are premium stabilization reserves, those would be available to a certain extent to offset losses, but inevitably they are not always available on the cases on which you have the losses, and so the committee in a rough justice kind of a way said that, if you have a premium stabilization reserve, you can take credit for 50% of that in reducing the capital requirement.

One of the things I think it's important to know as you look at this from an overall company point of view is that particularly for large companies the insurance risk element of the total risk-based capital formula is not a major element. It may be for some companies, but in the aggregate it's not. The committee that did the testing did some preliminary calculations (and I say preliminary because at that time the formula had not been released to companies for detailed testing, and they therefore had to make some estimates about some of the things that aren't actually listed in the annual statement). But allowing for that (and the estimation affected both asset and insurance risks), the committee did some testing because it wanted to see how this worked out. Without taking the covariance adjustment into account, it turned out that, for the largest companies in the study (and those were companies with \$5 billion of assets or more), insurance risk amounted to only 13% of the total risk-based capital calculated for those companies. That percentage increased as company size decreased, so companies with \$1.5-5 billion of assets, insurance risk as a percentage of total was 18%; for companies with \$250 million to \$1.5 billion of assets it got up to 27%. And, finally, for companies with \$50-250 million of assets, insurance risk amounted to about 42% of total risk-based capital calculated. For large companies this was clearly not the major area of focus, and in a sense that shouldn't be a surprise, because for large companies, if you read the newspapers, you know that the risk problems that the people have been concerned about of late have been asset problems, not liability problems. Nonetheless, this is the layout of the numbers that the NAIC is now in the course of testing. That testing, by the way, is being done at the company level where companies are going back, as many of you have undoubtedly experienced firsthand, and breaking out some of those pieces that are not published separately in the annual statement that you need to have in order to do the calculations.

Table 2 shows the corresponding formula for individual accident and health and I think it's helpful to look at that side by side with the group A&H because you begin to see some of the focus that the committee brought to its work. The categories are much the same, but by and large, the percentages are not – particularly in the first few areas. So you will see that for major medical and hospital, if you're in the individual business, essentially, the committee's assessment in a preliminary way is you're going to need almost twice as much capital to support that business as if you were in the group business.

For noncancelable disability income it steps up to a fair degree as well, 35% or the first \$50 million of premium. Frankly, one of the things I find a little difficult to understand is the relationship between the noncancelable disability income numbers and the group long-term-disability numbers.

RECORD, VOLUME 18

TABLE 2
NAIC "Proposed for Exposure" RBC Formula
Individual A&H

Major Medical & Hospital (premium)	25% of first \$50 million, 15% of excess
Noncancellable DI (premium)	35% of first \$50 million, 15% of excess
Other DI (premium)	25% of first \$50 million, 15% of excess
Med. Supp., Dental, etc. (premium)	12%
Hosp. Ind., AD&D, etc. (premium)	8%
Exhibit 9 Claim Reserves (reserve)	5%

It would seem to me that in group LTD where you can change your price, there would be a bigger differentiation than there is between that line of business and noncancelable disability income. Others may differ and we'll find that out. The rest of the categories follow basically the same structure: miscellaneous lines of business subject to inflation, miscellaneous lines of business not subject to inflation and, finally, claim reserves.

As you think about and as we talk about these formulas I think it's important to consider what's not there as well as what is. For example, suppose for the sake of argument that you have two companies that would profile identically applying these formulas and yet one of those companies has a consistent record of making money in this business and the other one has a consistent record of losing money in this business. To my way of thinking the capital requirements for those two companies are different. It doesn't come out that way if you apply these formulas. The committee did at an earlier point look into the possibility of giving credit for profitability or debit for loss. Some of you know, I think, that Best's has at various times in its calculations on a companywide basis looked at that issue and done some adjusting for past losses. The committee did look at that. At this point that element did not survive. Frankly, I think that's a shame. It would be difficult to figure out a way to do it right, but at this point it's not in the formula at all, and we'll have to see what happens with that during the period of exposure and testing.

The other thing that's not in the formula at all is any measure of reserve adequacy, inadequacy, or redundancy. So that a company that routinely sets up its reserve with substantial margin gets no credit for that. A company that skates right on the very thin ice isn't penalized for that either, at least not in the short run. That, by the way, is a factor that applies not only to health insurance but also to all lines of business in the NAIC formula. There is no assessment of reserve adequacy or conservatism. The numbers are simply taken for what they are. To me in the long run that's something that needs rethinking, but the committee, obviously, in order to get going had to do something and get it down on paper and have something that would advance the state-of-the-art a little bit, but not, let's say, spend five years studying it either. So this is the formula that is out now for testing. Our first goal here is to look at it, to understand it, and to solicit your comments about it.

EFFECT OF SOLVENCY CONCERNS ON HEALTH INSURERS

But before doing that go to Table 3 if you would. On this table are listed some other things that are relevant to the calculation for health insurance even though they don't relate to it explicitly. Obviously, if you're in the health insurance business, you've got liabilities and you've got surplus so you've got assets, and the asset formulas, though they don't drive the numbers as much for a company that concentrates in the health insurance business, are still important. This is not intended to be a summary in which all the asset formulas are laid out in detail, but for the major categories of investment grade bonds, I did list the percentages simply so you can have a chance to take a look at them. There are adjustments for concentration in single large holdings, and there are adjustments that also reflect the fact that, if a company has a fairly small portfolio, the luck of the dice can run against it – some of you may have found that out already – in contrast to companies that have a larger portfolio, so those are relevant.

TABLE 3
NAIC "Proposed for Exposure" RBC Formula:
Other Factors Relevant for A&H Business

The covariance adjustment is relevant, and what it says is that among the asset and insurance risks there is an assumption of independence so that the square root of the sum of the squares approach is used to put that together. What that means in the aggregate, based on the testing (and this was fairly uniform across all sizes of companies) is that after the C-1, 2, 3, and, 4 risks were calculated, when the covariance adjustment was applied, it had the effect of reducing aggregate risk-based capital for companies by about one-sixth, and that was true generally across company size. In the four size categories that I talked about before, the ratio of the noncovariance-adjusted risk-based capital to the covariance-adjusted risk-based capital ranged from 1.13-1.17, so this was not a size-dependent element unlike the balance between asset risk and insurance risk, which as I said is heavily size-dependent. The covariance adjustment has some application that we cannot measure. Finally, the C-4 risk is applied as a percentage of premium also, life and annuity versus accident and health. One of the reasons those percentages are different is that at least in some states guaranty fund assessment percentages are different between life and annuity premium and A&H premium, and it was deemed that guaranty fund assessments are one of the elements, though by no means the only element, in C-4 risk.

