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Session 91PD
Surplus Management for Health Entities

Track: Health

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Panelists: PHYLLIS A. DORAN
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Summary: The health insurance industry faces a challenge — the amount of capital required is proportional to both the number of insureds and the claims cost per insured. The combination of the prevalence of low-margin products, management's frequent desire to increase the number of insureds and perpetually increasing claims cost can make it difficult for health entities to internally generate the amount of capital they need. Surplus management is a crucial discipline for any health insurer or HMO. Attendees gain exposure to various approaches for effective surplus management.

MR. THOMAS D. SNOOK: This is Session 91, "Surplus Management for Health Entities." My name is Tom Snook. I am a principal and consulting actuary with Milliman USA in our Phoenix office. We have an interesting and expert panel to talk about the topic today.

My interest in this topic started a few years ago when my clients started asking me questions about things like what is the right amount of surplus we should be holding in our health plan. Some self-funded trusts have asked me those types of questions. They all knew the rule of thumb for minimum level, and when risk-based capital came out, they understood that. Risk-based capital addresses something

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

else. It addresses a minimum level, but it doesn't just question what the right amount of surplus is. I, in fact, wrote a little white paper on that topic a few years ago, and that's how I got interested in this whole issue of surplus management. I think it's an important topic and it gets overlooked sometimes by actuaries.

Today's session will cover a broad variety of topics related to surplus management from three different perspectives. One perspective will be that of publicly traded health plans, and one will be from private or provider-sponsored health plans, which has a very different set of issues when it comes to capital and surplus. And because we are actuaries, I figured I'd put an actuary on the panel and wrap it all up with some descriptions of actuarial modeling techniques that can be used in the process of managing surplus.

Our first speaker today is Doug Sherlock. He is a chartered financial analyst and is president of the Sherlock Company, which is a health care research and advisory firm serving institutional investors and health care firms. The Sherlock Company is 15 years old. Health care clients have included such companies as Aetna, Blue Cross/Blue Shield of Massachusetts, an investor in Med Unite, the Attorney General of the State of Connecticut, and Scan Health Plan. He also serves a lot of investor clients like Warburg Pincus, Morgan Stanley and J.H. Whitney. The Sherlock Company publishes some newsletters, one of which is *Seer*, which benchmarks for administrative and investment management for health plans and tracks the administrative expenses for nearly 30 percent of all U.S. insurance. It is also the publisher of *Pulse* and *Mercury*, which is a newsletter that tracks the health plan and integrated delivery system industry's financial results. Before founding Sherlock Company, Doug was vice president and financial analyst of U.S. Healthcare, so he comes from a health plan background.

MR. DOUGLAS SHERLOCK: I want to talk to you about four aspects of surplus management for health plans. I want to focus on the publicly traded firms, in part because they are similar to many of the other firms that are out there. They also have a fairly large market share and their data is readily available. First, I will talk about changes in the financial characteristics of these firms. Then I will discuss trends in financing. Next, I will talk about specific sources and uses of capital, particularly equity capital that these firms have. Finally, I will examine our outlook for the future.

If you look at health plans over the last eight years, little has changed. There has been a remarkably constant return on equity. Back in 1994, the average return on equity for the industry as a whole was 25 percent. It's now 32 percent, essentially constant year in and year out. That's a real paradox, because profit margins have fallen and continue to fall. Net margins have fallen from 5.4 percent in 1994 to 3.4 percent in the twelve months ended most recently, and earnings before interest, taxes, depreciation, and amortization (EBITDA) margins have fallen even more dramatically from 8.4 percent back in 1994 to 3 percent recently.
On the other hand, total capital turnover is higher. In other words, there is less

capital out there underlying every dollar of revenues. Capital turnover is defined as revenues divided by capital. Capital is the sum of equity and debt capital, and it's up 25 percent from 1994 to 2002. The revenue turnover was four, now it is five. Just as interesting is the fact the ratio of total capital to equity has increased from 1.2 to 1.9. That ratio of total capital to equity is a little bit counterintuitive. An easier way of thinking about it is as the ratio of debt to total capital. Back in 1994, debt represented only 14 percent of the total capitalization of these firms. It is now 47 percent.

The effect of the higher productivity, that is the ratio of revenues to capital times the greater leverage, means that basically there is a thinner equity capital base. The ratio of revenue to equity has gone from 4.61 to 9.4. Back in 1994, equity represented 2.6 months of revenue. Now it represents 1.3 months of revenue. That's for publicly traded firms as a whole. It is a much more leveraged business than it has been. So here's the answer to the paradox. The return on equity was sustained because there's less equity that needs to be sustained. As margins have declined, productivity has increased, and these firms have become significantly more leveraged than they have been in the past.

Moreover, interestingly enough, there is much greater reliance on investment and nonhealth business than there has been in the past. In 1994, it comprised 100 percent of operating income. It now comprises only 59 percent. That is a fairly dramatic change. There is much more reliance on investment income. These changes have been reflected in the capital markets.

Chart 1 shows that capital formation resumed in 2001 versus some recent downward trends. The halcyon days were probably in the early 1990s.

Chart 2 shows the composition of it. As you can see, debt dominates external capital sources. For example, in 2001 there were four public offerings of publicly traded firms. They raised $190 million. By contrast, debt raised by publicly traded firms was $1.3 billion. They had the same number of offerings, but obviously much larger. Private firms raised an additional $200 million in equity for a total debt of $1.5 billion compared to $190 million in an unusually fertile equity market last year.

Even more, buy backs have reduced equity. The biggest trend in equity financings has been share repurchases, which have totaled $9 billion over the past three years. To put this in some perspective, that $9 billion that was repurchased in equity by these companies, has double the size of all the equity capital ever raised by publicly traded health plans since around 1980. That is a very significant reduction in capital. So even as the industry has become more profitable, which it has in recent years, the amount of equity has declined, mainly because of repurchases and options.

In Chart 3, the box on the left represents sources of equity capital. The one on the bottom is earnings. The bar on the top on the left side represents the value of

options at their exercise price. The two most important uses have been the intrinsic value of employee stock options and the really big one underneath that is share repurchases.

Not to sound like a broken record, but as you can see from Chart 4, debt is dominating balance sheets for a lot of these firms. By the way, the presentation of equity here is slightly different from other presentations because we're using the tangible book value of equity in some cases, and sometimes we're using just book value in its classic GAAP sense.

There are seven reasons that we've identified for less capital and greater emphasis on debt. The first reason is that while margin trends are continuing to decline, they are no longer declining quite so fast. Secondly, there are positive terms of trade that have been a characteristic of this industry. That is because health plans get paid before they have to pay the money out. There are very modest investment needs. The average plan has very small capital expenditures, which are primarily information systems and office space. There are not a lot of staff model HMOs out there any longer.

