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Session 20PD
How Much Is Enough? Capital and Surplus Management for Health Entities

Track: Health

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Summary: Health actuaries must consider the impact of capital and surplus levels from a variety of perspectives—including those of regulators, rating agencies, investors and those setting benchmarks for internal rates of return. Topics to be discussed include various regulator and industry benchmarks, comparative data on capital and surplus levels among health carriers, and capital allocation and modeling techniques used to assign capital to various lines of business.

MR. JOHN LLOYD: I am with Ernst & Young, and I will provide an introduction, a little background on the topic and terminology related to capital and surplus management. James Drennan from Reden & Anders Ltd. will talk about things that the numbers don't necessarily tell you. Richard Swift with Medwise Partners, Inc., is going to provide some numerical examples. Mr. Swift was formerly a chief financial officer (CFO) and works with financial reporting and underwriting at a number of HMOs. He will give a different perspective on surplus management.

I will describe some conceptual terms and industry trends regarding the management of surplus. At the risk of generalizing, I would hope to provide a broad assessment of surplus management techniques among health actuaries.

We work in a world that is somewhat dynamic and particularly reactive. As a result, and in combination with the audiences with which we communicate, our measures of surplus management and capital management are not quite as elegant as they might be in other insurance sectors. In particular, the budgeting and projection process for health actuaries tends to be fairly deterministic and reflects a static approach. We may run scenarios, but those are typically a function of volume. The

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

basic approach is to trend historical costs and look at how much business we hope to sell. The modeling tends to be somewhat iterative. You forecast your future budget. You look at the business volume anticipated. Then you see if you get the answer you want. If not, you recycle the model again.

The profit targets typically are less analytical than some people would prefer. Small groups and individuals typically have higher profit targets than large groups. Margins are somewhat steered by a broad market assessment of pricing risk, but in terms of exactly knowing the right profit target for the right product there remains a good deal of broad judgment.

Required surplus contribution tends to be, as much as anything else, budget-based. How much money do you want to make with the plan? Where do you get it from? You often back your way into which product needs to generate a certain amount of money to meet the aggregate objectives.

Surplus measures in general rely on risk-based-capital (RBC) minimums. Thankfully, the NAIC came up with a health-sector-specific RBC formula. So now we at least all have a common frame of reference. It allows us to relate our surplus to a given RBC ratio. This measure loosely quantifies solvency requirements and can be added to some measure of capital and viability needs to determine how much money we need to be in business.

Return is usually measured as a percent of premium. That is the way we tend to see most of our profit targets and surplus returns measured. They may be expressed as return-on-investment or return-on-equity, but the denominator in such returns is not particularly standardized. Some people use a broad measure of the money tied up by the product line reserves. Some people use RBC. There are some ad hoc measures that attempt to quantify risk. Our current state offers a common framework for dialogue, but we do not have any specific measures particularly common to all.

Chart 1 shows results derived from annual statements for the RBC levels of different companies using an NAIC database. We examined surplus ratios among the top 20 non-Blue Cross/Blue Shield carriers (Blue Cross plans were grouped separately). All our sample companies have more than $1 billion in force. We ratioed outcomes against the Action Control Level (ACL) that the NAIC uses as the regulatory trigger. This value is the 100 percent number that the RBC formula generates, as distinguished from the 200% Company Action Level, which can trigger regulatory monitoring. In general, you see that most companies are holding somewhere around 300 to 500 percent of that RBC number.

Chart 2 shows the same results for Blue Cross/Blue Shield plans. The Blue Cross plans, which are not publicly traded for the most part, typically have a higher standard that the Blue Cross/ Blue Shield Association places on them. In general, they have fewer demands on return but other genuine concerns about surplus

needs based on geographic limitations and other restrictions on their business. They tend to hold something in the range of 500 to 600 percent.

When you translate that to underwriting gains, we live in a world in which a 2 percent underwriting return is good. The pure underwriting gain from those same companies, total for-profit returns, range from 3 to 5 percent, sometimes a little lower than that based on the mix of business. The Blue Cross plans have a little more spread. They have a wider diversity of business. In general, they are running 1 to 3 percent. Some of them have had better years. If you add to this a couple of percentage points for investment income, it tends to run 1 to 2 percent. This provides a pretty good idea of health products contribution to surplus.

We have talked about expanding the RBC dialogue into something a little more quantifiable, possibly more commonly definable with measures in other insurance sectors. Ernst & Young has an unusual practice. The health-insurance department is commingled with its property & casualty (P&C) and life counterparts, in the same office. We steal their models fairly frequently.

As shown, our own data suggest that 200 percent RBC is not the optimal level. Clearly, there is some public consensus that health plans need to hold more than the minimum, the 200 percent you must hold or your local insurance commissioner comes to investigate. We know that the profit targets are roughly linked to the need to build surplus.

In looking at where the other capital markets are and in talking to the P&C folks and the life folks, we see that Europe has moved to what might be viewed as a more analytical, more consistent way of measuring capital. Particularly, the banking industry has moved to economic value-added or risk-adjusted rates of returns. Since a lot of the life and P&C markets are driven by the European markets—and where the life guys go, we go—eventually the capital needs that we must quantify are going to require more sophisticated ways of discussing these issues, if not measuring them. As any of you that work with analysts know, once they learn something, they tend to use it on everything—the one hammer that fits all nails. So, woes betide you if your market analyst suddenly becomes a risk-adjusted-return-on-capital (RAROC) expert.