So those are the relevant elements for health insurance of the NAIC formula and some comments about them. I would encourage at this point questions, comments, or observations from anybody. If anybody's done any testing of them that's fine.

MR. WILLIAM B. DANDY: Where does long-term care fit in this package?

MR. MCCARTHY: I believe at this point that it is intended that long-term care is in the "other" category and would either be deemed to be inflation sensitive or not depending on the nature of the benefit that's being provided. That is an element I know that the NAIC group was concerned about. Emerging areas are always the toughest ones to deal with, and people felt in their guts that they had some sense of what a risk factor ought to be for major medical, or long-term disability, or something like that. Long-term care is, I think, something that most of us would feel is not yet clear. At the moment, as I understand it, it would go in the miscellaneous category. But, clearly, as you built up reserves for it, those would become substantial, and the reserve percentage would probably dominate the premium percentage after a while.

MS. JUDITH A. DISCENZA: I have two questions on the C-4 risk. First, the way you expressed it, it sounds like the C-4 risk is not included in the calculation of the covariance adjustment.

MR. MCCARTHY: That is correct. It is not. It was deemed to be totally separate from the others.

MS. DISCENZA: My focus is on A&H. What was the reasoning behind the calculation of those two numbers: the 2% of life annuity premium and the 0.5% of A&H. What were the committee members trying to get at?

MR. MCCARTHY: I think if any members of the committee were here they would say they didn't know. There is a sense that there are things that can go wrong that don't arise specifically out of the risks of a business. And, in fact, if you look at company insolvencies and spend any time doing that, you will find particularly for small- to medium-sized companies, that some of the things that caused the insolvencies don't necessarily arise out of the particular risks of a line of business. There's a sense that there needs to be some more. I think people feel that this is perhaps the shakiest of them, but zero clearly isn't a right answer. And guaranty fund assessments are clearly one element, and that's one of the reasons, as I say, for that different factor for A&H. Beyond that I don't think I can help you.

MR. JOSEPH W. MICHEL: My question relates to some major medical multioption business where the doctors are at risk, etc. Is there any consideration in reducing the risk factor? There's less risk to the insurance company because the doctors are at risk. Is there any thought to having a different category? What if you're a little bit confused between putting it in the major medical and hospital or putting it into the area of dental and Medicare supplement?

MR. MCCARTHY: I can't speak for the committee members, but I did attend some of their meetings, and it was my belief that since they did not break it out separately, they intended to treat it in the major medical and hospital category. There is no question that in any of these categories the example you cite or any of several others can be used to prove that something should be lower or higher than it is. Frankly, I think the committee members were probably on the low side on the stop loss, because I've seen some pretty substantial swings in that. Their belief is they can't get all that done at once. They have to get it off the ground.

EFFECT OF SOLVENCY CONCERNS ON HEALTH INSURERS

MR. ROY GOLDMAN: Obviously, since all these data are not available to calculate like somebody who's just looking at another company's blue book, you are dependent upon an individual company doing calculations based upon its own block of business. This seems to me that then you can progress to another step to break down, for example, the first line of major medical and hospital premium into various types of businesses. You have fully pooled business, which has lower margins than business in which you have new retrospective or prospective insurance rating. You have the point-of-service managed-care business. The HMO business might not even come into this line for a lot of companies because HMOs are written through subsidiaries.

MR. MCCARTHY: Yes, right.

MR. GOLDMAN: Similarly, on the claim reserves I would submit that there's a big difference in risk between the claim reserves for long-term disability and for major medical in the same percentages here. I know that the committee was trying to come up with something simple, but you still have to rely on individual companies that produce data.

MR. MCCARTHY: Yes.

MR. GOLDMAN: I don't think it would take too much more to look at the risks inherent in some of these lines.

MR. MCCARTHY: I think that's an excellent comment and I appreciate it. The committee did at its earliest meetings begin with a much larger grid of possibilities and little by little whittled it down and combined categories and so forth. I think one of the key elements is, as you say, whether there's overcombination that went on there and whether, in fact, there should be more subcategories. Of course, if you have more subcategories, you have to have different numbers and reach agreement as to what those numbers are, and that was a problem, too. But that's an excellent comment.

MR. ALBERT A. RIGGIERI, JR.: I have two comments. One is I believe most of the steps in the formula for different size companies relate to having management control. Larger size blocks of business and lines will have more management control and experience in dealing with them. That's why I think we have the steps in. The second comment is the group LTD is an area of concern for us in that it does seem to be high relative to both the individual noncancelable and guaranteed renewable (GR) formulas in that you do have the right to terminate a contract, where you don't have that right on the individual side.

MR. MCCARTHY: Does that mean the LTD should be lower or the noncancelable should be higher?

MR. RIGGIERI: No, the LTD should be lower.

MR. MCCARTHY: Okay.

MR. RIGGIERI: The noncancelable looks about right.

RECORD, VOLUME 18

MR. MCCARTHY: Why am I not surprised?

MR. RIGGIERI: It seems like it might be appropriate to line it up more on the group side with the medical. It's about the same risk except for the tail on claims for which you have the higher claim reserves, so you have a good correlation there.

MR. RAGHU RANGACHAR: I guess I've seen a lot of research published on C-1 and C-3 risk and not too much has been exposed on insurance risk, and my question is, are we sort of pulling these numbers out of a box, or when is the research behind this going to start showing up?

MR. MCCARTHY: I take it that that question is addressed to some mythic committee and not to me.

MR. RANGACHAR: I tried.