The fourth reason is that risk-based capital tends not to be recognized by the equity markets, which is important. Also, very few dividends are paid for this industry. Tax policy favors the return of equity in the form of share repurchases. Only Cigna and United Health Group pay dividends at this point. The sixth reason is that acquisitions are fewer. They're generally less costly than they've been in the past. The final reason is that share exchange is preferred for the large Blue Cross/Blue Shield transactions.

It turns out the number of acquisitions is below its peak. Back in 1995, at the peak of major acquisitions, there were fourteen. In 2001, there were nine. The value is significantly less however. The peak value of total acquisitions by publicly traded health plans was $10 billion in 1996. It was under $1 billion in 2001.

In 2002, as Chart 5 shows, some of the transactions are heavily emphasizing the use of the equity of the acquiring firm as the means of financing the transaction. The Trigon and Right Choice transactions were financed with more than 75 percent value of equity. Thus, for large and successful plans, internal sources greatly exceed uses.

Chart 6 shows the classic sources and uses of cash for United Health Group. In 2001, United Health Group had $1.2 billion in net income plus depreciation and amortization. The total uses, which were capital expenditures net of dispositions, was only $400 million. So in other words, there was $800 million in free cash flow by that classic definition.
Our expectations are for the historic trends to continue, but there are five factors that could increase the use of the equity markets. First0 is the greater visibility of the Health Insurance Portability and Accountability Act of 1996 (HIPAA), which could

require significant information systems investments. If people begin to become conscious of the need to raise additional capital to be in compliance with RBC and created a buffer on top of that, that could also stimulate a need for external capital. Remember, we are still now at 1.3 revenue months of equity, which isn't a lot. The third factor is financial trauma among providers. Many of the health plans have capitative arrangements with providers who aren't in particularly good shape. The fourth factor is capitalizing the public benefit. My own belief is that if there's going to be an important external source of capital, it's going to relate to that as health plans convert to for-profit status. I am not of the group that believes that it is necessary for a health plan to convert to for-profit status, but it's a tool in the toolbox and I think you'll see firms using it. Finally, there are declining potential barriers to entry. If defined contributions and technologies lower barriers to entry and providers have to compete directly, health insurance plans may need to compete on the same playing field, which will require additional capital.

In conclusion, there is a changing financial environment for health plans. It's characterized by a dramatic shift away from equity and in favor of debt. This stems finally from the changing nature of the internal operations of these health plans toward lower margins, less capital, and more debt.

MR. FRANK ARMINE: I don't understand the term "public benefit."

MR. SHERLOCK: I'm using this in the sense of reflecting the residual owner status of the public in connection with a nonprofit. When a health plan converts to for-profit status, by process of elimination we can infer that the public owns it. We know it's not the management and we know that it's probably not the members for a nonprofit, so it has to be the public. State legislators, an attorney general, or whoever the regulator is who grabs hold of this idea determines how the public benefit will spend its money.

MR. SNOOK: When you said that risk-based capital is not recognized by the capital markets or the equity markets, what did you mean?

MR. SHERLOCK: What I meant to say is that I don't think equity analysts pay attention to risk-based capital. I don't think they calculate it. I don't think they look at it as an issue. If firms have a positive net worth, I don't think most equity analysts give it much thought.

MR. SNOOK: Is that a mistake they're making or is it just because risk-based capital in poor financial times is unimportant in the long run?

MR. SHERLOCK: In the long run, risk-based capital is extremely important and it really needs to be paid attention to. There is, classically, a disconnect on Wall Street between reported earnings and its effect on valuation and discounted future free cash flow, and this is emblematic of that.

MR. SNOOK: Our next speaker is Richard Swift, who is going to be talking about things from the standpoint of provider sponsored health plans that have much more limited access to the capital markets than the plans that Doug was just talking about. Richard Swift is the president of Medwise Partners Incorporated, a managed care consulting company. He has nearly 20 years of managed care experience, having developed and negotiated the original PPO reimbursement programs for Blue Cross/Blue Shield of Florida in the early 1980s. Most recently, he was the CFO for a provider on a health plan in the New Orleans area. He's now based on Scottsdale, Arizona, and he helps plans and providers with risk management, underwriting, and reimbursement programs, including interim management services throughout the United States.

MR. RICHARD SWIFT: Doug talked about the public side and I'm going to talk about the private side, such as provider-owned and privately owned plans and the differences between them. I'm going to start with capitalization governance.

Where does the money come from to begin with? Physicians want control in a provider-owned plan. Physicians don't want to put up any money for the control of their provider-owned plans. So there's that disconnect really from the beginning. They want to control it, they want the hospitals to be the deep pocket and put the dollars up for them, and frankly, for most of the provider-owned plans it has worked that way. The doctors have convinced the hospitals that they need to do it together and the hospitals tend to put up the money for the plans. That's at least true in the short term. When you start looking at long term, they really become independent. They tend to look short term only when they're setting them up. They examine what the short-term needs are to get it going, what the network requirement is, and the capital and surplus to start it, without really looking at what the long-term requirements are.

Fundamentally, the question becomes strategically what's the purpose of the plan. Why did they set it up to begin with? You've got situations like Mayo Health Plan in the Phoenix marketplace that put it together as a way to build the distribution system. They've said that and now they are in the process of expanding it to a statewide health plan. That's not because they have providers all over the state, but because they want to capture tertiary care and move it back to the Mayo hospital and the Mayo clinic in the Phoenix area. It was a way for them to expand the distribution system and get that tertiary care that may have been going to someone else in Phoenix, Albuquerque, California, or Las Vegas and pull it back into their facilities and providers. They do it to protect market share.

In the New Orleans market there's a for-profit chain called Tanin Hospital System. They had half a dozen hospitals in New Orleans, but many of the health plans owned by for-profit providers, such as Cigna and Aetna, were put in a situation where the hospitals were coming to them. They said you take my hospital and I've got all services, or you can take that little Tanin hospital down the street, but they don't do OB and they don't do open heart and they don't do all those other things

you really need. So you'll have to pay me those charges. It was very easy for Aetna to make that decision — Tanin gets left out and the not-for-profit, full service hospital gets the contract. So Tanin, from a defensive strategy, decided to build its own plan. They cobbled their six or seven hospitals together with their providers and their physicians, and they started their own health plan. For them, it was a purely defensive mechanism to protect the market share that they had and perceived that they were going to lose.

