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## Session 85 PD

### Capital Planning and What May Happen to Your Capital Plan

**Track:** Health

**Moderator:** Karl Madrecki

**Panelists:** John C. Lloyd  
Karl Madrecki  
Donna C. Novak

*Summary: Panelists discuss recent developments and disagreements in the area of capital planning. What is capital planning, and how should health actuaries be involved in it? How are some of the standard risk-based capital (RBC) measures defined? Given several recent challenges to health plans' capital levels, how should the industry support its position? Is it possible for a health insurer to have too much capital? Attendees learn the basics of capital measurement and hear about recent attempts to redefine appropriate capital levels.*

**MR. KARL MADRECKI:** My first brush with capital came in the burgeoning life and health industry, back when group was considered a growth industry and everybody wanted to get into it to experience that corporate growth that everybody valued so highly in their pocketbooks. Because I was put in product development, my first interface with capital was that we had to design products, and we were actually measured by return on capital. I very quickly learned to hate the controller, because, as we all know, if you get assigned too much capital, it's pretty hard to meet those targets, whether it's before or after taxes. My second dose of reality came a little later when we needed to invest in things like networks, HMOs at the time. We also needed a new claims system. Then I discovered something else from

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the investment people in the company, and that was called return on investment. Those two go hand in hand.

When you start with an insurance company, you assume deep pockets. You're not worried about business decisions, because if you have a good growth idea, you aren't worried about solvency; you just assume that things will sort of work out. But it did not take long until I got my first dose of how the public thinks. I went home. My dad was a Chicago cop, and he was still mad at me for not becoming an engineer. What the heck—I was this guy who worked at an insurance company (in group life and health). "Dad," I said, "We're losing money." He said, "No, not with all that money coming in the front door. It has got to be going out the back somewhere." That was my first lesson that the average citizen—I think that my dad is a pretty good representative of one—is never going to believe you when you tell him or her that you're losing money.

A short time later, I got a bigger dose from a pension actuary who did a lot of testimony. He had just been in a case where he tried to explain to a jury that a small change in interest rate assumptions was trivial. It shifted present values by \$1 million. He said, "Did you ever try to explain to a jury that \$1 million is not a lot of money?" Those two incidents have always stuck with me.

Today we're in a somewhat similar environment, except the issue is health coverage rate increases and affordability. That has generated an environment that's challenging all of the health coverage risk-taking entities, from consumer unions to governors to attorney generals to what have you. It doesn't matter whether you're for-profit or not-for-profit. Recently there was a series of articles in California (and in many other states) that said that the health companies there have from 13 to 5 times the required minimum. The implication to the public was that that's too much money.

I'm fortunate to have a panel that's very familiar with the capital structures of health insurers. Donna Novak worked on the working group that developed health risk-based capital. She's currently a consultant to the regulators and to the insurance industry, much of it on the subject of capital and planning. John Lloyd, currently with Ingenix, is a former valuation actuary, has also worked with one of the accounting firms and has also done a lot of work in the area of target capital and capital planning. Donna and John have a wealth of insight into their subjects. I'm from the Blue Cross/Blue Shield Association and also was on the health risk-based-capital development working group.

**MS. DONNA C. NOVAK:** I'm going to cover six topics today. One is the ruin level that is represented by risk-based capital. In other words, what risk level is risk-based capital protecting a company against? Another topic is the reserves and the relationship between reserves and risk-based capital. Those of us who work with risk-based capital realize this connection, but regulators and sometimes company actuaries forget the interaction between reserves and risk-based capital.

I'll talk a little about risk-based capital targets for companies and how they are set. My next topic is the relationship between medical inflation and profits. This is something that I don't think is going to surprise anybody in this room, but as an expert witness I have had to explain why health companies, even not-for-profit ones, have to have a profit.

I'll also talk about affordable growth, which is a term stolen from MBA-teachings that focuses on non-health companies. I've modified the concept a little for health insurers and risk-based capital. Then I'll talk a little about excess retained earnings. As Karl said, there's some concern that companies are too profitable. If you're too profitable, what can be done with excess earnings?

As Karl mentioned, I was part of the Academy of Actuaries group that developed the original risk-based capital formula that was presented to the NAIC. Then the NAIC took what we had recommended, which was a bit more complicated than what was practical, simplified it and changed it in a couple of ways that are important

We did stochastic modeling using a number of years of data (maybe five or eight) that we gathered from companies that were generous enough to share their data with us. We looked at the historic underwriting cycles and modeled, through an iterative process, what a 5 percent chance of ruin would be. We were looking for what capital level you would need as a percentage of premium so that there was a 5 percent or less probability of a company becoming bankrupt over a two-year cycle. The reason for the two years and the 5 percent was that regulators wanted a level such that when they saw a company hit it, they had approximately two years to step in and try to get things turned around before they had a situation where the regulator would have to take over the company.

I'm not going to go too much into the actual formula since most people are familiar with it. However, there are a couple of things that I will be talking about that do assume a little knowledge of the formula. When I talk about risk-based capital statutory levels, I'm talking about a 200 percent level. That is the first point where regulators become concerned, and that's the point where we estimated that you have approximately two years. Also, almost everything that I say will be aimed at the underwriting risk because that is what we're modeling. Those of you familiar with the formula know that for health insurers, the underwriting risk is the major part of risk-based capital. Nothing else has much impact.

Let's talk about reserves and risk-based capital. When we did the modeling, there were some implied assumptions of which we were very much aware. One was that the reserves had a margin in them, so your unpaid claim liabilities had a margin. The margin depended upon your company policies, but health actuaries always put an explicit, as well as an implicit, margin in, and that was assumed. Also, regarding deficiency reserves, it was assumed that future claims and premiums were calculated for a profitability level or a certain loss ratio, and that if they were not

going to be profitable, there would be a deficiency reserve set up. So those two reserves were assumed to be adequate as part of the modeling.

That's important because of two things. One is that Codification, which came in later after risk-based capital was adopted by the NAIC, used a term in the Statements of Standard Accounting Practice (SSAPs) that said "management's best estimate" for the reserves. Many people assumed that a management's best estimate does not have explicit margin and that it's about a 50/50—50 percent of the time you're overreserved and 50 percent of the time you're underreserved. However, health insurance regulators would like to see that you're at 100 percent or overreserved, but they tolerate somewhere around 85 or 90 percent. It's not a 50 percent reserve level. There has been a lot of discussion at the NAIC about that, and there has been a lot of discussion with regulators about that. Some company actuaries and some accounting firms have taken the codification language, which was written by property-and-casualty (P&C) accountants and actuaries, and tried to apply it to health insurance companies, so there is a disconnect. If a company would lower their reserve levels to that 50/50 percentage or not set up adequate deficiency reserves, their risk-based capital would then be misstated. Regulators are very concerned about that because they are using it as an early warning.