MR. MCCARTHY: Although it happens that in my past life I was once Chairperson of the Society of Actuaries C-2 Risk Committee, and one of the things we clearly found is that whereas for assets – bonds in particular – you can look at certain categories where there are a lot of data and there are ratings and you can figure out what they mean, we found it very, very difficult on the other hand to cut through the tremendously heterogeneous nature of all the different kinds of risks that are being written and overcome some of the data problems involved in collecting them. But your comment is right on target. The numbers that were picked here were based in part on folklore and part on people's beliefs. In some cases, for something like group life, they are based on some fairly sophisticated statistical analysis, but in terms of the health formulas I would agree with you. I think there's a real problem there. In fact, we'll look at some numbers later on that illustrate a piece of that, and I think that's a very well taken point. What to do about it is not so easy but it's a well taken point.

MR. RANGACHAR: A lot more needs to be done I guess.

MR. MCCARTHY: Yes, sir, very much. Here comes a plug for the workshop.

MR. JAMES N. ROBERTS: This may be a terribly naive comment, but in looking at the purpose behind the NAIC doing this, giving external regulators an opportunity to determine when a given company is approaching some potential solvency crisis, I'm wondering if there isn't a different nonformula-based approach that could be used by regulators. I don't know how practical this is, but the insurance departments have already delegated significant responsibility back to the companies in terms of methodology for cash-flow testing, reserving methodology, what level of conservatism is in there and so forth. My suggestion would be to require management of the company – whether that's specifically the actuary or some other person – to develop a surplus target for that company that uses some kind of scenario testing or other approach that modeled its business through. Maybe the regulators could define the types of scenarios that would have to be looked at and, basically, determine a level of surplus that would carry a company through different sorts of economic and other business issues. Then the regulators could agree or not agree and negotiate or whatever back with the company so that each company has its one targeted surplus level. I'm just concerned that the formula basis is so naive for what is such a

EFFECT OF SOLVENCY CONCERNS ON HEALTH INSURERS

complex array of products and services and regulatory environments. For example, in the individual health I see one of the reasons that for individual major medical the percentage is higher is because in many jurisdictions it's difficult to get rate approvals and in some it's not difficult.

MR. MCCARTHY: That's right.

MR. ROBERTS: A company that's operating entirely within one jurisdiction versus another could have grossly different surplus needs, and the numbers are pretty big here. I guess my idea is that we try a different approach altogether towards defining a surplus need.

MR. MCCARTHY: Just two comments in relation to that, by the way. One of them, as I alluded to as Jim came up, is that he is the Chairperson of the workshop in the time period that follows this one. Number two, I do know that one of the focuses the NAIC has is to deal with the fact that many of the states are not equipped in terms of staff to do the kind of analysis that Jim just talked about, and the goal was at least to give them some first step that they could start from. In relation to that you give up a lot when you do that, and Jim has pointed out some of the things you give up.

MR. WILLIAM F. BLUHM: I'm having trouble rationalizing the relationship between the stop loss and minimum premium percentage and the major medical percentage. I guess I construct a scenario in my head of a million dollar case, of a fully insured case first, where the percentage is 15% or \$150,000. That case then becomes minimum premium, which probably doesn't really change the risk materially, and there's \$100,000 premium say. You're now holding \$25,000 instead of \$150,000. If the company then goes stop loss and most of that \$100,000 becomes nonpremium or something else, an ASO contract, the premium is down to maybe \$25,000 or \$50,000 for the risk, and you have significantly reduced the capital requirements without really changing the risk.

MR. MCCARTHY: Right. I think that's a fair comment. One of the things I would point out is that some of the companies that participated in the development that are heavy in the minimum premium market argued that, in fact, depending on where you set the thresholds and where you set the spillovers, the risk there is different from what the same fully insured large case might have been. Also, as in the point Roy made before, it's certainly different from that of smaller cases. I frankly believe that the means used here to handle minimum premium is in a way a surrogate for a big case, small case split and that's more speculation than anything anybody will confirm in writing. I believe there is an element there in which people are saying for big cases the volatility risk is not as big as for small cases. Many of the big cases are minimum premium or ASO with stop loss, and the factor for minimum premium and stop loss is a back door way to adjust for that. You can treat that as speculation, not as anything that's in any document anywhere.

MR. ROBERT E. DEGEETER: Dan, do you know what the thinking was as to why there's a factor for Exhibit 9 claim reserves but none for Exhibit 11?

RECORD, VOLUME 18

MR. MCCARTHY: No, and I meant to mention that at the onset because, as you undoubtedly would say for medical at least, the split's totally artificial, and you ought to put them back together and I agree with you completely.

MR. DEGEETER: We have clients, for example, that on the cancer reserves set up an accrued portion in Exhibit 11 and the future incurred in Exhibit 9. I don't think they're going to continue that practice in light of this.

MR. ROBERT R. MCGEE: We're a medium multiline company. The breaking down of the first \$50 million without having any type of an aggregate adjustment for the company seems unfair in terms of the breakdowns being developed for specific lines, but then there's no offsetting credit for possibilities of one line's surplus covering the other.

MR. MCCARTHY: Is your point that, for example, it would make more sense to you if a threshold applied to all health lines rather than separately or pieces? Is that what you're getting at?

MR. MCGEE: Yes, right.

MR. MCCARTHY: Good point.

MR. ALAN D. FORD: A \$50 million block of small cases that are fully pooled where gains and losses offset on a case basis is very much different in risk than a \$50 million block of cases with retrospective premium refund or dividend arrangements, and this doesn't seem to reflect that and, in fact, would penalize the company that pools the business as opposed to the company that treats each case separately.

MR. MCCARTHY: Could you elaborate on that latter point? What do you mean by penalizes the company that pools the business?

MR. FORD: The company that has all dividend business has the same capital requirement as the company that has the fully pooled business. But the risk on the dividend business is much higher.