The process for such surplus measures forces somewhat more analytical linkages and improved credibility of the planning process. We have two silos that exist for a lot of health actuaries. There is the premium—which is benefit, cost, expenses and taxes. And then there is surplus. Surplus measurement tends to be based on solvency, RBC targets and business investment—things you have to do to stay in business. Examples might include HIPAA, e-commerce, or other initiatives to remain competitive. This linkage to surplus doesn't get articulated very often.

There is one other piece on this chart. Coming from an accounting firm, we always worry about your balance sheet, because, believe it or not, people have surplus in

their balance sheets that they don't tell other people about. For those of you who endure an audit, you might find out that the reality is that you might be determined to have some additional surplus buried in your reserve estimates.

In general, investments made with your surplus drive some income back into the pricing process. Your surplus also funds service improvements which, hopefully, drive down premium rates by making things more efficient. Most system improvements never seem to translate into that, but that is the theory at least. Having connected those two flows of money, contribution to surplus becomes the amount left over to build surplus. Lastly, for some carriers, if you decide that there's not enough surplus, there's always access to external capital.

Based on trends in other sectors, we need to become more conversant with the concept of economic value added (EVA). That's defined as the rate of return versus the cost of capital. Essentially, it's not a ratio, but it's something that you can use for planning to quantify your return over and above what it costs you to be in business. It is not popular with health-insurance professionals, simply because it is typically a multiyear projection. We tend to work in months rather than years, so it is not used as often as in life insurance.

Occasionally, the P&C guys have tried to force health actuaries into using dynamic financial analysis (DFA). DFA is, essentially, a stochastic model that works really well for P&C professionals, because they have these long-tail liabilities with a lot of investment variability and uncertainty, and the time horizon is really long. Their stochastic modeling measures possible obligations on a discounted basis, but again, it employs multiyear analysis that hasn't really suited the health industry.

Return on equity is a measure used in a lot of sectors. The question, however, becomes what you want to use for a denominator. You usually have to ask that question when someone presents you with a value for their block. In general, RBC works fairly well as a basis for comparison. At least it was based on ruin theory, and some analysis was done to set the factors employed. It is a fairly decent, broad measurement of risk by product.

The place where we think we are seeing some pickup in activity lately is RAROC, or risk-adjusted performance measures (RAPM). The definition of RAPM is based on economic income, which is how much money you're making on some product (you have to agree to the terminology) divided by how much economic capital is required for that given market. This works well for the P&C professionals, because they typically are blending very disparate risk profiles. They are combining stop-loss, marine coverage, and things like liability with asbestos issues. You get different coverages that have very different risk profiles.

Having a ratio that adjusts return to risk works fairly well. However, it requires some form of modeling. You have to determine what your economic capital is and how you are going to model that risk. With health actuaries, you will find that you

are going to get some differences by line of business, but not as dramatic as for P&C. The value of the approach is forcing professionals to think about how they measure how much money something makes and what risk is assumed, versus other lines of business in their portfolio.

In terms of how that happens, the first step is in the budgeting and projection process. It is important to improve the link between capital needs and budget targets. The recent Blue Cross conversions have created questions regarding the need to convert, budgets and projections. It is clear that entire process needs to be integrated and articulated better.

Risk-adjusted return on capital creates a stochastic model that isolates the probabilities of the various events and builds that into the projection for a line of business. What you get out of it is a somewhat improved risk/reward equation, a risk-based contribution to capital. For surplus itself, you can use an RBC floor or some multiple of it. At least, you're provided with a rationalization of these other factors—the linkage between your capital, your need to make capital investment long term and a quantification of the risk associated with not doing those kind of things. Percent of premium probably always is going to be the thing that goes into our budgets, but at least you can convert it from some of these other measures that are better articulated.

The only downside of using RBC is that surplus management was not the objective of the whole exercise. The objective was to find a regulatory trigger to suggest when to step in and do something if you are a state regulator. It does, however, have certain positive elements. It is commonly accepted. It has an analytical base employing Monte Carlo simulations and ruin theory. The different product-trigger points basically are related to the risk of the market. It also recognizes specific risk elements over and above your profit. For example, ASO still offers risk because of credit risk.

We need to remember, however, that these are pretty broad factors. The credit you get in RBC for managed care is a function of how well you define what your network is. If you define it to be a more aggressive network than it is, you probably misstated your risk. Believe it or not, RBC contains an element of political compromise. The state regulators did not use some of the factors that the actuaries wanted. And finally, there is not an optimal RBC number. As shown earlier, 400 to 500 percent is a common value. So factors need to be improved before it can be a surplus management tool.

Just as background, RBC basically measures four components—underwriting risk, market risk, credit risk and the operational or business risk. The health RBC formula uses a factor-based method for each of these various components, and the underlying information is found in your annual statement. As you can see, your risk associated with product and underwriting is the dominant factor.

Suppose we move toward economic capital as a way of managing capital. The positive aspect of this measure is that it addresses specific business risks that we have over and above those being driven by the underwriting risk. It compares lines of business that are dissimilar and allows you to look at new ventures, things that you don't have quite as much data on. It indirectly is tied to the budgeting process, if you build your models that way. Finally, it's possibly an emerging standard. If the capital markets begin to move, we are going to need to pick up steam and get better at articulating risk.

On the other hand, economic capital requires more sophisticated modeling. You have to be able to look at your business more analytically than we do now when we set our budget. As always, there are judgment calls on some factors. How you measure your economic cost is the biggest determining factor. That's why we see some people improving the current process by using RBC as a beginning basis for an index and then moving toward economic capital.