Another reason is to lock in covered lives. In a growing market or a marketplace where the hospital and the hospital system feel like they've got to have access to that or someone else is going to do it and believe that they can control the dollars, the medical costs, and the risks. Many times they've been doing capitative arrangements and see that starting their own health plan is the next step. Frankly, they don't tend to understand the capital requirements, short term or long term. They can look at it, read the statutes, and understand that there's a statutory network requirement. That part they can figure out. Oftentimes, at least for day one, they don't realize that if they lose money once they start running that they may have to put more dollars in there. Administratively, a lot of times, they start on a shoestring. They may start as the marketing department of the hospital using hospital office space and hospital staff, and grow up from there into a health plan. So administratively, if they start up like that, there's not really capitalization being put into it, and the Tanin plan in New Orleans is an example. They started as part of the marketing department of their regional office. They gradually grew and expanded until it came to the time where they finally had to buy an operating system, a claim system, a phone switch, and all those other things just to be up and running.

When we start looking at the long-term side of it, the regulated statutory capital is, initially, pretty straightforward and people understand it. The providers can understand it if it's a single number. They don't understand risk-based capital. They don't fully realize that if they lose money, they will have to replenish that statutory capital, or that statutory network. Initially, on the administrative side, it could be a small number, depending on how they get started, but in the long run they really don't know what they're going to need as they go through it. Where do they get it? It may be a cash call from the existing owners. Some sell additional shares to other hospitals or private investors, diluting what they currently have. They all think they're going to be profitable and can generate it from there.

The last thing they clearly don't understand is that their incurred but not reported claims (IBNR) are not working capital. They really don't understand what that is at all, or where it goes. For the publicly owned companies, the requirements for working capital are not a significant amount because of the size of the company. But in a small, privately owned health plan or provider-owned health plan, they're usually $50 million to $500 million in revenue. For them to buy a claims system for $1 or $2 million or to spend $1 million for HIPAA compliance, that's a significant dollar amount that they really don't have ready access to. So that becomes a

major initiative. Oftentimes their plan will spend $1 million to go through and complete a National Committee for Quality Assurance (NCQA) process. And lastly, plans right now are spending tons of money left and right both on the privacy piece of HIPAA and the claims and transaction sets to try and get compliance.

The other piece of it, particularly in a provider-owned plan, is what I call the proverbial money tree. The providers always think they should get paid the most, paid first, and all the patients to go with it. For example, a plan I worked with in the Midwest was owned by a medical school and the hospitals. The medical school doctors were paid 150 percent of Medicare. They couldn't understand why the management company thought they could take less, because Blue Cross paid 150 percent of Medicare and United paid 150 percent of Medicare. What they didn't realize is that they never saw those patients unless there was nowhere else for those people to go. They wanted to be the primary care doctor. They wanted to be the gatekeeper and see them for every service and still get 150 percent of Medicare, because, again, they think that the entire premium coming in should just go direct to them.

Then, of course, the other piece of it is who makes the medical management decisions. The providers all think that they're great clinicians. They know all the right answers. They know how to treat the patient the best. They don't want anybody to tell them no. That's often why they get into it, because they believe that they can do it better than the way United does it. So they want to make decisions themselves without someone looking over their shoulders telling them they can't. They have not been terribly successful doing that. They don't understand that the insurance business is different. Unlike when people come into their office and they can give them a professional discount, free office visit, or give it to them at cost, they don't understand that they can't do that with their rates. They don't understand that they can't give the XYZ company a 5 percent rate increase if they need a 15 percent increase. They don't understand it until it's too late, and when it's too late, they've lost millions of dollars. Of course, once it happens, as we all understand the pricing cycle, it will probably take them a year to a year and a half before they can really turn it around. They don't know what they don't know.

I sat down with the board of a health plan. They were all CEOs of hospitals and did not know what IBNR meant. They had an operating health plan. It was, of course, the largest line item on their entire balance sheet, and they had no idea what it was and what it meant. And of course, it was too small. They needed to listen to the actuary they had and not be selective about it.
I'm going to use an example here; this is my poster child. It is a plan called the Oath of Louisiana. It was originally founded as a provider-owned health plan. Five local not-for-profit hospitals owned it and operated it through a management team. They brought another hospital in when they needed to raise money a few years into it. They found that they were losing money and didn't know what to do about it. So they "sold" it to a private investor, essentially putting $20 million in the bank to cover the future IBNR and the future losses, in addition to the reported $15

million that they pumped into it until they got to the point where they could get someone to take it off their hands. That private investor renamed it the "Oath," and the slogan was a promise to the people of Louisiana. They went on about their oath that they took as a health plan. A year later, they acquired the commercial HMO block from another provider-owned health plan that had decided they'd had enough losses and they were just pulling the plug. So they took the commercial block, and they wanted to take the plan's Medicare business. The state in its wisdom would not let them do that.

Table 1

	1Q 2001
Membership	75,917
Net Income	(4.5) MM
Cash	40.1 MM
Prepaid Premium	12.4 MM
IBNR	36.4 MM
Due From Parent	4.5 MM

Table 2

	YTD 2Q 2001
Membership	122,167
Net Income	(6.1) MM
Cash	48.5 MM
Prepaid Premium	16.5 MM
IBNR	51.2 MM
Due From Parent	10.0 MM

Table 3

	YTD 3Q 2001
Membership	120,650
Net Income	(7.8) MM
Cash	53.1 MM
Prepaid Premium	15.9 MM
IBNR	56.6 MM
Due From Parent	13.4 MM

As you can see, Tables 1, 2, and 3 are all from the stat filings for the Oath for 2001, first, second, and third quarter. You can see what their membership was in the first quarter. In the second quarter, they took over the membership from Gulf South. You can see almost right away it was showing a slide. So they picked it up,

weren't keeping it, and began to loosen that membership immediately. You can see that, in financial results, they took a $4.5 million loss in the first quarter, a $1.5 million loss in the second quarter, and roughly a $1.7 million loss in the third quarter. They had a nine-month loss of almost $8 million. And these are their reported numbers.

When you look at their medical loss ratio and their total losses, they had 103 to 106 each quarter. Their medical loss ratios dropped from 92 down to 90, and their admin loss ratio was about 15 percent. It might not be so bad if that was really a good loss ratio, but the only reason the loss ratio was as good as it was is because of their IBNR. When you look at what their IBNR was doing, it wasn't doing enough. Their IBNR in total dollars was $35 million up to $50 million or $55 million, which, on the surface sounds good, but they topped out at about a little over two months of claims. All the while, providers were complaining that their claims were way behind and they couldn't get paid. When you look at their IBNR against the cash balance they had, I guess the good news is in the first quarter they had more cash than they were booking as reserves. They didn't even have their IBNR, as understated as it was, covered in the second and third quarter.