MR. MCCARTHY: Oh, do we want a show of hands on that? I don't know that I'd necessarily agree with that proposition. I think it might depend on case size and the way you structure your margins in the case, but nonetheless, there is no question that those two things have been aggregated for risk-based capital purposes, and you can make the case that the risk is more or less here or there. One of the things, by the way, that the committee says in its report is that it was trying to establish a threshold below which there ought to be regulatory emphasis and it wasn't necessarily saying that a company whose actual to expected risk-based capital ratio came at 1.01, let's say, was thereby in great shape. In fact, when the committee tested all of the companies with assets above \$50 million and put all that back together for the industry, it got an actual to expected formula ratio of 1.77. The committee members had to make some approximations in doing that for reasons we've talked about because they didn't have all the annual statement data, but I don't think they're that far off. Now, frankly, I'd be very hard-pressed to say that the life and health insurance industry today is 77% overcapitalized. The committee members make the point

EFFECT OF SOLVENCY CONCERNS ON HEALTH INSURERS

that that's not necessarily what they're trying to measure. If they were trying, for example, to measure overcapitalization, they would need to factor in things like surplus needed for future growth and that sort of thing. But in fact, they were aiming at risk only, and they would believe if anything that they were taking sort of a low side emphasis in contrast to what a company might do internally or what a rating agency might do. I think they felt that a lot of these tradeoffs they made and a lot of these aggregations they made were defensible in that context because they were trying not to get the perfect answer, but to get an answer that you want to be above no matter who you are from a company point of view. And that, I think permeated a lot of their thinking as well as the practical need to get something done, and they were under a lot of pressure to do that.

MR. ARMAND M. DE PALO: In New York state, New York had a surplus formula it has been using on audit. One of the problems in it for the Guardian, even though we are a relatively high surplus company, is that on the C-4 risk New York auditors were using 50% expenses without any consideration of group insurance business. It was really designed around an annuity operation. And, believe it or not, for the Guardian, which is basically hitting the surplus limit in New York, we came out around 89% of the committee's target. We explained it to the committee members, and they've since made some changes to the formula, and they understand that that's a flaw in their formula. But I've still got the impression Terry Lennon (New York State Insurance Department Actuary) is going his own way to some extent even with the NAIC model out there. Do you have any feel for what the gap's going to be between the two formulas?

MR. MCCARTHY: Well, let me go back first to the specific point you raised because people who haven't tested against the New York formula may want to know it. In the NAIC committee's report the members tested their results against the New York formula, and they pointed out that one of the factors that caused some companies to appear in a different place in the ranking was a very high component of expenses relative to surplus and that threw the New York formula off. I would not attempt in response to your other question to speak for Terry Lennon; he speaks very well for himself. But I would point out that Terry has been one of the key drivers behind the development of the NAIC formula. He's interested in its testing. He met regularly with the people who were developing it. And, furthermore, in talking to some people in the New York Insurance Department staff, it is their belief that over time their own testing formula would probably migrate not toward 100% of NAIC, but perhaps some percentage of the NAIC formula. So I'm not so sure that New York and the NAIC are going that much in opposite directions.

The next subject that we'll talk about is the subject of rating agency practices. Table 4 picks up some of the elements that some of the agencies use in their formulas. But, of course, when you talk about rating agency formulas and how they're used, the focus is somewhat different from what the NAIC has in mind. The NAIC has in mind something that says this company is at a ratio where it needs more regulatory emphasis or doesn't, as the case may be. The rating agencies, of course, are trying to rate on a continuum from some rating that translates to very good to some other rating that translates to very bad. And while there are formulas, they get used for a variety of different purposes. In fact, the rating agencies, I believe, and this goes back to an earlier comment, have not focused very much on the theory underlying

some of the numbers they've used in the health insurance area in particular, and that is because, for most of the companies they rate, that has not been the major element giving rise to the rating. Table 4 shows various percentages for health insurance. Best's has moved around from year to year with different percentages on premium and didn't have anything on reserves for a while and now it does. Standard & Poor's works with a fairly wide range, and it's a little difficult to know, in fact, exactly what element is being used for the rating. Moody's has very different percentages on group and individual A&H. I could also, if I wanted, have put Weiss on Table 4. He tests with a normal environment and a stress environment. And the group health percentage changes between the normal and the stress environment. But, nonetheless, if you get all these numbers out there, you can kind of draw a circle around them, and you'll get some answer between 10% and 20% of premium for an aggregate block of business. Frankly, I'm not really sure for the rating agencies that the percentage is a major driver in determining their ratings. But if there are any comments or questions on rating agency formulas, people's experiences with them or what the significance of that is for rating, we'll be glad to take them up.

TABLE 4
Rating Agency RACR Guidelines: Elements Relative to A&H Business

A.M. Best	12.5% (premium) 12.5% (reserves)
Standard & Poor's	12.5-25% (premium) 10% (group A&H premium)
Moody's	25% (individual A&H premium)

MR. DE PALO: I just want to comment. We just went through our annual meeting with Moody's and Standard & Poor's, and we are a triple-A rating in both. We will probably maintain that for quite some time. It's no doubt that especially Standard & Poor's has a great fear of the group health area, and it takes into account to a great extent its trust or distrust of the management of the company. Standard & Poor's is very uncomfortable with management in general, and I'll tell you if Guardian wasn't a profitable operation and Standard & Poor's didn't feel confident in the management, it would be a very big negative into Standard & Poor's formula. Confidence in management has probably much more weight than the individual factors because there's a subjective element in what Standard & Poor's does.

MR. MCCARTHY: You've made another point, too, that should be emphasized in that the rating agencies and their structures look a lot more at profitability. There is, by the way, an interesting article in the April 8, 1992 *Wall Street Journal* quoting Standard & Poor's looking at the health business going forward to the year 2000, and Standard & Poor's is focusing principally on the medical business. Standard & Poor's foresees continued dropping of some companies by the wayside and what it termed the three remaining categories of writers: major players, super regionals, and niche players. Of course, that gives you a big tent so anybody can creep under one corner or another of it. But the point Standard & Poor's seems to be making is that it anticipates continuing consolidation. Companies that it views as marginal or not focused will drop out and that certainly affects Standard & Poor's thinking as it looks forward.