Another risk that was built into the original risk-based capital formula as designed by the Academy of Actuaries was the downstream risk of capitations. If you have a capitation and one of your providers or one of your networks becomes insolvent and can't fulfill on the contracts, you're collecting premium, but now you have to go out and buy those services retail, if you will (versus wholesale), without being able to adjust your premiums until the end of the next contract period. We did model that. We included it as a consideration in the managed care credit that is given for the underwriting risk. But when the NAIC implemented the risk-based capital formula, they felt that that should be an explicit risk and that it should be considered a credit risk, so they significantly increased the managed care credit for capitations, thus decreasing the underwriting risk-based capital. When they moved that component to credit risk, it was not an even offset. But even if it had been, because of the covariance formula at the end of the calculation of risk-based capital, the underwriting risk overshadows the other risks, so changes in the other risks do not really flow through to the bottom line. The result was that we lost some of our protection against the capitation risk. Nowadays there's less and less capitation, so maybe it's less and less of a problem.

The next topic is capital targets. As Karl was saying, the statutory RBC is a minimum; that's where the fire alarms start going off. However, it's being interpreted as the statutory requirement, and anything above that means you have too much capital. John is going to go into some detail about how we calculate what the target RBC should be, but I think all of us realize that your company's target has to be significantly higher than the point where the state regulators start calling you and asking you a lot of questions.

One way to think about the target is the mean of your fluctuations over 200 percent of RBC, so that your fluctuations in capital just barely touch that 200 percent or stay above it. One of the first things that you look at is your underwriting cycle and any unique risks that your company would have because of its situation or business plans. Determine what that cycle is and what the cushion should be so that your risk-based capital does not fall below the 200 percent.

Risk-based capital targets, because they are measuring the risk, should be set by line of business, because some lines of business have innately more risk and more fluctuation in the loss ratios than other lines of business. Also, getting back to what Karl was saying about the return on investment and return on equity, those calculations are best done at a line of business so that you can price appropriately and measure profits appropriately by your different lines of business. John is going to go into the details of this a little more.

As far as medical inflation and profits, all of the risk-based capital modeling depends upon the company and the company situation and their targets. You can't transpose, say, X percent of premium or X percent of RBC from one situation to another. You have to model it out. The modeling is not difficult; you just use the risk-based capital formula from the NAIC to do most of it.

Medical inflation drives RBC. Again, the underwriting risk is the risk; it is the RBC for health insurers. The underwriting risk is based upon claims. As your claims go up, your capital requirement is going to go up, and you're going to have to have more retained earnings. How much the capital requirement goes up depends upon, the company target capital. If you have a 300 percent target capital or a 700 percent target capital, that multiplies the effect on your capital requirements due to medical inflation. If we are talking about a 15 percent rise in health-care costs, that would imply about a 13 percent increase in RBC if you were at a 500 percent target level, which turns out to be about 2 or 3 percent of premium, or about 5 to 7.5 percent return on equity. A 15 percent rise in health-care costs is not all that high nowadays, and a 500 percent RBC target is not that unusual. Even a not-for-profit is going to have to make at least this amount of profit, and that's if they're not growing. If you're growing, you not only have medical inflation, but adding more members or getting into a new market will also increase your capital requirements.

That gets us to the topic of affordable growth. Affordable growth is a concept that was developed by an MBA professor at one of the Eastern universities. What he did was look at a company's target debt-to-equity ratio and ask, "How much can this company grow and still keep that target ratio in balance so that we don't have to borrow money, which becomes unaffordable?" Thus the term "affordable growth" was coined. I stole it because I like the term "affordable growth." I think that people can get a picture of what it means.

In the case of health insurers, I say that affordable growth is looking at where your RBC level is right now compared to your target RBC and how much growth in

premium you can realize in that difference. The calculation involves modeling out, again using your company's situation, how much a percentage in premium increase means in actual dollars in risk-based capital and then determining how much your premium can grow in between where you are and where your current risk-based capital is. Of course, this implies, too, that if you are below your target, you have no growth potential. Even inflation starts hurting you.

**FROM THE FLOOR:** Doesn't it depend on your profit margin? In other words, if you only have 1 percent versus 5 percent, can that affect this calculation?

**MS. NOVAK:** You're right. You're looking over a period of time, such as your growth in the next year, so you would look at your projected capital at the end of the year, which implies your profit margin. But you are projecting out that ending capital and then the RBC requirement at the same point in time.

What if we do a really good job and are really profitable? It is starting to irritate me that I spent five years getting an MBA and learning to help companies be profitable, and now "profitable" is a dirty word. But I still say that profitable is good. What if you are too profitable? The reason I included this is that I think it frames this issue. Normally when the issue comes up of too much capital or too profitable, you have a group of interested parties who feel that they have claim on the profits. It's therefore interesting to look at the fact that there are a number of groups that could say that they have claim to this excess profit. The first might be employees. Certainly that's what the unions believe: if you're really profitable, that's from our skills and labor, and so you should increase our wages. Profit sharing has been a very popular way of rewarding employees when there is more profit than is targeted. Sometimes that is in the form of executive bonuses, and sometimes it's profit sharing for everyone in the company. That regulates the excess capital automatically.

One thing that you rarely see, in the widget industry for instance, is a company paying more to its suppliers. Rarely would a General Motors say, "We have a lot of profit here, so we're going to pay more for all of our tires and windshields and transmissions." In the health insurance industry, the suppliers do feel that they have some claim on excess profits. It's my understanding (I have never researched this, so I don't know if it's true) that in at least one state where a lawsuit against a not-for-profit health insurer was filed by the families of the doctors (who were also insured by this company, so they sued as insureds). They were trying to get higher payment to doctors and hospitals. I do some expert witness work, and there are a lot of lobbyists who come in to protect the hospitals, the doctors and their earnings. They're very concerned that if there are excess profits, they are coming from squeezing the doctors and the hospitals too much.