Now, when you look at what their cash really was — I'm calling this real cash — they had $40 million in the bank in the first quarter on March 31. That's because their Medicare business paid them on March 30 for their April premium. So, of the $40 million in cash, $11 or $12 million of it was prepaid revenue that they were counting on, in some ways, to pay the past claims, as well as to pay the future claims. It got just as bad, if not worse, in the second and third quarter. So, their real cash per member started at 364, dropped down to 262, and then rose back up slightly to 308. That's not per member month, that's per member. Their claim expense was running at about 260 per member month. So basically they did not have much more than one month of real cash that was not already spoken for as prepaid revenue to cover their claim expenses. Again, these were numbers that they were filing with the state. At the same time, they were filing with the state a receivable due from their parent of $4.5 million, which rose up to $10 million, and then rose to $13.5 million, that they were reporting quarter after quarter to the regulators when they filed, because they didn't file any of them on time.

That's the end of the story. In April, the state came in and shut them down when they didn't, or couldn't, file their fourth quarter, their annual statement. They are somewhere between $50 and $77 million under water in terms of what providers are owed. Providers are being asked to take 30 cents on the dollar. It's not even clear if they're going to get that. They might. There are hospitals that are rumored to be going under because they're owed too much money.

This is the poster child of a plan that didn't have the access to capital, didn't manage what little they had well, and ultimately, gave the whole industry a bad name. By the time they were shut down, they had 85,000 members, down from 130,000 before that. The members were given ten days' notice that their policies

were being cancelled. Individuals went to a risk pool. United stepped in and took the small group and rerated them all immediately. The Medicare business was tossed back on the street for their Medicare Plus Choice business. Some of them have gone to other plans, and some have gone back to Med Sup. So it's been a tough situation in that market. I think it's indicative of what happens when a provider or a plan doesn't have the access to capital and doesn't manage the capital they have well. When you look back in hindsight, they never should have taken over or been allowed to take over that other block of business a year ago. But they did, and the whole marketplace and the providers suffered as a result.

MR. SNOOK: When you talked about the Oath acquiring Gulf South HMO, did they have to pay for it?

MR. SWIFT: I understand they paid a dollar.

MR. SNOOK: Okay. I was wondering how they would have raised the acquisition price.

MR. SWIFT: Gulf South was owned by a hospital system that was shutting down. Gulf South, the former owner of the hospitals, kept the run out on the former claims, but they sold the plan to the Oath for a dollar.

FROM THE FLOOR: Presumably Gulf South members were running at a loss, so they were taking on members that were losing money, I guess.

MR. SWIFT: That's correct.

FROM THE FLOOR: They shouldn't have paid a dollar; they should have received something for the premium losses.

MR. SWIFT: Well, I think it gets back to the fact that maybe they needed to talk to an actuary. I understand from talking to one of their actuaries, that they informed their actuaries after the fact that they had completed this transaction. The Gulf South members were losing significant amounts of money, and not only did they take it over and pay them a dollar, they decided it would be easier to wait until the renewal dates of that business before they rerated it. So they were then on the hook for a year until they could rerate their entire block of business.

FROM THE FLOOR: Wasn't the original acquisition of the Oath on an asset-only basis for nominal to nothing as well?

MR. SWIFT: In the original acquisition, the former owners funded what the estimated reserves were. So, essentially, when it became the Oath, the owner was paid somewhere around $20 million to take it over. The theory was if the claims run out with less than $20 million then they were ahead. If it was worse than $20 million it cost them some money, but they'd been running as a management

company before that, so they should have had a very good idea of what that liability was going to be.

MR. SNOOK: It was interesting that people out on the street were without health insurance at the end of your presentation. It speaks volumes, I think, to the importance and the seriousness of running health plans right, and it sounds like some of these guys shouldn't be in the business.

MR. SWIFT: That's true.

MR. SNOOK: I'm proud to introduce my partner and colleague Phyllis Doran. Phyllis is a Fellow of the Society of Actuaries and principal in the Philadelphia office of Milliman USA. She's worked as a consultant in the health care field for over 25 years. She assists clients with strategic and management issues related to health care and management programs, financial reporting and projections, and design of management information systems. Phyllis has served on the board of the Society and as the vice president of the Society of Actuaries.

MS. PHYLLIS DORAN: I'm going to talk about managing surplus from an actuarial prospective, touching on surplus requirements, and then later on building and preserving surplus levels. An important place to start is with identifying the level of surplus required by the health entity, the optimal level that will meet the health plan's needs for the short term and the long term. Surplus is needed first for risk protection. Of course, health plans are in the business of taking risk and therefore need adequate funds to cover future claims even in periods of adverse financial results. The example we just heard about certainly makes that clear. Then, second, I'm going to talk about future capital investments. For many health plans this need has actually grown quite a bit in recent years with the need to invest heavily in technology in order to remain competitive. Finally, a number of health plans want to expand through acquisitions and, therefore, need funds to take advantage of acquisition opportunities if they don't have other sources of capital.

How much surplus is enough? I'll talk in terms of a percentage of premium. By that I mean percentage of insured premium excluding premium equivalence for non-risk business. All health plans now calculate their risk-based capital requirements using the RBC formula. The RBC company action level threshold, which is 200 percent of the authorized control levels, is a number that will vary quite a bit by health plans based on their characteristics and their structure. But I'm going to say they're generally in the 5 percent range as a percentage of premium. The RBC levels aren't often expressed in that fashion and certainly there are many health plans that will have higher percentages, particularly if they have little or no provider contracting or provider capitation. Sometimes they are lower, but order of magnitude is probably the range for a lot of the health plans. Then in some cases, most notably Blue Cross/Blue Shield plans, there will be a higher minimum standard based on, in the case of the Blue Cross plans, their association standards, which express minimum thresholds as multiples of the RBC.

The RBC is not target surplus. It's a minimum standard established by regulators. Health plans should have a target that, if met, will insure a high likelihood that they will be able to maintain surplus above the company action level even after periods of adverse financial results. Therefore, risk protection requires either substantially higher surplus levels than RBC or ready access to alternative sources of surplus.

Chart 7 summarizes Blue Cross/Blue Shield underwriting gain/loss results as a percent of premium for the past 35 years. It's always interesting to speculate about what the future will look like. Of course, none of us knows. Some might argue that the large gains and losses that were experienced through the 1980s will not return because of certain factors, such as presence of provider contracting that insulates health plans from some price fluctuation, or perhaps increased sophistication of health plans. Others might argue that the dampened cycle we saw in the 1990s — that is, smaller losses and smaller gains — was primarily because of lower trends, and now that trends are higher again with no relief in sight, maybe we will see a return to more fluctuation and volatility, and we will see results more like prior years. Regardless of your view on this, it is prudent financial management to have a strategy of building and maintaining surplus at a level that will accommodate multiyear periods of underwriting losses.