EFFECT OF SOLVENCY CONCERNS ON HEALTH INSURERS

MR. GOLDMAN: I've had the great pleasure of meeting with Standard and Poor's and Moody's and A. M. Best, etc. over the last five years. It seems to me that their emphasis is really still on the asset side. In fact, I don't see that they have a really great understanding in the liability side at all. They have few actuaries, and I don't know how their factors are being developed. They basically have other ways. They used to use leverage ratios for coming up with required capital, and I think the formulas are sort of being manipulated so that they more or less reproduce the leverage ratios. One of the things that I find interesting is that when we first met with the rating agencies in say 1988, group health was considered a volatile business. I think now although they do ask questions about our opinion of the health cycle, and they are concerned about the mergers and acquisitions that are taking place and, also, about the effects of changes in government regulation of health insurance, they actually consider the group health business one of the more stable pieces of business compared to what's going on on the asset side backing up life insurance and annuity business.

MR. MCCARTHY: I think that has been the experience of many people who work with the rating agencies, and in fact, if you look at some of the major concerns that leading companies have had, there have been more asset than liability concerns and the rating agencies, to the extent that they read the papers and follow the flag, have certainly been attentive to that. As a result, that tends to make this in some respects a minor factor, although as Mr. De Palo suggested, it's an area they may still have some discomfort about, and depending on a company's particular profile, they'll pay more or less attention to it.

I'm going to suggest that we move on to some data that are on the tables that follow. We begin with 45 companies with sizeable group insurance operations; this particular set was first developed in 1987, but we picked it retroactive to 1985. We had originally picked 40, and we expanded it for reasons I'll get to in a minute. The objective was to pick companies with sizeable group operations and, also, for purposes for which the sample was picked at the time, to exclude companies that were manifestly nontypical. So that, for example, a company in Portland, Maine, that does mainly long-term-disability business, although it would have qualified for our sample based on size, is not in the sample because we were focusing primarily on a typical mix between medical and disability. Other than that we were out to pick large companies in the group insurance business and have followed that set of companies for a number of years and have developed some numbers in relation to them that I want to describe to you. The reason for presenting them here is to look at them and take a look back at the NAIC formula and see what the numbers say to us.

Now to be sure, virtually all of these companies are in businesses other than group insurance, so they don't stand or fall based on the way a risk-based capital formula for group insurance hits them, but nonetheless, it's kind of instructive. Table 5 – group health cumulative loss in relation to 1985 premium – says, envision yourself standing in 1985, taking the group health premium as it sits at that point and look forward and add up the cumulative after-tax statutory losses going forward. So, therefore, if for example in year one a company had a gain, we count that as zero because, obviously, when you get to the end of that year its risk-based capital calculation won't accrue or reserve that gain anyway. That becomes free money. If in the first year it has a loss, count that loss. If in the second year it has a loss also,

RECORD, VOLUME 18

add that loss to the first. If it has a gain in the second year, use the gain in the second year to offset the loss in the first but don't come back beyond zero. Because in this game you always reset at zero. What you see then on Table 5, if you do that, is the result over the period 1985-90, taking 40 companies of the 45, and those are the 40, by the way, that were still in the group insurance business at the end of 1990. Taking them by size quartile, where one is the largest, we've recorded the maximum cumulative loss under the definition that I just gave you as a percentage of 1985 premium. So that if you did a risk-based calculation in 1985, and then looked forward from that point, to test the adequacy of that risk-based capital, you'd be testing it against these numbers. As you see then in the largest quartile nobody got above the cumulative loss of 10-24% of that premium. As you go to smaller categories you begin getting some larger losses. In quartile two you've got a company that turns up above 25% and this is a company that is still in business, by the way. In quartile three, you have a company that turns up above 50% and another company above 25. And, finally, quartile four shows nobody above 50% but a fair-sized chunk of companies that would have been above 10% in the 10-24% range for that period of time. Now the numbers don't lie, as they say. What you make of them, obviously, depends on the approach you bring to it. Frankly, when I look at these numbers I say, gee, did the NAIC go high enough when it set its percentages? But I present these data to you because I think they're kind of sobering. While there is no dramatic bias that smaller blocks of business will show higher need for capital, I would argue I guess that the way those numbers turn up there is perhaps some slight indication that, relatively speaking, smaller companies do have a slightly higher need for capital for risk purposes only, forgetting all other company purposes, than do larger companies. That's the first set of numbers that I want to draw to your attention.

TABLE 5
Group Health
Cumulative Loss in Relation to 1985 Premium

Size Quartile	Number of Companies with Cumulative Loss of:				
	More than 50%	25-49%	10-24%	1-9%	0%
1	0	0	2	6	2
2	0	1	3	5	1
3	1	1	3	4	1
4	0	1	4	4	1

You may want to look at Table 6 because it takes the five companies that dropped out between 1985-90. These are five companies that were in our sample that sold off their group blocks of business.

MR. GOLDMAN: Is this net income before tax?

MR. MCCARTHY: Net income after tax.

EFFECT OF SOLVENCY CONCERNS ON HEALTH INSURERS

TABLE 6
Group Health -- Five Exiting Companies

Company	Losses in Relation to 1985 Premium	
	Cumulative	Ultimate
A	62%	62%
B	42	42
C	15	6
D	23	17
E	21	21

MR. GOLDMAN: So this reflects all kinds of allocations on the annual statement?

MR. MCCARTHY: The answer is yes. This is after-tax income before capital gains and before capital losses. For the five exiting companies I've shown the greatest cumulative loss by the same definition that I gave you for the continuing companies, and in some of those cases, it appears that perhaps those companies were over-reserved because in the year following exit, there was a release. You'll see that for two of those companies, companies C and D, I show the ultimate loss and then I reflected the gain that came in after they were, in effect, out of the business. But, again, if you look at these in relation to the other 40 companies and, bear in mind, that a risk-based capital formula is going to have to deal with people who may leave the business as well as people who stay in it, these to my way of thinking add a little bit more sobering news to the need for capital to be in this business. Again, as I say, the numbers are what they are. People may make different things of them.

Now I'm going to go on in a minute to look at the rest of the data on the set; however, before doing that, I'd be interested in any thoughts anybody may have as to the application of these kinds of numbers to risk-based capital targets and what they ought to be. This goes somewhat to the question asked before which was, in effect, are there any data? Well, this is one area where you can find a little bit of data anyway and you can try to figure out what it means and to me it suggests at least the formula that's out there now protesting is not too stringent. Maybe if anything, it suggests the opposite.