Another thing you can do is reduce your revenues. Mutual companies that don't have participating policies may do this. It's a little dangerous, because if you reduce your premiums next year because of excess profits this year, then it looks like you

have an extraordinary rate increase the following year. But it is possible if you're in a mutual company and have nonparticipating policies. Or you can pay it back to the owners, which, of course, in a stock company is dividends. When you have a mutual company with participating policies, you can pay dividends directly to the policyholders.

For companies that are incorporated as charities or charitable organizations (which is different from not-for-profit), as are some health insurers, then you can do charitable deeds. You can have outreach programs, smoking cessation, cover the indigent or cover the uncompensated care. There's a call in many communities for insurers to do more charitable deeds with their excess profits.

You can invest the excess profits in growth or other projects. That's what many companies, besides the insurance industry, do. They look for other projects. They buy other companies. They come up with new products. Health insurers can do the same thing. They can come up with new products and they can grow. That gets full circle back to the affordable growth and how much you can grow. Having excess retained earnings does give you a better ability to grow.

**MR. JOHN C. LLOYD:** I'm with Reden & Anders. As Karl mentioned, there have been a number of recent challenges to the surplus and capital levels of health entities. Part of what has generated some of that has been the profits that have been generated the last several years. Nobody ever talks about too much money when we don't have any. As we all know, we attempt to explain to everybody that the profit is just a small percentage of the total premium. Lloyd's Law is that a small percentage of a really big number is still a really big number. When you talk about millions and millions of dollars, the average person and the average politician sees these figures and says that's a lot of money. At the same time, we're currently generating some fairly substantial rate increases. Trends are rising, and these rate increases are needed. However, it's very hard to explain to people that some areas where you're making money may not be the areas where you need the rate increases. In general, this combination of profits and rate increases puts pressure on us.

We also have high visibility in regard to social issues. The news every night is about uninsured people, employers dropping coverage and cost-shifting from providers onto the uninsured. Drug costs remain highly visible. We stay in the news a lot, which makes great fodder for politicians. Lastly, there has been a lot of visibility brought by our own actions. Since everybody likes to invest in successful companies, and a number of for-profit entities are now promoted as successful companies, the visibility of health carriers to the investment community, and to investors in general, has been raised. Additionally, the recent conversions or attempted conversions to for-profit by a number of mutual companies have obviously brought additional publicity.

I started working with capital planning for health entities as a part of the Society of

Actuaries' attempts to promote enterprise risk management. At the onset, few health actuaries would go to those meetings and would sit in a room by themselves. The rest of the life actuaries would talk during the meetings about interest rates. The health actuaries would say, "No, our issue is trend". The majority life actuaries would ask, "What's trend? Why is that important?" The dialogue went this way most of the time. The area of enterprise risk management for health actuaries has not been as robust as it has been when working with the demands of asset adequacy testing and asset/liability matching.

The goal that we've established for health carrier capital planning is to have a rational discussion about how much money you need. This is not just RBC, where the discussion can revolve around some arbitrary multiple of the RBC limit being categorized as too much money. Developing those arbitrary levels is, unfortunately, not always a rational process. We would like to see a rational discussion that gets away from the solvency measures. Solvency is important, but the other term I tend to use is "vitality." A company has to be more than solvent; it has to have corporate vitality. It has to be able to meet the changes in the marketplace. It has to be able to fund its own research, sometimes through selling stock if you're for-profit, but if you're a non-profit company, this surplus is your source for that kind of capital. Lastly, most companies require capital to fund a broader mission, which is, at least hopefully, more than just making money.

As Donna said, underwriting risk is the dominant factor in RBC measures. If you remember square roots and such things, the formula used to recognize various components and to reduce covariance does mean that, even though some of the non-underwriting pieces are substantial, they don't change the whole number that much.

RBC has positive attributes. It provides a great common terminology for everybody. Before RBC, health companies didn't have a common denominator to talk about who was strong, who was weak and such measures in other than dollar numbers. RBC is analytical. It's based on outcomes. It's much better than some of the older legislation, which used standards like months in reserve. This measure confuses surplus and the term reserve for some audiences. It is also a fairly static number. RBC is scalable, in the sense that as the size of the company or its risks change, the factors move along with it. It is adjustable; it provides a risk for each category or product line. For instance, they're talking now about doing a new factor for Part D, because it offers some unique risks other than what are currently lumped under "other."

However, there are problems with RBC. Essentially it's one size fits all. Calculations are outcome-based through the simulations. However, the scenarios are more situational than causative. It was good modeling, but sometimes the situation that requires X amount of surplus for your business may not be the same as someone else's situation. RBC was the result of a political committee process, so some of the factors aren't exactly what everybody wanted. By definition, because it's applied to



everybody, RBC requires fairly broad factors that are not necessarily representative of your specific business environment. My view is that RBC is the engine light. If the engine light goes on, the regulators know you're in trouble. Hopefully you don't maintain your car using the engine light; you tend to service it regularly and use some other metrics to determine whether it's in good shape or not. But what has happened, unfortunately, is that, for one thing, the public has over-used the engine light. Arbitrary limits such as 16 times RBC are taken to mean you have too much money. The measure was never meant for that purpose. Secondly, RBC doesn't address the broader issues of vitality and capital needs.

The term I came up with to address these other issues was "working surplus," because we found that a lot of people generally have an idea what working capital means. Most people know that a business needs working capital to stay in business. That's the idea here. It goes beyond solvency to cover both the solvency and the vitality issues. It is also a great way to get the actuary involved in the budgeting and strategic planning part of capital management. You try to integrate what your company is doing with the amount of money you need to do it.

This measure is also stochastic in the way we've modeled it. The process allows you to use a Monte-Carlo-simulation-type software to develop the business triggers. You end up with a confidence interval range around surplus levels. Board members and people understand those kinds of things. They think actuaries can put a confidence interval on anything, so they feel comfortable with the concept of being 95 percent sure, even if you aren't.

It also introduces a capital planning component. Over and above solvency, we're going to have to have capital at certain points of time to install new systems, respond to issues such as the Health Insurance Portability and Accounting Act of 1996 (HIPAA) and other such issues. To some degree that's an add-on to RBC, but it goes beyond being an add-on. Often, you need capital at exactly the time you don't have capital. Planning requires thinking about what's coming down the pipeline and where your underwriting profits are headed versus your longer-term surplus needs.