So what is an appropriate target? We can think of it in terms of three components. First, that RBC compliance floor, which is generally about 5 percent, perhaps higher, that the organization will want to stay above. And second, the underwriting risk protection that provides the financial cushion so that the surplus does not drop down to the RBC compliance floor. This component could be 15 percent or more as a percentage of premium, and conservative organizations will want to aim for even higher than 15 percent.

We recently did some analysis in which we looked at historical underwriting losses over the past 20 years for a sample of health plans. We measured the total multiyear loss for each down cycle as a data point and found that an amount of about 15 percent of premium would be required to achieve an 80 percent likelihood of covering such an adverse cycle. That's not a statistically significant sample, and some might argue that looking at historical results, perhaps some of those losses are greater than we might see in the future. But nevertheless, it really makes the point that there is a need for additional surplus well in excess of the RBC threshold for true risk protection.

The third component is funds for future capital investment. Most health plans place faith in significant development needs for HIPAA compliance and for other technological requirements in order to keep pace with competitors. For example, some of the communication and e-commerce initiatives associated with the new consumer-driven health plans require capital investments. Then, there are others that want to build surplus for consolidation and acquisitions. Those health plans that have excess surplus reserves will be able to respond best to the market

opportunities.

With a 5 percent compliance floor, another 15 to 20 percent for underwriting risk protection, and perhaps 5 percent for capital investment, the components of a surplus target might add up to 25 or 30 percent. That would be a highly variable number depending upon your organization's future strategies.

Now, it's important to note that for-profit organizations may not want to acquire a surplus to this level. They have other sources available, namely the capital markets. Frequently, they have possibilities for surplus infusion, perhaps from a parent, and in such a case a parent would not want to tie up excess funds in surplus within the health plan. Nonprofit organizations, on the other hand, really need to rely on surplus for all risk protection in future capital investments. Therefore, they often have a greater need to accumulate surplus, which means a need for higher profit margins in order to do so. Regulators sometimes restrict the ability of nonprofit organizations to accumulate surplus by prohibiting rate increases above a certain level if the profit margin is deemed to be too high. Perhaps in such situations it would be helpful to do multiyear modeling of what types of profit margins are needed in order to build enough surplus to withstand and remain healthy in a period of multiyear losses.

This brings us to the second topic of building and preserving surplus levels through margins. For many organizations, largely the nonprofits, margins are the only source for building and preserving surplus. Why are margins needed to maintain surplus? Of course, it's because premium grows and the surplus needs to grow in proportion.

Table 4

Annual Premium Growth	**Annual Net Margin Required to Maintain Surplus at 25%**
10%	2.3%
15%	3.3%
20%	4.1%

Table 4 indicates the annual net margin that would be required to maintain a surplus level at 25 percent of premium. This is dealing with the net margin, not the underwriting margins that we saw earlier in terms of historical results. This would include all components, including investment income. These figures are sometimes surprising when seen for the first time. In periods of high trends and membership growth, as much as 3.5 to 4 percent of premium is needed just to maintain surplus. So obviously, these percentages would be proportionately lower to maintain a surplus percentage lower than the 25 percent.

Table 5

Annual Premium Growth	Annual Net Margin Required to:	
	Maintain Surplus at 25 %	Increase Surplus from 15% to 25% Over 5 Years
10%	2.3%	3.8%
15%	3.3%	4.6%
20%	4.1%	5.3%

Building surplus is very difficult, as indicated in Table 5, which says that to build surplus from 15 to 25 percent over a period of five years would require a margin of 4.6 percent with an annual premium growth rate of 15 percent. Perhaps if we looked back at the older underwriting cycles, there may have been periods where it was possible to achieve positive margins in the 4 to 5 percent range, but in reality few companies are able to maintain those margins year after year. Therefore, preserving surplus levels is extremely important. Once surplus erodes, rebuilding it is so difficult, so an important component of surplus management is management of underwriting margins.

I'm going to talk for just a few minutes about a financial process that's aimed at maintaining healthy underwriting margins consistently. In my experience, the most effective tool in this process is a financial forecasting system used appropriately. How is the forecast used by health entities? In many cases, it's viewed as a predictor of future financial results, and as such it has a low value. The reason it has a low value is the prediction is never right. And once the forecast is shown to be inconsistent with actual results, it's very easy to ignore it. But when viewed as a model of the company's financial operations and a vehicle for looking at proposed actions and stimulating the financial results that would occur, it could have a very high value. And I would say that for many health plans, one of the most important investments they can make is to acquire a strong financial forecasting capability. This requires the development of a model that's unique to their organization and reflects the characteristics. It also requires the development of information systems and monitoring capabilities to support the financial forecasting. This can be very costly if the systems aren't currently adequate. It also needs dedication of staff resources to carry out the process continually. But if an organization makes this investment, it has substantially improved its chances of managing and maintaining consistent underwriting margins year after year as is needed to maintain surplus.

A detailed discussion of that type of financial management process is not possible in a session like this, so I'll just talk briefly about the four steps involved. First is the business planning, and that's where the forecast comes in. This involves simulating future financial results, not predicting future results. As such, it rarely requires a

change in timing from what a lot of organizations use. A forecast should be carried out early in the calendar year in order to evaluate potential outcomes for the following calendar year, because most of those results will have been determined by actions that have been taken by about midyear. So rather than doing a forecast in the fourth quarter to look at what will happen in the next year, if it's done early in the preceding year, it can be used as a tool to determine rating actions, provider contracting initiatives, and so forth.

The second step is implementation actions. These are the decisions that are implemented by all health plans every day. Monitoring and measurement is a very critical step, because of course, the actions taken can lead to unintended consequences. So, actual results need to be monitored relative to that forecast. It requires strong information systems and the ability to drill down and understand when results are off track, why they're off track. Financial statements are not sufficient for this. Rather detailed analysis on a restated basis at a fairly detailed level is required.

Then, the forecast should be updated, substituting those actual results for previous assumptions. That allows the ability to get an advanced notice of what recent experience means. In other words, if you substitute in the recent quarter that has been less favorable than expected, you can see what the implications are for the following year and identify what types of changes and course corrections need to be made. Early identification of problems would allow modest and timely course corrections, whereas delays will require more disruptive actions and will often result in substantial erosions of margins.

In summary, effective surplus management requires planning in terms of identifying surplus requirements and what margins are needed to achieve those targets, and then adopting effective business management techniques to maintain and build surplus.

MR. SNOOK: When you talked about building target surplus for underwriting risk protection, isn't that what risk-based capital is supposed to do?