Since this determination of the required capital is the biggest issue, it helps to have a general frame of reference for how economic capital is measured. If you have two different lines of business, there's a distribution of your expected earnings for those lines. There are also some parameters for measuring your expected loss. Those parameters range from making a profit, to breaking even to producing losses. Your expected level of loss is based on an assessment of the probabilities of those outcomes. There is, however, an unexpected level of loss that goes beyond some breakpoint in possible outcomes. It represents a point at which you would not maintain capital to cover that outcome.

You equate lines of business by setting a common trigger point for this unexpected outcome: a uniform risk. How far you would move down the sliding scale of outcomes for two different lines of business can be very different. AD&D actually can have a reasonable profit with a minimal amount of risk, so the economic capital tied up with it is fairly minimal, whereas stop-loss coverage can be extremely variable, so you need more funds available.

The good news is that it is not markedly different than what you get with RBC. It is different in terms of how you model it, but underwriting risk is still the dominant factor. The main difference is, instead of using the 9 percent factor that the NAIC gives you multiplied by medical claims, you model each of your possible variables and their individual contribution.

In terms of determining how much is enough, one of the things that we are starting to decide how to do is link the silos we discussed earlier. Budgeting is an important piece of what we do. Surplus management should be an equally important piece. And the two should be tied. The first way that they get tied is, the capital budget should somehow support your needs for administration expenses, capital cost, taxes, and where you think you're going on a basis longer than a one-year perspective.

The strategic plan relates to what we described as the viability piece. What are we going to have to do in five years to be where we want to be? What is that going to cost us? What surplus goals do we have to have to get there? And then lastly, how are you going to allocate your capital to the different lines of business? How do you decide how much of a product you can afford to write and still make these targets? What do you use as the basis for making that determination—RBC, RAROC?

The long and the short of it is, in determining how much money is enough, there's a whole set of tools out there that health actuaries haven't tapped into. Maybe we are not quite ready to be there, but the key is knowing how to decide how much return you need from each market. Then you must incorporate that into a fairly vigorous budgeting process, so that your outcome of surplus and your budget is set on how much you need to contribute to surplus for each of those markets.

MR. JAMES DRENNAN: In risk-based capital, there are a lot of things that are outside the numbers that are very important. I've done work on this with clients, and I've seen some things that we should consider today.

First off, we all agree that you need adequate risk-based-capital levels, financial stability, etc. Maintaining independence is a big concern—especially for small companies, small health plans, regional companies, small Blue Cross plans, etc., that use several different methods to continue to stay in business. They may merge or acquire companies, which uses more capital. Or they may want more capital to avoid being acquired. Internal growth is the common term. CEOs always say that the company needs more capital for internal growth. They never say, "We're going to buy up some companies."

I am maintaining that if you are using risk-based capital as a tool for deciding your surplus level, that should not be all. It might be adequate in a very stable economy—if you had no cycles (no underwriting cycles, no rating cycles, no trend cycles), if you had no terrorist attacks. Things like that may affect you. If there were no new diseases, no SARS, no change, that would be enough. But the world is dynamic. Things are changing, and these changes are affecting us much more than they used to.

This change, in my opinion, creates a need for more than risk-based capital. In effect, you really need enough for the worst-case scenario. You do not want to be in a situation in which you hit two or three downturns in one two-year or three-year period, and the state comes in and takes you over. It is that low point that you have to worry about. And there are many issues outside of formulas that affect us.

Those items include a shift in your mix of business. This may be planned or unplanned. A small versus large group is a very common shift. The small group is obviously much more volatile, and you may wind up being in a state where the regulations change. I have seen a lot of companies that were in small-group

business in almost every state. And over time, they felt that they could not keep up with each state regulation, so they pulled out and concentrated on only their larger states. That shifted their mix of business.

There are federal regulations that may affect your business. One such regulation that is very prominent right now is the Association Health Plan federal regulation. If you're in the small-group business, you should be aware of this. I am on an Academy committee that wrote a letter to Congress that was ignored. We pointed out that the current regulations are not adequate. They would allow different regulations on the federal level versus the state level. An association plan could underwrite differently at the federal level if it qualified, and the state-level plans could not. The solvency regulations are different. If it passes, and you're in the small-group business, your business will shift dramatically over the next few years. It is not clear how, but probably for the worst. And that is a reason that you need to address things besides just looking backwards at the risk-based capital.

Self-funded versus insured business will shift over time. When trends are high—and we have seen this over the past few years with higher trends, especially in your prescription-drug and your standard-managed-care business—more midsized and small groups shift to self-funded methods. There are various types of self-funded companies, but they will shift. In theory, that will change your risk-based capital, but you have to be careful. They may shift back. And you have to watch that and understand where your risk really is. And on your self-funded business, you have to understand that risk is not always clear in the risk-based capital formula. You have to understand your contracts. You may have more risk than you think. Becoming self-funded does not always totally shift a risk.

Other lines of business can help or hurt your risk-based-capital needs. If you are in them, then you are already measuring it. But the more important thing is, where are you planning to go? And do you have enough variation so that a downturn in one line of business can be offset by another? If you have other lines, that helps. If you have group life products, if you have stop-loss products, those all have different characteristics. And they may affect you differently, depending on where you are going and where you want to go. I would contend that the most important thing is not where you are now, but where you are planning to be in a few years, if you want to be in those lines and you want to grow them.

Subsidiaries may affect you differently. They may cause you to have gains. And suddenly, you have profits you did not anticipate. Or they may cause losses. Again, you need to look longer-range; do not look only at history.

A limited membership base generally will come about when you have a geographical limitation. I work for a Blue Cross plan in a fairly small state, Louisiana. There is limited membership. You can have 100 percent of the state as members, and you still do not have a large plan. You may have problems. Why would you have problems if you have the whole state? I was there during the oil

downturn. You may remember that in the early to mid-1980s. We did not lose many groups, but the membership dropped about 25 percent. They were laying off people. We had drains on our surplus. It was hard to cut our own staff fast enough. Our overhead was high. So, if you are in a limited area, you may have those problems.