To construct surplus models, we start with a static budget/forecast model, which most people develop. Typically, you go to marketing and they tell you how much you're going to sell next year. You go to the actuaries and say how much you're going to charge next year and multiply by a loss ratio. Then you go to somebody and ask what the administrative costs will be. You usually do that by each line of business, run that all together in a giant Excel model and come up with next year's budget. That's a fairly common process. What we've done is add some stochastic variables to that process. Essentially, you can make some of those assumptions dynamic instead of static. To that, you add capital expenditures and what your strategy is going to be. You then develop the overall potential surplus impact. Then at the back end of it, you can choose the confidence level at which you're comfortable that you will meet those obligations.

As Donna mentioned, a lot of RBC measures are going to be tied up in the underwriting loss patterns. There's a lot of debate now about whether there is an underwriting cycle and whether it is going to go away. I don't know whether it's true that lemmings regulate their population by running off a cliff, but it's such a great picture and you have to use it when you can. The bottom line is that it's a market-driven underwriting cycle. Marketing suddenly says, "Look! Everybody else's lemmings are running! Get our lemmings out!" So everybody's lemmings go running off the cliff. About that time the actuaries are saying, "We're running short on lemmings and we need to order up some more lemmings." So pricing includes a lot more lemmings, and we never get it right. We either have too many lemmings or not enough lemmings. But it's all market-driven by this market-consensus process. There's one school of thought that says that we've replaced all these little scurrying lemmings with these big lumbering lemmings. It's harder to stampede them, and so maybe we're not going to have that same process going on any more.

However, I tend to believe that there's going to be some inherent underwriting loss cycle because the mechanism of the market makes it happen. If you think about what happens to trigger it, you could include a miss of your anticipated trend or something such as the loss of a provider contract. It usually takes a certain amount of lag to recognize the event. It's less lengthy than it used to be, now that we do all this electronic submission, but the incurred-but-not-reported (IBNR) takes a while to come through. After that, there's a little period before you start to see a pattern that the actuary believes is indeed a pattern. Then there's that interminable period of time between the actuary believing it and convincing everybody else that it has happened. Then you have to recognize that you've got rate guarantees for contracts, you have seasonality in renewals or a number of other structural problems. For each company, there is a certain length for this lag—it's variable by company. It involves the time it takes to recognize the issue and then the time to actually do something about it. That process—in some places it's longer and in some places it's shorter—typically develops into a multiyear event. About the time you think you've got the thing fixed, all the lemmings have gone off the cliff. Experience would suggest it runs 18 to 24 months.

The main thing about modeling this is that it's going to be different for every company. I did work for one company that had most of their renewals in January and June, so if they figured out a problem in February, they were in trouble. You can extend that to most situations. That's one reason why doing this assessment uniquely for each company is important.

The main thing we've done is to figure out the major triggers. A good example is getting your pricing trend right versus realized costs. Usually this variance is fairly normally distributed, or at least you hope you don't always miss on one side or the other. You can model out the probability of that miss based on your historical evidence of how good a job you've done. You then shade it based on what you think is happening in the industry now, and in your markets in particular. I've seen a lot

of people do this that also use incurred claim misses as a variable. I tend to think that that's an accounting issue, and you roll the impact from one year to the next. But where it does have some impact is in the fact that if you've missed your IBNR, then you probably missed your pricing as well. It probably becomes more a matter of extending the probability of the impact of this event, as opposed to an independent variable.

You also look at your own provider contracting variability. To what extent are you at risk for increased costs because of a change in your contracting environment? You'd be surprised at how many smaller plans are so linked to some core providers that if something happens, there's almost no recourse. It is almost inconceivable that you would not put something in the bank for that potential.

As I said, you look at the historical variability to get a range for these variables. We do it by type of service and product; make sure you've got it covered for the basic rating variables. We then add any current issues you know that might make the near term worse than what it has been in the long term.

There's another set of events that I call "unique morbidity" events. These are not things you would usually go to your board and indicate a specific need for surplus. For example, a pandemic might be such an issue. However, if you're scaling this capital need over a long period of time, we do realize that these things ripple through the system occasionally. It could also include a breakthrough in technology or some other event. These events tend to be discrete rather than normally distributed. Typically you've got what I would call a low-probability, high-impact event. You can model those to figure out how much you want to add for such events. Often how you address those elements, however, tends not to be the way you model them. Instead they get addressed by picking certainty levels at the 97th percentile versus the 99th percentile. That's one reason for putting them in. They tend to be highly skewed, and typically they're highly correlated on the morbidity shift or other variable related to market performance. They tend to be the cumulative event, such as antiselection. If you know there's something happening in a market, then you know you're probably going to get a morbidity shift in that market to go along with it, so you need to correlate those.

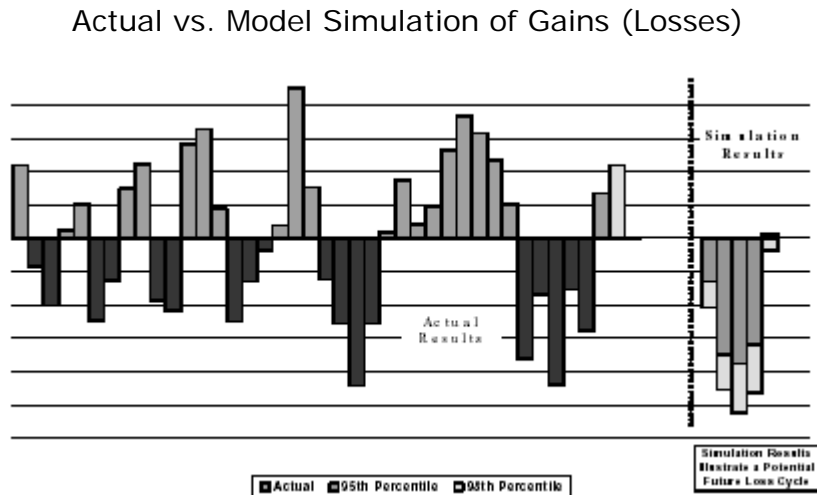
After you've picked a couple of variables to run, you have to model them recognizing your actual rating process. Regulatory and contractual constraints will often flatten what you can do with rates. If you can get data that show your distribution of renewals by month and the lag time (for some accounts, say union accounts, you have to give longer lag time than for small group), then you can run that through the system and essentially model out exactly what your underwriting renewal process looks like. That would be how you come out with the answers to these issues in terms of model output.