MS. DORAN: Yes, it is, but how many organizations want to reach that company action level where all of a sudden business changes significantly? I think that most organizations want to avoid ever getting anywhere near that company action level and, therefore, need the cushion that protects them against approaching that level.

FROM THE FLOOR: When you say target of 25 to 30 percent premium, is that monthly premium?

MS. DORAN: No, that would be a percent of annual premium.

FROM THE FLOOR: So 15 to 20 percent of annual premium would mean you'd miss your loss ratio target you were pricing to by 15 or 20 percent?

MS. DORAN: Yes, but again often when those misses occur, they occur for several years in a row and it takes time to recover. Everybody thinks we're not going to have these periods of multiyear underwriting losses again, but if you look at history, 15 percent would only have covered 80 percent of the data points. Twenty percent of the points would have exceeded that kind of a loss. So it depends on your view of the future and the view of your plan's ability to avoid losses.

FROM THE FLOOR: Well, you need a deep pocket.

MS. DORAN: Right, and that's a good point. Deep pockets replace that need.

MR. ARMINE: I want to go back to the question of RBC and this question of 20 to 25 percent. The overwhelming item in RBC for health plans is the underwriting risk piece of the calculation. It appears that you think those who set the formula peg that at about 1/4 to 1/5 of what it ought to be. What am I missing here? What's the disconnect here?

MS. DORAN: It is a minimum standard and, in reality, a number of plans don't meet that standard even today. Data from a session yesterday stated that one out of four health plans hadn't even achieved the company action level at the end of 12/00. The reality is that there are a number of plans out there that can't even meet that level, so partly there's a practical reality here. It's also true that some organizations have other potential sources of surplus, but what I'm talking about is an admittedly financially conservative approach for organizations that want to be around forever and avoid getting anywhere near that company action level.

FROM THE FLOOR: I have a consultant comment/client management question for Phyllis. Maybe Richard could help, too. I liked your suggestion of financial forecasting, but for some clients or plans that are operating on the fringe of surplus management, I sometimes use a gross premium valuation to co-op them into doing an honest, if not robust forecasting. Do you have any suggestions on how to get a client to think about doing some robust sensitivity testing and an honest approach to that?

MS. DORAN: Sometimes you can use a very simplistic model that only looks at aggregate premium projected at some sort of trend rate for a multiyear period. Look at whether you have underwriting losses of a certain amount and just how long it takes to recover from that. Also look at once you have surpluses eroded, what it takes to recover from it. Sometimes putting numbers in those forms gets the point across that you really can't afford to lose any money if you don't have much surplus. Recovering and rebuilding after that is very difficult.

FROM THE FLOOR: I feel like I need to send them a copy of Richard's presentation just to get them to think about it.

MR. SWIFT: Feel free. I would suggest that a lot of the smaller plans, the privately owned and provider-owned plans, are struggling if they are even meeting that action level. I know of many that are not meeting it, know they're not meeting it, and also know that they're probably not going to meet it in the short term. And they have in many cases had discussions with regulators about it and know that they are skating on very thin ice because they don't have even the 200 percent level, let alone 10, 15, or 25 percent above that to cover the downturn. The Oath is a prime example, but there are many others like that.

MR. SNOOK: Richard earlier used Mayo Health Plan Arizona as an example. They have actually decided to get out of the insurance business. Interestingly enough, they had written enough business. They didn't get to be real big, but they got to about 35,000 or 40,000 members in Arizona, and they just decided they didn't want to be in the insurance business any more. They were going to figure out a different way to get in the distribution system, but they were skating on thin ice on the risk-based capital. That was one of the driving factors that caused them to do that.

FROM THE FLOOR: Phyllis, what is your view of the impact of September 11 on surplus requirements? Would you care to elaborate on large funds versus small funds and regional versus national?

MS. DORAN: That's an interesting question. I didn't attend yesterday's session on the trends, but I was looking at some of the handouts. It got me thinking about the fact that when you think about the catastrophic things that might happen to a health plan, it would make some of those downward underwriting cycles we looked at seem minimal. Of course, you hope that most organizations have some type of stop loss and reinsurance protection in such a case, but truly devastating health care results in a small geographic area would be possible with respect to that. I think having sources other than surplus to protect against that is important through the reinsurance.

FROM THE FLOOR: Phyllis, I just want to try and understand the context, and I know you were making a generalization, but you were saying 5 percent of risk premium to meet the RBC compliance. Now, are you referring to meeting 150 percent of ACL, is that your general correlation?

MS. DORAN: That was the 200 percent level. The 5 percent was associated with the 200 percent, meaning the company action level.

FROM THE FLOOR: Okay. So then 30 percent would roughly be 1,200 percent of ACL?

MS. DORAN: That is correct.

FROM THE FLOOR: I have a comment and a question. It seems to me that the

rating organizations are recommending the levels that you're talking about, Phyllis. That's what they like to see, so that's another item people may want to consider. The question I have is regarding what's happening in Pennsylvania. I don't know if any of you have any information on that, but it's sort of the level that Phyllis is talking about, and they're saying it's too much.

MS. DORAN: I do think a lot of it is perhaps not really understanding the nature of the business, but also many people think that the periods of multiyear losses are behind us. Maybe they are, but if you're in the risk-taking business, you need to anticipate some potential for them, in my opinion.

FROM THE FLOOR: I have a comment on your charts with the premium growth rates of 10 to 20 percent. I think if you work with the type of model you use to get those numbers, you'll find that that premium growth rate is true whether it's a trend growth or a percentage increase in the membership. So actually, if you're looking at a 15 percent trend environment and then you're trying to grow your business by 15 percent of members or more, then really you're looking at a 30 percent annual gross dollar premium growth rate. Going back, those numbers will go off a bit more. If you hit the wall and have trouble with your growth, and you try to retrench and end up having some net membership loss, you can perhaps avoid some losses. But very often what you'll find is that your administrative structure has an overhead associated with it that requires a membership level to support it. So you can easily get to a situation where you may recover something on your loss ratio on claims, but you give something back on your administrative side. So it becomes very difficult to generate a model that yields free surplus.

MS. DORAN: Those are both good points.
FROM THE FLOOR: In reference to the terrorism question, I think the life insurers still refer to the influenza epidemic of 1917, 1918, and 1919. That's still a standard scenario to consider for worst case, vis-a-vis actual mortality risk as opposed to the investment risk. I don't think any of your underwriting cycles in the past 20 years contain any significant epidemic type risks. I've heard some plans today with Medicaid populations, for example, have had a minor influenza outbreak in certain towns that affected their losses, but my question would be has anyone thought about a nonterrorist contingent risk and its impact? What's the outside limit on that? Has anyone thought about that and tried to model it?

MS. AUDREY HALVORSON: We've been worried about earthquakes, and so we're building that into our testing too for our catastrophe and what kind of reinsurance we need for that.