Another example is a single industry. You could use Detroit as an example. If you are big in the auto industry and there is a downturn, you could be negatively affected. In Virginia Beach, one group had a lot of shipbuilding and government operations membership. Those industries both could have changes. They can go in the same direction. And then you really have problems. Again, you have to look at the worst possible case, and you have to look at your risks. The geographical limitations and industry limitations are not really measured in risk-based capital. A limited product portfolio is an obvious problem. If you have only one line of business, you have more risk than if you have multiple lines. That's fairly clear. And the economic downturn is more important if you are in a limited area. If you are in a broad national market, your economic downturns may not all take place at the same time.

Administrative expense changes create a need for additional risk-based capital. HIPAA is becoming a known quantity now. But a few years ago, we did not know how much we would need to invest in that. And the people who did not have enough surplus really are hurting. There is a lot of investment in HIPAA system issues.

Other systems modifications—there are always new claims-processing procedures. They do not always save money, but there are always going to be new ones. They have a limited lifetime. New products, e-health initiatives, managed care initiatives—it seems that every few years, some consulting house comes out with them. And disease management is a very hot topic. We are maintaining that, maybe, the best way to control your costs under managed-care plans now is to look at specific diseases. To do that, you have to invest some money. You want a return on the investment, but you have to put some money in up front.

Changes in competition definitely will affect your risk-based capital and surplus position. You may be in an area where you are fairly dominant, and you are able to make a good profit. That is an attractive area for another company to come in to compete. And if that happens, your margins will shrink. Your membership may flatten out or drop. You will have troubles. You need to anticipate that. It's prone to happen in an area where there's not much competition. If there's a lot of competition already there, then it is not as much of a problem.

In most states a new carrier coming into the state that does not have a block of small-group business has an advantage over the existing carrier. The existing carrier's average rates have to fit within a range, but the new carrier could come in with no existing business and underprice for a few years. Something like that will

change your dynamics very quickly. It's an unfortunate by-product of the regulations that most states have.

The large national players generally can survive longer, and they can go through the price wars and the buying of business, which perhaps leads to buying a competitor. The high trends always will cause some problems, as we have all seen. There is pressure from your large employers in high-trend times to cut your profit margins. And so, when you need to raise rates, they are pressuring you to raise them less. And you have to make a decision. Do you lose the business, or do you cut the rates? You have some serious pressures.

Expanding the provider network is always a need. I think that is the number 1 reason for more money, to expand your provider networks. In the rural areas companies may want to try to get more provider depth with a higher percentage in certain areas or be more selective. New products are necessary to penetrate the market further. Increasing the geographical area goes along with provider networks. Which comes first? I don't know, but you really need to do them both. If you're going to go into new areas, you have to have a network. And then acquisitions require a great deal of capital.

Mandated benefits come along every so often. And any-willing-provider legislation continues to be an issue. Other things, like association-health-plan legislation and HIPAA, really are not measured in the RBC formulas. And I think that they are fairly common. They happen regularly, and you might need to build them in your planning process and assume that something of that nature is going to occur.

You really need to plan for the low point in your underwriting cycle to have adequate surplus. Just looking at the average over time is useful, but it will not be sufficient when you are sitting before the insurance department explaining why your company is failing because of the low point in the cycle. If you look at that 1 to 3 percent underwriting gain, it is hard to take that and build up surplus. If you have that for three or four years—and then you have a negative for a few years—it is really difficult to build up much money. So you need to be very alert to that and try to build up as much as you can. I have seen some insurance departments that argue against that. They do not want certain plans (mainly Blue Cross plans) to build up too much. And that's, in my opinion, really wrong. You need to look at the big picture.

So how much is enough? Well, there's not one answer, as you would guess. My recommendation is to do a projection of your business by each line of business and do some sensitivity modeling, stochastic modeling, look at credibility. You really need to look long range, because each of your companies and each of your lines of business will be different. And it is very hard to have too much. My point is, do not just use the risk-based capital blindly. Look long term. Look at your lines of business. And do your homework to be prepared for the worst case.

MR. RICHARD SWIFT: I am a former CFO, so I tend to take an operational approach to things. Every plan is different. I think that there is a real dichotomy. You have got a group of plans with the largest concentration of members, the large plans—Aetna, Cigna, United, large Blue Cross/Blue Shield plans, etc. Those companies are in one situation. And then you have another extreme, all the way down to a company with 10,000 members and 26 employees. As we look through this, we need to consider some of the differences.

Can you have too much surplus? I do not think that you can, personally. We talked about underwriting cycles. We talked about low margins. I think that there are some issues for which you might have to justify return. But the reality is, we are in a risk business. Capital is always tight. There are always places to spend the money. And I think that you cannot have enough of it. There is always someone looking to use it for an initiative. There are losses. You always need to be looking for a new place to get it.

In terms of where you get it, you can beg, borrow and not steal, but earn it. And that is not an easy thing to do, as we look at it in terms of risk-adjusted capital. There are lots of different measures that can be used out there to do that. The bottom line is, can you raise the capital through selling stock, etc., so that you can provide a return to investors? It depends on the organization. And frankly, most of it depends on the timing of the cycle. The stock market is such that a few years ago, it was a much easier sell than it is today. I do not know what tomorrow will bring.

Borrowing capital is always an option. There are network issues. There are RBC issues. Depending on how you structure it, the loan may or may not count against your RBC. And it may not help your statutory capital, although it certainly could put some money in the bank.