There are ancillary impacts that you could also model. Expenses, in the short run at least, tend to be fixed. If you're going to model a big decline in a block of business,

you're probably not going to shed expense off that block at the same rate as you shed the members. Additionally, provider contracting leveraging sometimes goes away if you lose members in a given market. Those are the kinds of constraints that you can layer on top of the basic variables.

Never underestimate the power of images like lemmings and charts and graphs. Chart 1 shows actual historical gains and losses compared to the simulation output for a company for whom we did some surplus management.

Chart 1



It looks similar enough to illustrate that you can create a model that looks pretty much like the business results experienced. It also shows that there's no such thing as "three up and three down" underwriting cycles. In this particular case, there were some unique regulatory things going on such that while other carriers were making money these guys were losing money. Such results are a good way of showing that this model is reasonably well-connected to reality, certainly much better connected than using something like 16 times RBC as a surplus goal. You at least have something analytical on which to fall back.

This has addressed the underwriting risk component. As far as the other surplus components, you are again worried about events in the tail and how much money you are losing at the 95th, 97th and 99th confidence intervals. To those levels you have to add capital expenditures and the possibility of an economic downturn. Since we're in Louisiana, this is my favorite state for this example. Louisiana is a state that's heavily tied to the petroleum industry. A few years ago, petroleum went rock bottom. The local Blue plan didn't have a way to raise money because it didn't have any members that had any money. The bottom line is that the plan lost a lot of bodies, and the claims stayed while the premium went down. There's no way to plan that from a business perspective or to recover from it. They had a short-term problem with capital and surplus with major surplus implications, and it was primarily driven by the local economy. If you're geographically concentrated or you

don't have a way to move from market to market, those are the things that you have to kind of figure into the targets.

Give them some way of understanding that there's no such thing as 100 percent; that's an infinite amount of capital. Ninety-nine percent is probably going to be hefty, but you can find a number in there that seems reasonable to them. It's also a nice dialogue with the regulators if you want to be bombastic about it. "So you want a 10 percent probability that I go out of business. Thanks." It helps frame that dialogue and is much better than artificial ratios.

In summary, we want to look partially at your underwriting losses, but also at the marketing environment, your market concentration, whether you have a unique risk set that you have to match up against, and finally your need for capital and innovation. If you're a mutual, is it going to come out of your accumulated surplus? If you're not a mutual, what's the cost of borrowing? Are you going to have to do this at a time when perhaps interest rates are less favorable to do the borrowing? Typically what we've done is try to help boards establish an understanding of the variability of their own business and the kind of interval with which they're comfortable, plus any special considerations. In general, it's a process that at least puts the actuary in a role of doing something analytical. Folks can relate to the charts and graphs that the process produces. The charts and graphs give you the chance to get up and give the explanation that goes with them. That's one way we're starting to promote as a way of attacking this issue, rather than just trying to say how much surplus is enough.

**MR. MADRECKI:** I thought I'd take a stab at some of the conceptual issues. I got a call this week from some Democratic Party planners. They wanted to talk with me about community rating, with and without age and area. This is not a new area; every generation sometimes asks the same questions previously asked in slightly different ways. Maybe it would help to look at how some of these things were addressed a generation or two ago in the health solvency arena. I think you'll see that things didn't work out exactly as we thought they would on some of these issues.

We've been talking about health coverage risk-taking entities, and we've been treating them as though everybody who writes health is alike. The original carriers in health, before the commercials got into it in the 1940s and 1950s, were geographically centralized entities called medical service bureaus, and they became known as hospital and medical service corporations. I mention that because those organizations were prepaid medical service plans. They learned all about insurance a little differently from those of us who started out in the insurance industry per se. They were set up under enabling legislation. That's important because in some cases, enabling legislation mimics life and health or P&C statutes, but in many ways it's quite different. So you had a number of entities that were geographically located and that was their very nature, but they are set up under different enabling legislation. By that, their articles of incorporation are a little different, and we'll

reflect on some of those differences.

Commercial carriers first started in the health business writing indemnity-type business, but quickly got into the reasonable-and-customary business to counter the "service benefits" of the hospital medical service corporations. The service corporations were community rating and the commercials were also community rating but then moved into experience rating, which carried its own risks.

Then HMOs came on the scene. HMOs were actually a federal model that came out of a think tank. Most of the HMOs were also not-for-profit, as were many of the medical service bureaus and hospital and medical service corporations, but they were very different entities. We also have entities today called limited service corporations, which some of the companies may be using for Medicare Part D. In some places, risk-based capital doesn't apply to limited service corporations, but they are licensed as risk-taking entities.

Then, there were any number of provider-related entities that were taking risk. Depending on how long you've been in this business, they were a major factor from 1990 to 1995, because they had some very celebrated fallouts when they were unable to pay out their money under capitation. You have to consider that there are also any number of self-insured entities supplying health coverage, such as multiple-employer welfare associations (MEWAs), and self-insured employers that are also taking health coverage risk. But we're not really talking about those here today. The differences in the way you are incorporated come into play in your capital planning.

For this discussion, I'm going to step back in time. There was a National Association of Insurance Commissioners (NAIC) technical advisory committee in 1981. It was the first working group in which I participated. (I recommend you participate in working groups, because they do expose you to a lot of things.) At the time, we were asked by the NAIC to look at surplus or contingency reserve needs of hospital and medical service corporations and HMOs. HMOs were added afterward, but only because they were new and because there were a lot of financial situations occurring in them. At that time, I referred to the assignment as: Should not-for-profit health risk-taking entities have surplus? At that time, a lot of these companies were being managed or were being regulated without surplus or, in some cases, with negative equity. There were all kinds of problems that were starting to evolve at that time.

One of the things that we had to establish was that these corporations are risk-assuming. The other day in an investor call I heard somebody ask one of the for-profit medical companies, "Is there any risk in providing health coverage?" I thought that was an interesting question because it seemed to emanate from a couple of periods when you're making profit. I smiled at the question a little because I was thinking, where are all the companies that used to be in this business? A long time ago, it was pretty easy for a health actuary to get a job; now

there aren't as many places to go.

One thing the committee looked at and documented was that surplus, which is assets minus liabilities, is an estimate. It's an estimate for many reasons. Donna touched on several of them. One is that most of your liabilities are estimates in and of themselves. I was cleaning out some files earlier this week, and I started looking at some of the articles that I had saved. Do you know what we were looking at in 1990? Market-based accounting. We're still trying to figure out how to value assets. It wasn't that long ago that we were trying to figure out what was an asset and how to value it. We still have some problems today. So assets aren't necessarily as good as you think they are (remembering that surplus is assets less liabilities).