MR. DAVID BAHN: First, I have a comment on the terrorism. For those of us who do a lot of our business where there are military bases, such as Navy bases, we've had to deal with such things as mental depression pretty much on an ongoing basis, as the ships go out to sea and the wives and family members are left at home. We frequently see the upticks in the behavioral claims. So that's something that I think

a plan or a health plan needs to look at as their total environment as far as the kinds of expectations and spikes and upticks that they can normally see. Now I don't think September 11 added that much to us, but when the ships started going out, that's when we normally see that kind of uptick, and we see that over and over again. That's sort of a comment on the terrorism. My question is, in terms of your surplus and your targets, would you think that the 25 to 30 percent is what you might call a statutory or a GAAP overall requirement? The RBC is statutory-based, but I'm just wondering if a portion of the 15 to 20 percent add on could be on a so-called GAAP basis?

MS. DORAN: Well, ultimately it's a statutory basis. If the goal is to avoid reaching that company action level, it would be on a statutory basis, but I think there's certainly room for disagreement on that.

MR. JOHN FRITZ: I have a comment that has absolutely nothing to do with surplus management, but I thought I'd make it anyway. Going back to Figure 7, there's virtually no underwriting cycle as you go back into prior years, and guess what happened in 1965? Medicare came along.

FROM THE FLOOR: I want make a comment on the 200 percent level. The 200 percent level was originally the 100 percent level and it was renamed, rather psychologically, by the NAIC in part, I think, because there were so many HMOs that were below the level, but I don't really know the history on that. There used to be 100 percent, 70 percent, 50 percent, and 35 percent, so the 200 percent, I think, gives you a false sense of security of what that means. It was based on a tolerable probability of ruin from that standpoint, so it was never meant to be a maximum surplus. In looking at this, could you comment on the role of federal taxation, and also the role of investment income and the ratio of invested assets to surplus, and how that affects these numbers?

MR. SWIFT: With the exception of some nonprofit HMOs, they're all taxable. I would assume that it wouldn't be affected at all. I think most Blue Cross plans are effectively 100 percent taxable and, of course, all the for-profit, publicly traded firms are, too. Regarding investment income, we actually do a survey of the portfolio policies of Blue Cross/Blue Shield plans, as well as publicly traded firms, and in recent years investment income has comprised about 40 percent of the pretax income of most of these firms, but higher on a weighted basis. So investment income turns out to be pretty important. Depending on the size of the firm, and some other factors, they tend to have varying exposures to the equity markets, which meant that last year was a particularly bad year for a lot of the larger firms that have greater equity exposure.

MS. LESLIE JONES: Phyllis, I wanted to thank you for your presentation, because it's difficult as a regulator, sometimes, to talk to companies about the appropriate amount of surplus that they have. In addition to the risk-based capital requirements, one thing that I keep my eyes on is the premium to surplus ratio. I

have a really tough time talking to the plans about even getting to a 10 to one premium to surplus ratio, which is what we require for HMOs, and a five to one for indemnity plans. The question that I have actually goes to the distinction that you drew. The NAIC has drawn what I consider to be an arbitrary line between HMOs and health entities with respect to the 10 to one and five to one premium to surplus ratios that they look at. It seemed to me that the distinction that you drew was profit versus not-for-profit in that for-profit companies could go to the capital markets. What do you think about the 10 to one for HMOs, versus five to one for health entities? Is that arbitrary or do you think there's some logic behind that? Also, do you really believe that for-profits are in that downward underwriting cycle and that they don't have adequate capital? Will the capital markets respond when they go to them to ask for additional capital?

MS. DORAN: Well, that latter point is a very good point, because the ability to raise capital is there in theory only.

MR. SWIFT: It's a very compelling point. On the other hand, a for-profit plan has the ability to be acquired rather more easily than a nonprofit one does. I may be mistaken on the distinction being made between a health plan and an HMO, but I was under the impression that the hold harmless clause in the provider contracts was the reason for that.

MS. JONES: I think that is one reason. The other is that presumably there's more capitation and shifting of risk to the providers under an HMO arrangement, but in South Carolina we're primarily fee-for-service. We have very few capitative arrangements.

MR. SWIFT: I would suggest as a CFO of a health plan that, both on the HMO and health entity sides, there really probably should not be any difference and they should probably be at the same place. I wonder if it was set that way because of what was achievable, not just short term or even long term, for some of these non-HMO health plans that probably don't have a prayer of getting to 10 to one in some cases. It may not even be anywhere close to five to one.

MS. DORAN: I would tend to agree with that.

FROM THE FLOOR: I've got another question. Now, this annual net margin required to maintain surplus, is that for a for-profit or a not-for-profit plan?

MS. DORAN: This is very simplistic arithmetic really. It's just assuming that that's the net bottom line, net profit, and so there's no such assumption underlying this.

FROM THE FLOOR: Would this be the after tax annual net margin?

MS. DORAN: Yes, that's how I made it very simple. It does get more complex because you obviously look at your tax impact differently in periods of gains and

losses and investment in earnings varying over time. So this was intended merely to make a point, because what I found is that the people are often surprised when they see the numbers. They think 2 to 3 percent net gain is very healthy, but it may be merely maintaining.

FROM THE FLOOR: But the point is that, even though we as actuaries or insurance regulators would think that maintaining the surplus is a good thing from a tax standpoint, it's not really a reserve in the sense of liabilities being held. So there's no tax protection in holding that reserve. If that's true, and if you've got a taxable plan, you would then really have to have a before-tax net margin that would be higher than this by one month.

MS. DORAN: That is correct. The higher your surplus is, the higher your investment earnings and tax rates are. So none of that was intended to be taken into account here, but they're all the important points.

FROM THE FLOOR: I think there's a consensus that these numbers are a little bit high, and yet to the extent that there's a tax affect, they're in fact understated. So when you look at it from that perspective, the required net margins are even higher.

MS. DORAN: That is correct. If you're talking about an end margin before taxes, the before tax net margin is higher.

FROM THE FLOOR: Just to add something in here, I would argue that for those provider-owned plans, you always have the providers who say to the plan, why are you holding that much money? They tell the plans to raise the reimbursement level that they are paid as providers/owners. Then the plans don't have to pay taxes on it because it's not a dividend, it's medical expense. And the plan can pass it on to their employer customer, and we get paid more money, which is why we built the health plan to start with. So on that side of it, you've always got that dynamic going on that is working against the management of why you're holding that much money.