And the last method is to try to earn some profits. Chart 3 shows the pretax net income for large publicly traded companies over the last five years. I would say that there are about a dozen companies that have enough of a track record to show five years of published reported earnings. You can see that only a couple of them are even close to having a decent return rate, if you call 3 percent a decent return. The highest one out there is 5 percent, and you have companies at -2 percent over a five-year average. So it is not like there is going to be a lot that you can do generate funds internally. So I think that you have to be very careful and frugal about what you do with every dollar of surplus that you have.

In terms of how it gets used, I think that it falls into three main categories. Statutory requirements—you have a minimum equity requirement that most states have. Sometimes it is $1 million. Historically you have had to have $1 million. Some states have not raised minimums from there. Other states have minimums that go up dramatically from there. And then you have RBC. Is RBC enough? It is a way to compare, but it is not enough. And I would argue that there are some states

in which the regulators are reluctant to increase the minimums, because there are a lot of plans out there that are not meeting it. And were the regulators to push it, those plans would be forced into changes in control. They are struggling by at 100 percent, 120 percent, 130 percent. They are above 100 percent. They are not down at 50 to 70 percent, but they are well below 200 percent. And the regulators are letting them get by and are not pushing to implement the regulations in many places.

On the operational side, costs include basic infrastructure. It's an office. It's furniture. It's people. It's supporting them. On the regulatory side—I read an article last week that reported that IT companies are estimating that they're going to get a half-percent increase in their revenue on an ongoing basis just from HIPAA compliance. And the HIPAA work that they expect to be coming their way from insurance providers is for the long term. It is not a one-time Y2K type of project.

Mandated products—I think that every state has a subset of mandated benefits. Some of them have mandated products in terms of business planning. You have to be in another business. You have to have a small-group product. You have to have an individual type of small group. Everyone is different, but suffice it to say that they require capital not just to develop, but also capital to support the company when the regulations drain funds.

Technology—it could cost a minimum of $10 million to build a data warehouse. Some of them are $25 million and up. So clearly, technology can be a place where you start spending huge amounts of capital.

On the sales side, I think that a good plan right now is running at close ratios of 5 percent. So that means that for every proposal, 95 percent of them will be rejected. But yet, when you've got your underwriter putting together proposals, you've got salespeople making calls, it costs the same amount of money whether they sell the business or not, in terms of all of that up-front work. I was involved with an organization that budgeted $1 million to spend on putting a proposal together for a large, multiyear government contract that they ultimately did not get.

When you actually get a new account, you have to ramp up not just network development in terms of expansion, but also product development and product expansion. Does the contract that the company has today support the product that they want to introduce next month or next year? Or do they have to renegotiate contracts with existing providers to support additional products, even before they start expanding into the service area down the street?

There is also the open-enrollment piece of it. Large employers in particular, the government specifically, tend to require that a plan must have people go to every enrollment meeting for every person that is in the plan. I have a client whose employees had to go out to over 300 enrollment meetings for their state group.

That takes resources. People have to be pulled from somewhere else to take care of that.

And the last piece of it is new initiatives and product development. The lead time, the outside support, the filings, everything else that needs to happen to put a new product in place easily costs $200,000. In some cases, it costs $500,000 to $600,000 before you ever get the first dollar of revenue in. And hopefully, there's been enough market research and up-front legwork done so that it is a product that is going to sell.

In terms of what you do with the capital and how you allocate it, it really depends on the organization and where it is. It is a function of the plan's life-cycle maturity and what their strategy is for the short term and long term. And so, it really is a very individual piece of it. It's the membership base. What are the membership characteristics? Large group? Small group? One dominant payer? Is it a Medicare plan? That is very different from a plan that has 1 million independent members.

Product mix, customer mix and the stability of the plan—what's your membership doing over time? Is your membership growing? Shrinking? Stable? Financial stability is the one we all think of first. Is the plan doing well? But again, that is only one piece of it. You also have network stability as a third component. You've got a contract with the providers. What you're paying them, how you're paying them and what kind of risk that you may or may not be sharing with them are all important. You are going to be spending a lot of resources to maintain contracts that you have. You might have to fill in holes, because you have problems with your network, you have major providers that are looking to leave on a regular basis. There are very significant, and typically unintended, costs there.

When you look at the dynamics of the plan, there are some plans that are primarily sales organizations. They have a strong sales force, but they need funds for every member. Whatever medical group the member chooses, all of the risk, medical cost and administration is downstream, somewhere else. That is a different kind of organization than one that might be a very aggressive medical manager that has a strong staff, a case manager, medical management. This type of company is aggressively managing the patient (who was a member from the day they enrolled) to identify what his issues are (before he ever became a patient) and work with him. That is a very different kind of capital requirement, research requirement and integrated delivery system. That, essentially, is a hospital-based plan that has, as an extension of it, a health plan that is not much more than a way to capture and collect their distribution system. They have those numbers locked into the plan, and the resources might be hospital resources.

You might have hospital case managers that do case management for the members in your plan. You could have hospital finance people. You could have everything done by the hospital with an HMO license or a health-plan license, whatever your insurance license is, to generate those numbers. And then, it is the risk that you

are taking on and your operational scope. How are you paying your providers? How much risk are you keeping or sharing—either up front on the fee for service or capitated basis, or down the road on a risk-sharing arrangement?

When you start talking about customer risk, it includes not just some of the funding arrangements that we talked about earlier, but also rate guarantees. There are still rate guarantees out there in many markets—some of them are for two to three years. You have plans that are betting that they have guessed the trend better than somebody else in the market has. If they are right, that is going to be okay. If it is not right, they are going to have two bad years. They may have to explain to regulators why they should be allowed to remain in business because of a poor decision. They missed the trend on a rate guarantee by however many points it happens to be.