Also, one of the big problems we had with the HMOs at the time of this committee was that they weren't setting up an unpaid claim liability. But when I started in this business, we were arguing about when a claim is incurred and what should be in an unpaid claim liability. That wasn't that long ago either. To this day, we are trying to figure out what the liabilities are for our companies. That's why we have risk management and discussions about things like deficiency reserves. The point is that surplus is an estimate.

An interesting thing that came up at the time was that we thought it would be a good thing if the liabilities of the company were certified by a qualified actuary. You might take that for granted today. We also thought that there should be consistent accounting. This was in the middle of the development of statutory accounting and before what was referred to as NAIC codification. These are points that you have to consider when you're responding to these issues.

We did note that the likelihood of failure depended on many variables. We offered many models. They were pretty crude, but they were, in many ways, precursors to the type of model that John and Donna were talking about. We made observations to the regulators. Contingency reserves/surplus must be adequate, both to protect the public and to provide a source of funds going forward. One of the concerns we had at the time was that you needed investment income on cash held, because otherwise you could put these not-for-profit entities at a competitive disadvantage. For example, if you've ever needed a claims system or a predictive modeling system, or wanted to buy, get or maintain a network, what happens if you have a company without surplus? You're sort of freezing that company. You're landlocking it. At that particular time, we weren't smart enough to build in ongoing increments of risk due to the impact of trend.

Another premise proffered was that regulation was not a substitute for management. Management was very important. We also pointed out that overt reaction to consumer pressure can produce inequities. In fact, it can act in a manner contrary to the consumer's safety. The very same things that we're talking about today, rate increases, were happening back then. Let's not forget rate increases were even more magnified in the 1980s in a period of hyperinflation.

Every time you have rapid rate increases, you're going to get a similar situation of consumer pressures. The problem at that time was that we didn't have any surplus. It's a little different problem from trying to justify already having surplus.

Another principle discussed was that for the not-for-profits, staying in business is an operating cost. We quoted several leading economists that not-for-profits have to use their funds wisely and within their charter. There isn't a whole lot of difference in what to do with the same dollar amount in the not-for-profit as a for-profit, if you're going to use the money wisely and in the same type of industry. A not-for-profit differs from a charity, which gives its money away and therefore is not a going concern in the business sense.

The advisory group concluded at that time that the optimum level of capital falls between two extremes. Let me explain what we were suggesting to the regulators. One thing we were saying is that there is such a thing as a minimum level of capital or surplus. This idea of running something on cash flow without surplus, which you can do in the best of times, is not a good idea. You could arguably have negative equity in health coverage if you're very good at cash management and have some type of stability, but all you've done is deferred your rate increases for some time periods and put a lot of people at risk. The other notion was that for a not-for-profit, there was a certain level (to be determined by management) above which additional capital did not provide or afford additional protection for the subscribers of the company. It is not a unique notion, and it's perfectly logical. But it was incumbent on management to think through their company's needs in this regard and make decisions on the managing of the company.

We also presented that no single definition (level of capital) was appropriate in all cases, because for every one of these companies, their geographic situs/experiences, their regulation, their competitive environment and everything that's around it was unique. It was not "one size fits all."

We suggested that there were roles for management and some roles for regulators. Roles of management might include maximizing the number of people covered while operating the company and assuring survival and continuity. The idea was not to provide coverage this year and go out of business next year. That was never the intention. It was a longer-term type of thing. Today we might look at some of the markets, and you want to be around because otherwise, if you drop out of the market, where are the people going to go to get their coverage? It was management's role to manage the surplus and to do it consistent with the objectives of the company.

We also suggested that there were appropriate roles for regulators. Their role was reasonable rates and solvency. They should encourage effective management. These were appropriate roles for a regulator. Another interesting one was to prevent unrestrained provider reimbursement. If you think about it, some of these plans were originally owned by the providers, so one could call them the cash cow.



It was later in their evolution that the health coverage entities became antagonistic to the providers and realized that balancing both sides was more appropriate to their role. Remember that health companies are very efficient at financing health provider entities, and these entities wouldn't exist without the fiscal intermediaries. It would be appropriate for a regulator to step in in that type of environment.

It would also be appropriate for the regulator to prevent inequities between generations of covered subscribers. You don't want to steal between generations. We are not Social Security and we are not Medicare; we were private companies. There's an analogy to this whole thing. If anybody has ever worked with the issues of equity or dividend distributions, a lot of those principles apply in thinking through your capital-type strategies.

We must have done a very good job on solvency—I'm joking—because between the time we did that report and 1995, when we commissioned research at the Society of Actuaries, many carriers had literally gone out of the business. The Society studied over 100 profit and not-for-profit companies that became insolvent and went out of the business. (The research did not assimilate information on the companies that dropped health coverage for financial reasons but remained solvent). The researchers couldn't count the HMOs because of reporting deficiencies; there were probably several hundred HMOs that had gone by the wayside. If you ask me about solvency, you'd probably be preaching to the choir, having worked on both ends of this one. We didn't really produce stability in this market, and there was quite a bit of fallout until about 1995, though that doesn't mean the risks have gone away.

I recently looked at the SOA analysis of health carrier insolvencies. It is available on the Society's Web site. One of the things that the study concluded was that a cause of insolvency was inadequate pricing or inadequate surplus—pretty obvious. Another cause was rapid growth. An interesting note in the development of risk-based capital was that we wanted to put a premium on rapid growth because that was a risk. You don't know as much about your new business as you did about your old. We did not identify that one as a risk factor. We also tried another one, which was a load for prior approval rate review. What that did was increase the lag, in terms of when you could adjust your rates, but the regulators didn't think that that was a very good idea and promptly threw that one out. But we tried.

There were affiliate problems in some insolvencies, which is not surprising. Sometimes in your bid to diversify, you get into problems with your diversification strategies. Overstated assets, fraud and diminishing numbers were also noted causes of health carrier insolvencies.

You can probably guess at some of the things that were not mentioned in that research. Almost any failure can be attributed to management. My number one cause that was not mentioned in the analysis, though, is a new claim system. Have you ever met anybody in financial trouble that didn't put in a new claim system?