MR. JOHN P. COOKSON: Given that 1989-90 were relatively good years, one alternative in Table 5 would be to look at the cumulative maximum.

MR. MCCARTHY: Yes, that's what it is.

MR. COOKSON: At any point in time?

MR. MCCARTHY: At any point in time. But, for example, let me give you an illustration to make it clear. If a company lost 100 in year one, got back 50 again in year two and lost another 100 in year three and if year three was the end, it would use 150 as the cumulative loss. I did not credit gains after the last loss, and I realize I didn't make that clear now in saying it. I credited interim gains to balance that out, but not after the last loss. That's the way these are done. And as your comment suggests, by and large, it was cases through 1988, although in one or two cases

RECORD, VOLUME 18

through 1989, that generated the worst loss. I appreciate the clarification because I realize I didn't say it clearly.

MR. ROBERT J. DYMOWSKI: Since you had stated that this was a typical block of business or a typical group of companies I was wondering, if you did a risk-based capital calculation based on a composite, what approximate percentage would be shown there that would come out using a typical block of business of your 40 companies? And then also looking at this cumulative loss in relation to your premium, accumulate all of your 40 companies together and find out what type of percentage of premium the loss was versus what would be shown on your NAIC risk-based capital formula.

MR. MCCARTHY: I understand the question. I haven't done that, but I would also caution you that the NAIC formula isn't supposed to work for an aggregation of a whole bunch of companies. It is supposed to work for individual companies. And while presumably there's some casting of the net that says the net probably won't catch everybody, still and all it ought to catch some of the outliers without letting them be offset by others. I do know that, if I did a calculation of the type you described, it would tend to be dominated by a few very large companies with fairly stable results, and they would make the results look more stable than they ought to be given the purpose of the NAIC formula.

MR. DYMOWSKI: These losses were taken as percentages of the 1985 premium, therefore ignoring any growth that might have been sizeable during this period of time depending on presuming the company.

MR. MCCARTHY: That's true. But, interestingly, for many of the companies it was not that sizeable, and I believe that's because of continuing shift to ASO and minimum premium. The statutory premium is being used. Looking at those numbers the growth is not that sizeable, but your point is correct. If you had it for a company that was growing, its target would keep going up in the meantime. I wanted to have a place to stand still and look at the numbers.

MR. DYMOWSKI: Yes.

MR. MCCARTHY: But your point's well taken.

MR. DYMOWSKI: Two other points, of course, are that during this period a number of companies were investing a tremendous amount of money in managed care developing networks, which one could argue was necessary to do in order to be profitable from 1989-90 forward.

MR. MCCARTHY: Right.

MR. DYMOWSKI: And, also, the HMO businesses that some of these companies have that may have been profitable do not come into these gains here.

MR. MCCARTHY: That latter point is true, and of course, if the companies are unprofitable, it isn't in the losses either. But, no, I agree with you. This is a limited

EFFECT OF SOLVENCY CONCERNS ON HEALTH INSURERS

purpose focus. I was trying to do it in part, however, to line up to the way the formula operates, which is generally on the same basis.

MR. JOHN P. WAGNER: These 45 companies, did they contain any Blue Cross/Blue Shield Association plans?

MR. MCCARTHY: No, these are commercial carriers only, and I should have said that at the outset. There is, as you probably know, a separate effort going on in the Blue Cross/Blue Shield Association to develop a risk-based capital structure, and some preliminary ones have been developed. Originally we had hoped to cover that topic in this session as well and all things fitting as they do, we're not getting to that. I think, frankly, depending on the nature of the Blue Cross/Blue Shield Association plan, there are in some cases some very different considerations you have to bring to bear.

MR. WAGNER: Well, I'll make a comment on that. The Blue Cross/Blue Shield Association approach is to take rating mechanisms into account and regulatory influences into account. Another comment I might make is in a prior life I was with the Blue Cross/Blue Shield Association and very concerned with solvency. I would say that anything that could measure management efficacy would really be the most important thing here in my mind.

MR. MCCARTHY: If you have any suggestions for how to do that, lots of people would like to know. Let's move on with the data in order to put in perspective profitability of operations, and again, this is subject to the comments that Roy Goldman made very appropriately as to what is and is not included in these numbers. What Tables 7 and 8 show for the same 40 continuing companies is profit to premium percentages for 1985-90 and then aggregated over that period. Table 7 is based on the average of all companies in a quartile, and that can be really disrupted somewhat from the point of view of seeing average profitability patterns by companies with unusually high or unusually low results. As a result, Table 8 is based on medians within each quartile rather than averages to avoid the distractions at the extremes. When we first began tracing these numbers, there was a belief that for a while seemed to be borne out well in the early years (when we first did these numbers after 1987) that there was a fairly strong direct correlation between size on the one hand and on the other both profitability and reduction in volatility. In the early sets of numbers those came out quite clearly. Two things have happened as we followed this sample forward. Number one, that's been less true for the companies that have continued. And, number two, since what's in front of you now is only for companies that were still in the group business at the end of 1990, the five exiting companies that tended to be in the lower quartiles have been removed. It turned out that in the early years, while they were still in the business, they had a significant sort of pulling down effect on those lower quartiles. As a result, the numbers don't bounce around nearly as much now from one size quartile to another as they did when we first began doing this study. I've set them out here partly in order to go forward to discussing return on equity, but also partly because I think the numbers are interesting in themselves. John Cookson brought out before in his comment the group health cycle. These numbers show very clearly the cycle pattern that isn't a great surprise to anybody anymore. They also show a significant amount of moving around by size quartile from year to year. These I say are presented primarily for

RECORD, VOLUME 18

purposes of looking at return on equity as we go forward, but I think they're kind of interesting in themselves also.