MR. MARTY STALIN: Going back to Figure 7, I think a relevant point about 1965 being the year Medicare came in is that it made health care a bigger business. Although I concur with the substance of Phyllis' presentation, I think I would call that 15 to 20 percent a marketing risk as opposed to an underwriting risk, because I don't think underwriters and actuaries are the ones giving away the money implied by these big negative lines. I think you have to have the reason and a genesis of why you have this and figure out exactly how your plan is operating and what those margins should be.

Chart 1

Financing Activities

Capital Formation has Resumed ...

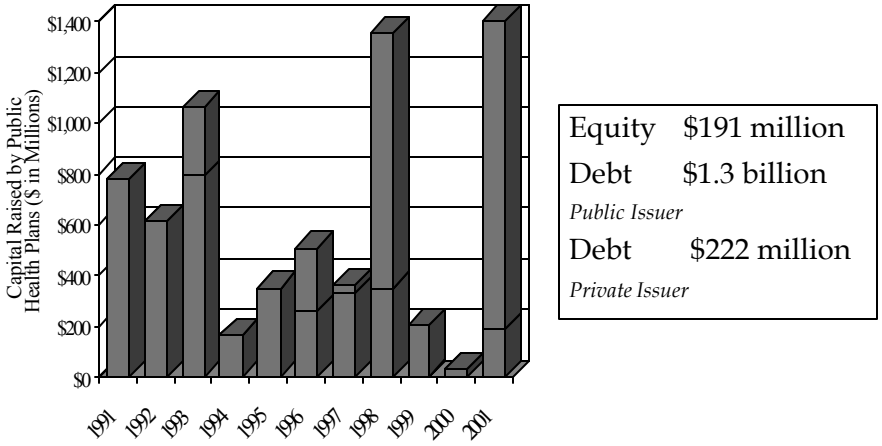

Chart 2

Financing Activities

But Mix has Shifted to Debt ...

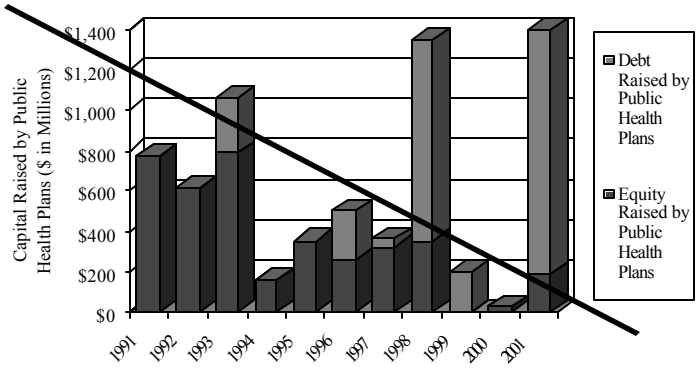

Chart 3

Financing Activities

Net, Uses of Equity Exceeded Sources!

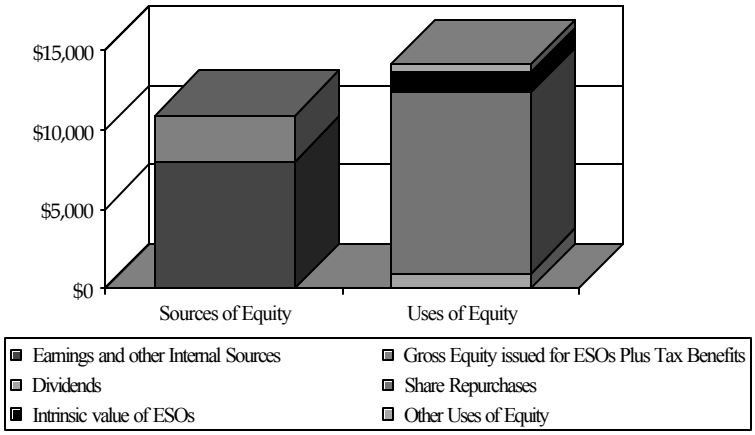

Chart 4

Financing Activities

Debt is Dominating Balance Sheets

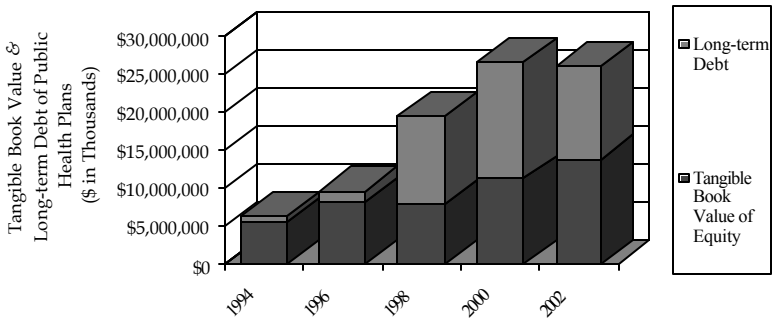

Chart 5

Health Plan Sources & Uses

... especially since share exchange is preferred for large transactions.

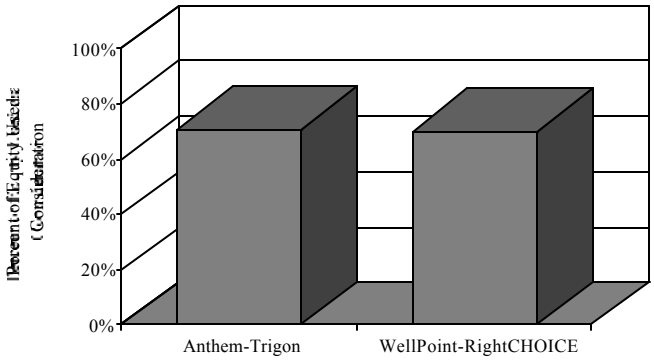

Chart 6

Health Plan Sources & Uses

Thus, for large successful plans, internal sources greatly exceed uses.

Example: UnitedHealth Group

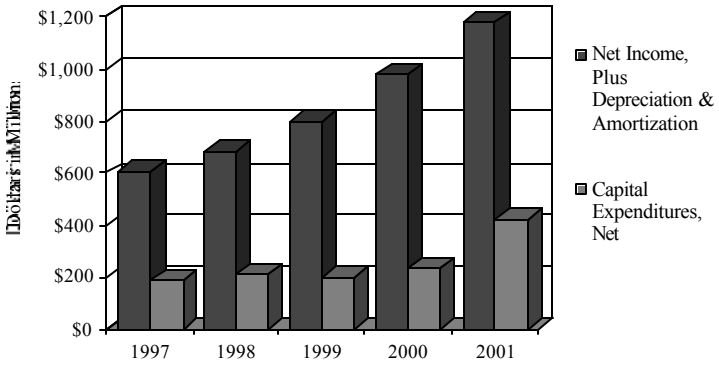

Chart 7

Blue Cross/Blue Shield Underwriting Gain/(Loss)