Why does it cost us zillions of dollars to put in a claim system when we've been trying to build them for 30 years? Why does it cost so much to invest in IT? Everyone refers to a new claim system as the "black hole." Another cause for failure is industry knowledge. There are people that sometimes come into this business and try to make a fast buck and get out. It is a terribly risky type of business.

I was specifically asked to talk about not-for-profit health carriers and the Blue Cross/Blue Shield Association, not because I work at Blue Cross/Blue Shield or because I can sell you anything, but because both of these have been in the news. As John and Donna alluded to earlier, "not-for-profit health carrier" is not synonymous with "charity." Have you ever tried to give a charitable contribution to your local Blue Cross/Blue Shield plan and get a tax deduction for it? If we were a charity, you could do that. The only charities I know about are hospitals, and they are being looked at right now from a federal tax point of view. By the way, all Blue Cross/Blue Shield plans and hospital medical service corporations have been paying federal income tax since 1985 at an effective rate of something around 28 or 29 percent of their gain. I think the public perception of not-for-profits is that they don't pay taxes and that they are charities. Neither of those is a correct interpretation.

Not-for-profit health status is determined at the state level. Remember that I referred to enabling legislation or articles of incorporation. You are set up as not-for-profit for a stated purpose, and those situations differ by organization. We'll talk about social mission and how that enters into these things and into the public debate. I did want to point out that "not-for-profit" does not mean what it sometimes shows up as in the press.

Another organization that gets referred to and has actually filed papers in some of the cases is the Blue Cross/Blue Shield Association. Blue Cross/Blue Shield plans are independent entities. They came out of those geographic territories to which I referred earlier. What they have is a trademark of the Blue Cross and/or the Blue Shield. The Association is a licensing organization. They've long recognized the right of regulators to regulate solvency. However, they've learned the hard way to recognize the value of strong capitalization. We did have a plan in West Virginia that became insolvent. It takes an awful lot to make a plan insolvent. We learned some very hard lessons along the way about keeping these plans solvent. Requirements were set if you want to keep the trademark. That has been our role of intervention. It's based on certain notions that the operating levels of capital are above the minimums. If you were to approach a regulator's minimum (the 200 percent), our board has to vote on pulling the trademarks. That's how strongly we believe in it. In fact, we intervene at levels much higher than the 200 percent because of our concern over the capital adequacy of the plans that carry that particular trademark.

We recognize that the plans are independent and that it is their individual management's prerogative to establish target capital based on their situation. We also believe that the plans should remain independent. In some cases, if a regulator

were to appoint a board or take over a compensation committee, which in essence would take over the management of that company, that company would automatically lose its trademark or its ability to use Blue Cross/Blue Shield.

We also feel that it's inappropriate for regulation to single out any company. Regulation should not treat one company differently than another company. There should be a level playing field. This rears its head in some interesting ways. Everybody has been following investment analysts this year. The fear was that the regulator would not give rate increases or would disrupt the market by what they would do with the not-for-profit plans, thereby disrupting the marketplace against the for-profit plans.

There are issues that I say are in juxtaposition. These are the ones that cause the attention in the press. We've already talked about a lot of them. Two of these issues in juxtaposition are affordability and the rising cost of health coverage. The health risk-taking entities don't cause the rise in cost. There are a lot of notions out there. There are also a lot of notions that the money the not-for-profits hold in surplus, which seems like big dollars, could possibly cover a state's Medicaid program or could avoid rate increases for extended periods of time. In most cases, those big dollars don't last very long, let alone cover shortfalls in Medicaid. Also, there are numerous special interest groups out there that are looking for sources of funding. (I am not saying whether these are right or wrong.)

There is also a lot of misunderstanding about the social missions of not-for-profits. Most of them do have social missions, but they're subject to being potentially misunderstood. It's up to management to show that they're living within their social missions. You wouldn't expect anything less. However, translating a social mission into a charity myth is a quantum leap. I would hate to be a governor right now and be facing some of the deficits that they are going through. A budget shortfall is the very same reason that led to federal taxation of these entities. It is a very serious subject, and it is incumbent on the technical work in justifying your capital and your operating ranges and your ability to communicate it to people like my father.

**FROM THE FLOOR:** Does the Association tend to use RBC? Maybe not the 200 percent, but do you tend to have one national standard? As you know, many Blues in certain states have different standards that are not necessarily regulated at the state level.

**MR. MADRECKI:** That's correct. The original branding threshold was months of reserve. Then we began to recognize that in the businesses we were in, that was not responsive to any number of the risks. We actually used something that was similar to risk-based capital, but without the square root. We were using variations on that for simplification and for minimum intervention only. We do use a fixed level, which has been quoted in some of our public letters at 375 percent, which is where we intervene. Maybe in some cases we have set a minimum threshold or a minimum target, or, as Don mentioned, a range that you don't want to go below.

Basically, you don't want to get a visit from the Association.

**FROM THE FLOOR:** It's 375 percent of this modified RBC?

**MR. MADRECKI:** No. It's 375 percent of the regulator's RBC, because it became so universal that there was no need to run two formulas. Again, we're intervening at a level that's higher than the statutory minimum and recognizing the purpose. Beyond that, we don't intervene at all in management running those companies.

**MR. HARVEY SOBEL:** I have two general questions for the panel. Karl, you mentioned MEWAs in your talk. I've done work for MEWAs, Taft-Hartleys and certain other plans that are not necessarily subjected to risk-based capital, but you get into discussions of what would be a minimum. I am wondering whether any of the panelists see any problems in applying the risk-based capital formula to some of these risk-bearing entities that are not necessarily regulated by the state.

**MS. NOVAK:** I would say that as the back-of-the-envelope, let's-see-where-you-are type of measuring tool that a lot of people are using, that's fine. But if you are doing real planning and if any management bonus is involved—any measurement whatsoever—then you have to look at the historic risks of the organization. Risk-based capital, as John said, is somewhat a one-size-fits-all. That's not totally true, because it does measure the types of risks you have, but within those categories, there's still a lot of fluctuation based on the individual situation of the MEWA.

**MR. MADRECKI:** When we were working on risk-based capital, another thing we ran into was the accounting and asset structure of the entities. We had a particular challenge with staff-modeled HMOs. If you have hospitals with beds that aren't being used, how do you determine the net worth of those organizations? The underlying accounting basis is a premise for risk-based-capital. RBC assumes the accounting base. Your balance sheet for the MEWAs doesn't necessarily lend itself to that. For example, I believe that now there is some requirement for opinions on unpaid claim liabilities in MEWAs.