TABLE 7
Group Health Profitability: 1985-90
Forty Companies: Profit/Premium

Size Quartile	1985	1986	1987	1988	1989	1990	All
1	4.4%	3.6%	(0.9)%	(0.1)%	1.5%	2.5%	1.7%
2	5.2	1.1	(3.8)	(1.0)	3.4	4.1	1.5
3	2.7	(0.2)	(2.7)	(2.5)	(0.9)	0.7	(0.5)
4	4.8	1.4	(2.8)	(2.9)	1.6	4.4	1.2

Based on averages within each quartile

TABLE 8
Group Health Profitability: 1985-90
Forty Companies: Profit/Premium

Size Quartile	1985	1986	1987	1988	1989	1990	All
1	2.4%	1.8%	(2.4)%	(0.2)%	1.4%	3.1%	1.1%
2	4.2	0.3	(3.5)	(0.1)	1.7	3.9	0.9
3	2.9	(0.9)	(1.9)	(1.6)	0.0	1.6	0.2
4	3.4	1.1	(3.7)	(1.5)	1.4	3.4	0.5

Based on medians within each quartile

And the next set of tables is exactly the same sets of companies and, again, one based on averages and one based on medians, putting group life and group health together. Since most people who have group health business also have group life business and since there's a belief that those are kind of related to each other, it seemed appropriate as well, for looking at return on equity, to put these together. Other than that, Tables 9 and 10 have exactly the same meaning and same construction as the group health slides. That is to say once we put companies in a quartile we left them there. We didn't move them around even though their size based on combination of business might be different than on one line alone. You still see the cycle effect, but obviously, it's dampened considerably by the group life results. These are, again, gains from operations after federal income taxes. Now the point of laying that out, apart from its own interest, was to go to Table 11, which is an attempt to take by quartile the NAIC risk-based capital requirement for companies in that quartile as a percentage of premium, group life and health together, and look at the average return over the 1985-90 period in relation to the equity requirement that would be gotten on the NAIC formula bearing in mind not only my belief, but I think the market's belief, that that would be kind of a low side required equity. In quartile two you might say that would be real nice. I'd love to have that 20% return. Bear in mind that is on a somewhat slimmed down definition of equity, and if you use the results of the committee that developed the NAIC formula and the committee's testing results and say that in practice most people find they have to keep a good deal more equity than that or are keeping it for whatever reason, these returns would

EFFECT OF SOLVENCY CONCERNS ON HEALTH INSURERS

all be significantly lower. Here is an interesting question then: Why are people in this business? I would appreciate any comments on the question of returns on equity, appropriate means of measuring them, or these results in general that would shed any further light.

TABLE 9
Group Life and Health Profitability: 1985-90
Forty Companies: Profit/Premium

Size Quartile	1985	1986	1987	1988	1989	1990	All
1	4.5%	4.6%	1.9%	1.9%	2.7%	3.3%	3.1%
2	6.2	3.0	(1.0)	1.3	5.0	5.5	3.3
3	3.5	1.1	(0.7)	(0.8)	0.8	2.2	1.0
4	5.6	2.2	(1.7)	(1.7)	2.4	5.3	2.1

Based on averages within each quartile

TABLE 10
Group Life and Health Profitability: 1985-90
Forty Companies: Profit/Premium

Size Quartile	1985	1986	1987	1988	1989	1990	All
1	3.4%	3.3%	0.8%	1.0%	1.8%	1.9%	1.9%
2	5.8	3.3	(0.1)	1.2	3.8	5.9	3.4
3	3.2	1.0	0.4	(0.8)	2.0	3.2	1.5
4	5.1	1.6	(2.4)	(0.4)	2.0	3.5	1.4

Based on medians within each quartile

TABLE 11
Group Life and A&H R.O.E.
Forty Companies: 1985-90 Average

Size Quartile	Assumed RBC (% of premium)	R.O.E.
1	15%	12.6%
2	17	20.0
3	19	7.9
4	22	6.4

Based on medians within each quartile

MR. LONNIE MILTON GRAUL: I have a little broader question about this whole process. If we can set a minimum surplus, why do we need the appointed actuary? It seems to me that this is in direct philosophical conflict with the appointed actuary concept. The appointed actuary ought to be able to set what the surplus requirements of the company are, I mean, eventually. I mean we're not there yet, obviously, but maybe this goes to the questions earlier about management and control and things like that. But it seems to me that this is philosophically in direct conflict with the appointed actuary.

RECORD, VOLUME 18

MR. MCCARTHY: Good question and I would be interested in people's answers, but while you all jump to answer I'll offer one thought myself, which is that in one respect I think they're related. As I said before, the formulas contain no explicit provision for reserve adequacy, inadequacy or redundancy. I would argue myself that one of the functions of the appointed actuary, as that concept is now being developed, is to assure that the reserves are reasonably appropriate for the business in question. If you have that assurance and you had that assurance kind of uniformly across companies, then I think you could reasonably build on top of that a risk-based capital requirement that might be consistent from company to company. The other thing I would say is that, while you can theorize that the actuary's domain ought to go beyond adequacy of reserves and ought to include surplus as well, I think it's right to say that in discussions with what I'll broadly characterize as the industry, not only aren't we there yet, but also I don't think we're exactly going in that direction right this minute, so we might as well take a look at where we are and see what we can do.

MR. TIMOTHY F. HARRIS: I'm involved in the Life Committee of the Actuarial Standards Board and my understanding on the valuation actuary addressing surplus is that it's kind of a political issue. What I heard is that management really doesn't want the actuary dictating what the surplus should be. The committees involved in drafting some of the valuation actuary documents were told to leave hands off surplus. But also at the same time they're looking to make sure that there's no overlap, that we're not doubling up on some liability that's being established in addition to a surplus amount that is being required.

MR. MCCARTHY: Good comment.

MR. DE PALO: You have to also look at this question from a regulator's point of view. Prior to this target surplus or whatever you want to call it, if a company had less surplus than the regulator liked, the regulator couldn't do much about it. You couldn't go into court and say, we want to take over the management of this company because it only has 2% in surplus. The courts would look at the case and say what are you talking about, this company has surplus, it's solvent. And the regulators had no control over the situation. What this is really giving them is some way to get in and say, there's surplus that's needed for risk and there's surplus that's needed for growth. It's not clear what the courts are going to do when some company goes below this level and the regulators say I want to go in and help that management because the company only has 50% of this formula, even though it doesn't want the help. What the regulators are hoping for out of this is that they can basically get into the company and control it when the company doesn't want them to do it and this is a new issue. The other issue that was raised is, is the target surplus in conflict with the valuation actuary? As long as there are guaranty associations there better be nationwide minimum reserves and minimum surplus, because not every actuary is working in the best interest of the industry. There's a lot of pressure on individual companies. As long as I'm a member of a guaranty association, I don't want other actuaries who are under political pressure in their own company running their companies to the ground.