And lastly, reinsurance—there are organizations that go virtually bare from a reinsurance perspective and keep all the risks themselves. And then there are others that are very risk-averse and will attempt to reinsure virtually everything. And certainly, they are paying a premium for that, but part of what they are doing is shifting that risk. That means that they have got less risk for themselves and, by extension, less capital that they have to keep to cover that risk.

When we start talking about operational details, what's the plan doing? How much of it do they do themselves? How much of it do they contract out? You can operate a plan with not much more than a sales staff and contract out everything else. Is that a good thing to do? I think that it depends on where you are in the environment you are in, but it is certainly one option. And some have been successful doing it. On the other hand, if you are going to do it all yourself, that requires a different level of infrastructure, different resources, and the capital plan to go with it.

Tables 1, 2 and 3 show results from a case study of two real plans. The first one is a multiline, publicly held, moderately large health plan. They take all of the risk for all of their services, and manage all of their business in-house. It is what you would typically expect a health plan to be. The second one is a smaller, provider-owned plan in the Medicare-supplement business. Nearly all of their business is capitated, and a lot of their administration is outsourced—either finance done by the hospital because it's hospital owned, or claims handled by a third-party claim shop.

Table 1

	Plan A	Plan B
RBC level	283%	211%
Surplus per member	$215.95	$261.89
Medical loss ratio	85.2%	91.3%

Table 2

	Plan A	Plan B
Net income per member 2001	$(2.08)	$75.88
Net income per member 2002	$(19.05)	$77.98
Revenue PMPM	$232.84	$497.94
Member growth	-2.5%	62.7%
Outsourced administration	5.6%	45.3%

Table 3

	Plan A	Plan B
Membership	782,573	16,393
Net income 2002	$(1.6MM)	$1.2MM
Reported surplus	$169.0MM	$4.3MM
"Available" capital	$109MM	$2MM

When you start looking at RBC and financials for the plans, they are not bad—283 percent and 283 percent. They are not great compared to some of the others, but they are not 120 percent. Surplus per member at $216 and $263. A loss ratio of 91 percent does not look great, but it is a Medicare plan. Their cost of administration is much lower. When you start looking at net income, Plan B looks good. They have made a fair amount of money in the last few years.

Plan A has lost money. And when you look at member growth, Plan A is clearly shrinking. Plan B is growing very quickly. And then look at Table 3, "outsourced administration." That is how much administration cost the company is paying to do it themselves, versus contracting out to third-party vendors. So you can see that in Plan B, half of what they do is outsourced, and that includes all their claims and most of their finance operation. In Plan A they do it all themselves. And I suspect that what they are outsourcing are things like disease management, but I do not really know that for certain.

Now start looking in greater detail. Look at the membership. Plan B has a lot of surplus per member and a lot of net income per member, but they have only 15,000 to 16,000 members. That is not a lot, but their net income of $1.2 million in 2002 is as great as the loss of the other plan on more membership. But then look at the surplus—$169 million versus $4.3 million. And when you strip out some of what they've got reserved and look at the available capital, you've got $100 million versus $2 million.

Where would you rather be? Would you rather be a plan with $100 million in the bank, losing membership, maybe losing a little bit of money? Or would you rather be growing at 65 percent a year and have only $2 million in the bank? Plan A is

doing a lot in terms of losing money. They are spending a lot of money, investing in consumer-driven products, e-commerce. They're leading edge, and they've got a good reputation in the marketplace. You think that they are one of the decent, financially stable plans that are going to be around for a while. Plan B is profitable, but they're struggling right now with what they're going to do by the end of the year with HIPAA, because they don't even have the money to have a HIPAA-compliant claims system.

That is the reality for that plan with their 16,000 members. They are trying to decide what the risk will be of maintaining a claims system that is not HIPAA-compliant, versus shutting their doors because they do not have it. That's the struggle that they're in.

FROM THE FLOOR: I am with Blue Cross/Blue Shield of northeastern Pennsylvania. I have a couple of questions. The title of this talk is "How Much Is Enough? Capital and Surplus Management for Health Entities." The last comment that Jim made is that it is hard to have too much capital. Right now in Pennsylvania we are going through several processes. Number 1 is the medical malpractice crisis. Recently Governor Rendell decided to raise in excess of $200 million from all Blue Cross/Blue Shields in the state of Pennsylvania. So he is trying to find out whose surplus is more than enough. Some of us have more than 1,100 percent of ACL. What is enough? Associations have worked together to establish the minimum amount of money that a plan must have. I want the associations to establish a ceiling. We have the floor. What is the ceiling? Is there anyone working on that?

MR. DRENNAN: You are dealing with the political arena, which is much different. I've worked with another Blue Cross plan that had similar issues. They asked us to help convince the state that they needed more than the state thought they needed.

FROM THE FLOOR: The state is asking us, how can you have a formula for which your lower end starts with your ACL and your upper end is infinity? It cannot be that way. You define what the upper end is. In the past we had months' worth of claims payments.

MR. DRENNAN: Again, there's not a hard-and-fast number, because you have to look at your individual plan situation. But you can try to put some parameters around it. You have a limited geographical area. You have limited product. You have competitive pressures. Try to put that in terms of a range and come up with a number. But you are dealing with politicians, and there is never one answer. We did reports on that to try to convince certain states that a plan needed more than the state felt it needed. It is a difficult thing to do, and you just have to get several different opinions, compare yourself to some other plans. Then add your own specific situations to modify it, and try to come up with a range.