**MR. SOBEL:** The MEWA on which I work is regulated in California, and the California Department of Insurance requires my attestation, so you can be assured that the claim reserves are good. You're right, though. When you start taking some of these non-insurance company entities and try to do a risk-based capital, you almost have to do a reclass of the balance sheet and income statement to get your numbers, and you don't always have all the numbers. I always caveat, if I am doing risk-based capital, that it's sort of modeling it, and we wouldn't know for sure.

**FROM THE FLOOR:** I ran into one thing in a couple of states. Absent the NAIC blank, the regulators have a hard time because the formula is so tied into the blank now that when you try to describe a formula that works similarly, say "8 percent of claims," it's very hard to translate that formula in the regulator's mind. The regulator sees it as an outgrowth of the blank, and a lot of these entities don't

follow that blank.

**MR. MADRECKI:** I'd like to take this in a different direction. I had the displeasure once of going to a company that we figured out en route that they were going to be going out of business and we might have to arrange for a merger. One thing the finance person and I realized on the way there was that they were probably having a liquidity problem, even if they looked like they were technically solvent. Sure enough, when we went into the chief financial officer's office, he opened up a drawer and said, "Here are last week's claim checks. I couldn't send them out." Then, of course, we went to restate the books. The CEO of the company looked at me and said, "Who the heck thought that we were going to have two preemies in the last quarter?" When you start writing high-limit medical, which I think needs some risk management and which is not addressed by risk-based capital, depending on the size of this block and its funding sources, I think some practical risk management enters into the thinking as well.

**MS. NOVAK:** There's some attempt in that minimum for small companies, where you look at two times the risk, but it's nowhere near enough, in my mind.

**MR. SOBEL:** As I understand it, Moody's and Standard & Poor's (S&P) also do their own type of capital analysis, which they claim is not risk-based capital and that they were doing it before risk-based capital. Have any of the panelists looked at their formulas? In general, what do you think of the rating services' formulas?

**MS. NOVAK:** As part of a project, we polled the rating services to see what they were doing. I honestly do not remember the conclusions or how they related to risk-based capital. However, they do look at NAIC risk-based capital, too.

**FROM THE FLOOR:** I just encountered it. I know S&P does have an integrated model. They have capital, liquidity and earnings models. Their capital model is very similar to RBC. The one advantage they bring conceptually is that it's integrated, so you're looking at liquidity at the same time you're looking at capital at the same time you're looking at earnings, which is obviously more the leading indicator of where the company is going.

**MS. NOVAK:** The NAIC did have a project to build liquidity into their model. The Academy gave them alternatives and we did a lot of work for them, and all of a sudden, nobody cared. That project died. But they did recognize that not taking liquidity into consideration is a weakness of risk-based capital.

**MR. MADRECKI:** There's sometimes a possibility of misinterpreting risk-based capital. There was an outcry from all of the industries (life and health, P&C and the health entities) when risk-based capital came in. One of the complaints was that the insurance commissioners were exercising eminent domain. You have to remember that the problem was insolvency. The regulator had very limited access to companies, even if the regulator thought that they were being badly managed or

potentially insolvent. In most cases, they could not legally intervene in a company until the company was basically under.

If you read the Model Act for risk-based capital, it was originally intended to give them forced intervention into a company's structure. The first level says that you have to give an action plan. The regulators have the right to reject that action plan, which throws you into the next level. If you breach that level, you get to the next level, and then you're gone—they're in your company if RBC has been adopted in your state. So the focus of risk-based capital was armed intervention. The Act even says that RBC was not to be used for determining strength, though it's a nice thing to benchmark against. Again, I think there's a potential to confuse this minimum with what you need to operate it, because you still have to do something with it for all the fluctuations that you've addressed.

**MR. ROBERT L. ZWEIBEL:** I was also going to ask about the rating agencies, particularly the one that wasn't mentioned, A.M. Best. Recently I had an opportunity to poll a number of HMOs similar to mine. Each one of them had different RBC ratios, but we all had the same rating. Could you comment on what level might be an appropriate safety level? If 200 percent is the minimum, at what point would you get to that excess maximum?

**MS. NOVAK:** There are so many people asking that question. I don't think any of us believe there is one answer.

**MR. LLOYD:** There's a reason why I went down the route of promoting people doing their own numbers and giving them to the regulators (being proactive about it). Think about Pennsylvania, where there are four Blue plans that, in terms of management size, geographic region and everything else, are completely different. The idea that there is one level that is equally good for every one of those four Blue plans is flawed. The actuaries make a good case for why that difference might exist from one to the other. I will say that we've done work for one plan where 600 to 800 percent seemed like a reasonable number, and I've also done one where 900 to 1,200 percent seemed reasonable, because they were geographically concentrated. My argument would be that one size doesn't fit all. All of the general models that get applied by the outside looking in tend to have that averaging element to them or they wouldn't work. I don't think that there's an absolute number that says that it's too much. You get to a point where you're straining the exercise.

**MS. NOVAK:** I think that there are some points where if it's above a certain number, then you have to look at what could justify it.

**FROM THE FLOOR:** Clearly it's a number way north of 200 percent.

**MR. MADRECKI:** One thing that caught a lot of companies off guard was not having thought about this in some time, or maybe never having thought about it, and then when they were asked the question, they were caught short on it. If you've had some good periods, maybe you don't think about these things.

Remember I talked about return on capital and return on equity? You don't want to have too much capital. If you're sitting on lots of money, you've got a lot of people to whom you have to answer or you're a takeover target. There are some natural inhibitions there. These same companies have also been accused of having five times the minimum and upward of that. But for a not-for-profit, your capital targets are not something that is done once and then placed on the shelf, because it's dynamic and is going to change from year to year, but something that management and the actuary should be functional at communicating with their boards, regulators and the public.

**MS. NOVAK:** The message is that looking at your capital requirements and why they are where they are is an important thing. For years I heard from health plans, "I don't have to worry about risk-based capital because it hasn't passed in my state yet." I would say, "But don't you have any type of capital planning?" I worked at Bankers Life & Casualty for a while. The founder of Bankers Life & Casualty felt that he didn't need actuaries and accountants; there was money in his checking account and he knew that he was doing fine. I don't know that you can run a company that way.