MS. DISCENZA: I just wanted to point out there's an old Burt Pike article in a dusty *Transactions* that ties required profit to growth and surplus objectives. It seems to

EFFECT OF SOLVENCY CONCERNS ON HEALTH INSURERS

me this return on investment really doesn't include the growth rate of the companies involved and it might be an interesting thing to see what the Pike formula would indicate.

MR. MCCARTHY: That's a good point. In other words, you can see whether these companies, in fact, are running beyond sustainable levels of growth in terms of their returns, and that certainly is one of the functions of return. Of course, if they're investor-owned companies, they have other theories about return as well that have to be taken into account.

MR. MCGEE: I have two questions just for clarification. On Table 5 trying to reconcile that with the profit. Did you say that the way it worked was that basically gains in 1985-86 wouldn't go to offset losses in 1987, 1988, 1989?

MR. MCCARTHY: That is correct. If the company had gain, gain, loss, loss, loss, then on Table 5 the cumulative loss is the sum of the three losses because you would have stood at the end of that gain period, and you wouldn't have stocked that money away for any purpose. It would have been free money. All you would have needed was your risk-based capital.

MR. MCGEE: Okay, but then if you had started at 1987 or 1986 even and gone through 1991, may it have been markedly different? Because you probably have 1991 being a profitable year.

MR. MCCARTHY: No, because as John Cookson brought out in his question before, I did not count gains beyond the worst point of loss. The theory that I operated on in doing these numbers was to say, if you have risk-based capital at a certain point, that in theory ought to sustain you through whatever your point of maximum losses in the future is. So that if you had loss, loss, gain, gain, I didn't count those subsequent gains, because if you would have been under (for the sake of argument, if this was your only line of business and that capital was the only capital you had and running through the three loss years would have put you under) the later gains would have been irrelevant so those aren't counted. The only gains used in getting this point of worst loss are ones that occurred between the first loss and the last loss that might have offset it somewhat because that, in fact, would have brought you back.

MR. MCGEE: Okay. And finally on the ROE table, is the risk-based capital just for C-2 risk?

MR. MCCARTHY: Oh, I'm glad you asked that. I showed the percentages there for that reason, but that is intended to be the calculated number for life and health together for a company that was only in that business, but for that business I assumed that the company had category two assets and I also put in the C-4 as well. So it put everything in.

MR. MCGEE: Okay.

MR. MCCARTHY: By the way, at first glance that may seem difficult to do because the group life numbers are stated in terms of amount of insurance. It turns out in this 40-company survey if you assume \$4 of premium per thousand per year, you will be

RECORD, VOLUME 18

very close for almost every company to the relationship of premium to amount of insurance, and so you can translate the life numbers fairly readily at that point.

MR. MARLIN M. MUELLER: You mentioned that HMO results are typically not included because companies are doing that business through subsidiaries.

MR. MCCARTHY: Well, Roy Goldman said that but I would tend to agree with him.

MR. MUELLER: Okay.

MR. MCCARTHY: And subsidiary results are not included in here. They would turn up in the bookkeeping as investment results, and if that's the case, they won't be in here.

MR. MUELLER: Okay, is there a special treatment of those assets then in subsidiaries in general or an HMO specifically?

MR. MCCARTHY: The answer, I think, is yes and no in that order. There is a special treatment of assets that involve subsidiaries, and in fact, that has been a point of considerable debate both for life insurance companies and for casualty companies in the development of the NAIC risk-based capital, and there are some regulators who have very strong views on that. But those assets are treated separately with their own requirement. To the best of my recollection and I can look it up afterwards and check, there is no particularly special treatment for owning an HMO company as opposed to opening a brick company or anything like that.

MR. BLUHM: I have a question. Dan, do you know whether the casualty people are coming up with formulas that are consistent with this for casualty companies, or how is it going to interrelate?

MR. MCCARTHY: Will the formulas be consistent for casualty companies? Is it your thought that, if you have a casualty company issuing health business, you ought to get the same answer as if you have a life company issuing health business?

MR. BLUHM: A good question.

MR. MCCARTHY: The answer is that there is formula development underway there as well. Of course, health business for casualty companies for the most part is a minor thing. I don't know if they are going to use exactly the same percentages. An interesting question.

MR. SHREETH ANMINIJU: NCCI. I think the casualty company proposals being developed are adopted the same way the health and life companies are doing the process. The proposals are making a five-pronged approach to the risk-based capital, trying to go for the business risk as well as the insurance risk, the asset risk and the credit risk. The approach is being developed. I think by December 1992 it will go for the testing in the field.

EFFECT OF SOLVENCY CONCERNS ON HEALTH INSURERS

MR. JOSEPH W. MORAN: I wanted to address the question of surplus or risk-based capital for HMOs themselves. What's the status of the regulators' thinking on that point?

MR. MCCARTHY: I frankly don't know. Does anybody? I've seen some work done, by the way, for HMOs that says that for that kind of an organization you really need to take a two-pronged look. You need to take a look from an insurance entity point of view. And you need to take a whole different look from a liquidity point of view, because particularly, if you're a brick and mortar kind of HMO, the nature of your structure is very different and the nature of your capital requirement is very different from an insurer where, by and large, the assets are in outside investments that might, under the right circumstances, even be liquid. But I don't know of any specific action being taken there.

MR. MORAN: Because I would raise the question as to how much of the book surplus of an HMO subsidiary should be viewed as free surplus available for that treatment in the parent company's statement as opposed to being a risk-committed capital for the HMO. Obviously, it would be even for an HMO that's not bricks and mortars, the value would have to be measured giving consideration to the stability of the provider contracts.

MR. MCCARTHY: Yes. I suppose that's a particular case and particularly relevant since we're talking about health, but the general question deals with surplus that comes out of subsidiaries you own and what the nature of their requirements are depending on the nature of the subsidiary.