MR. LLOYD: We did some work with one of the other Pennsylvania plans on the same issue. You have to start with the premise that it is a fair exercise. I am not

necessarily sure you can start with that premise, but there's an educational process. RBC was a mechanism for regulators to use to establish when a plan was failing. Modeling out the process outside the RBC realm is one of the ways of getting away from the regulators' mentality, because they are looking at ratios and saying, "Everybody else is at 300 percent, and you're at 1,100 percent." It may well be that 1,100 percent is in your long-term interest, if you take all of your circumstances into account. You can start to build a case for your own particular circumstances. You need more money.

FROM THE FLOOR: We looked at dynamic-solvency testing. I looked at the Australian system. I have done everything that is required. I request that the NAIC and the Society of Actuaries state what the maximum capital ceiling is supposed to be.

MR. DRENNAN: I am not sure that I necessarily agree that they should state a maximum. That is difficult for them to do with any formulaic approach. I would model it out, look at a range of worst-case scenarios and determine what you would need over a long-term period.

MR. LLOYD: A "one size fits all" approach is probably not the right answer, in terms of getting a single number. I think that it is situational. That is one of the problems that we have. I am not sure that all of the plans in Pennsylvania would have the same trigger. That is one of the problems with universality.

MR. SWIFT: I would agree that they probably should not have the same maximum. I would suggest the same thing. Model what could go wrong over a long-term process. What are the strategic impacts and the RBC impacts?

FROM THE FLOOR: I have one point on semantics, and then I will make my main point. I have seen target surplus, etc., expressed as a percentage of RBC. Sometimes it's a percentage of ACL, and sometimes it is a percentage of computer assisted learning (CAL). So we always have to be careful that we know what we are talking about. I have a habit. I just express it as CAL, and you see the numbers as ACL. And they look twice as big as they should be. I want to agree with the previous commentator about respectfully disagreeing with the point that there cannot be too much surplus in a plan. I'll just offer a counterexample that doesn't involve politicians. I have had four or five client engagements in the last couple of years in which clients have called me up and said that somebody thinks that they have too much money in the health plan. They want me to figure out what the right amount of money should be. Provider-sponsored health plans have a different set of issues. Provider-sponsored health plans have a reason for being, to feed patients into their provider organizations. And the providers, especially if it's a hospital system, can make better use of that capital than investing it in T-bills.

FROM THE FLOOR: The first questioner raised a really good point. And I think that he has not gotten a very good answer yet. I have been asked by my clients how to

justify holding onto a bit more capital. The government wants to take some, or the shareholders, depending on the situation, would like to have some back. And you cannot just say, "Loss ratios could climb or interest rates could decrease; we've got to hold onto every penny that we can."

The better answer is exactly the kind of work that actuaries should be good at, building models that represent the future course of the book of business that you have in place. They certainly have different characteristics, but it's relatively easy now to build stochastic models that will give a reasonably realistic representation of the future. So now you can say that this is the minimum capital that's needed to cover a certain range of situations, and there is a maximum that's needed to cover 90 or 99 percent. I am not saying that this is easy work, but it is not impossible to then say that this is the level of capital needed to get to a certain level of confidence. Absent that, you lose credibility with your regulator or your shareholder.

MR. ROBERT DENNISON: Do you see that as being something on the rise, this regulator attention to excessive surplus?

MR. DRENNAN: Actually, no. I think that it is on the decline a little bit as we see more plans getting into trouble, but it is more of a state-specific thing. A state might be getting pressure from hospitals or physician groups that feel that, say, Blue Cross/Blue Shield is making too much money. But I think that it is declining overall.

MR. LLOYD: We do not see it as often. If you take a regulator's viewpoint, for the most part, telling someone that they have too much money and bleeding some of it off, and then recognizing that in the next near-term underwriting cycle they could have financial trouble is a regulator's worst nightmare. So from that perspective, you don't see that pressure often, but there are situations that have come up—especially with the strong earnings that a lot of Blue Cross/Blue Shield plans have had in the last couple years. I think that all of the conversions of Blue Cross plans have raised these questions. Why are they converting? What do they need capital for? How much have they got now?

Chart 1

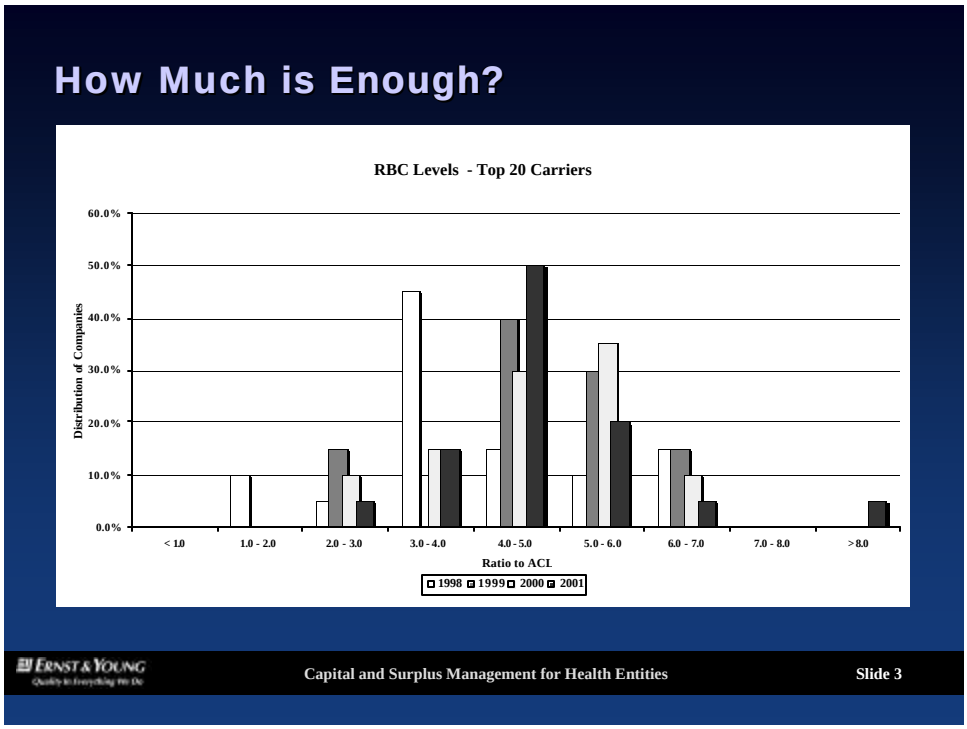


Chart 2

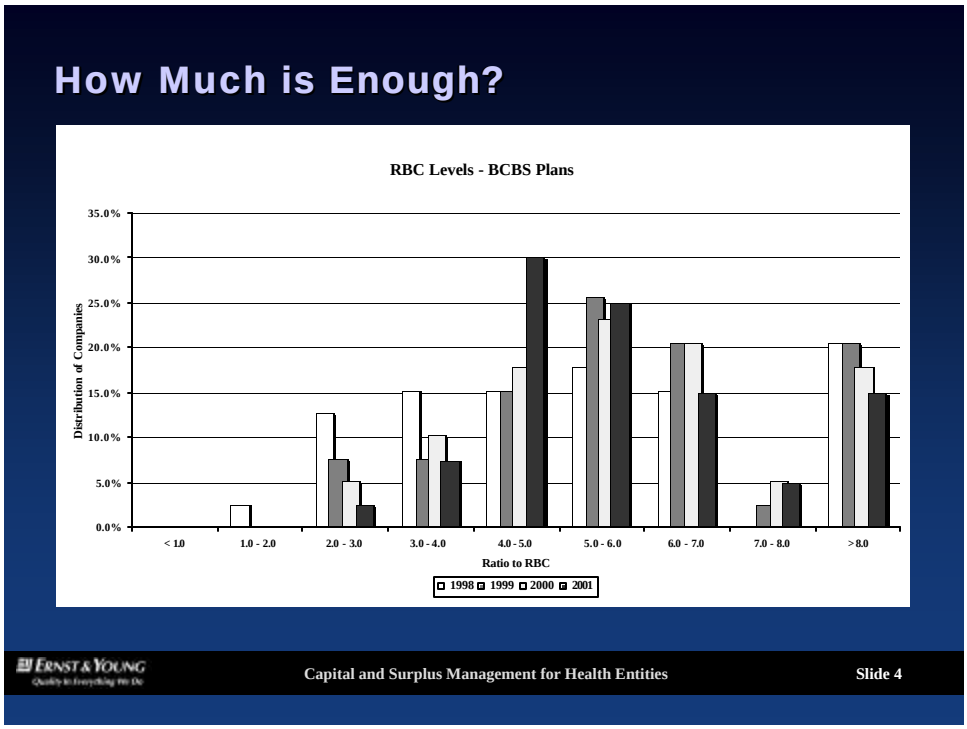
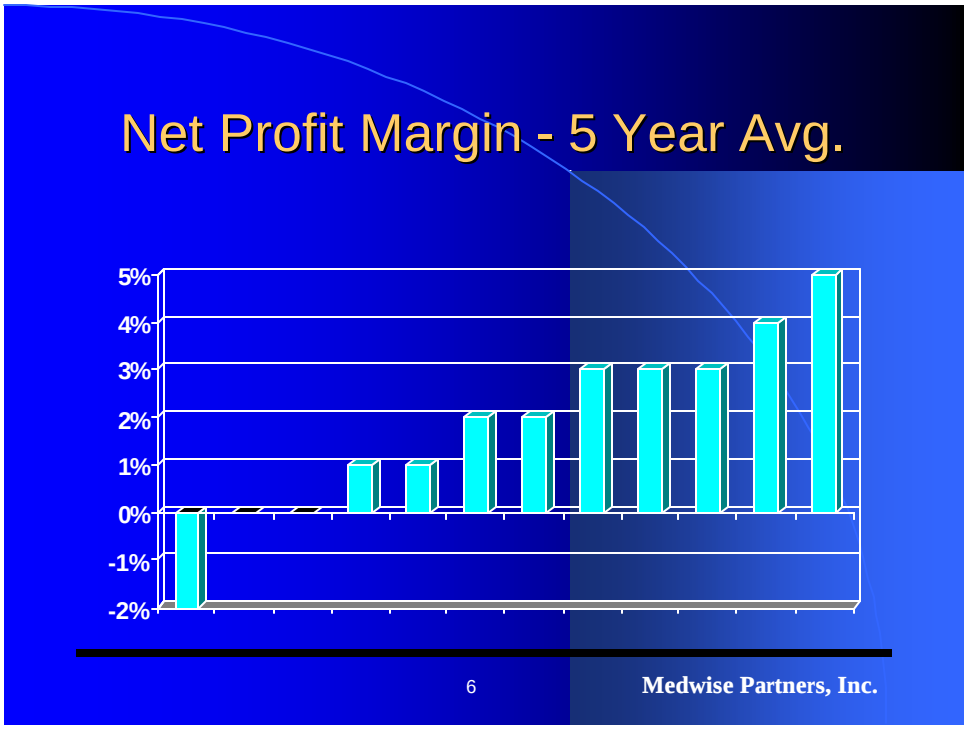


Chart 3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