

**1996 VALUATION ACTUARY
SYMPOSIUM PROCEEDINGS**

SESSION 3

**The Interrelationship Among Economic Surplus,
Economic Value, and Appraisal Value**

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THE INTERRELATIONSHIP AMONG ECONOMIC SURPLUS, ECONOMIC VALUE AND APPRAISAL VALUE

MR. DOUGLAS JOHN BENNETT: Betsy Ward is from Charter Oak Capital Management, and is going to talk about the economic value of surplus. Then Wayne Stuenkel from Protective Life is going to talk to us about economic value and how it is used at his company. Finally, Renee Cassel is going to talk to us about value added and how value added is actually used in a compensation system at Lutheran Brotherhood.

MS. ELIZABETH A. WARD: A popular topic in risk management these days is value at risk. Value at risk is probably most popular because the Securities & Exchange Commission (SEC) has proposed to incorporate value at risk into its financial statements. In addition, the Bank of International Settlements (BIS) in its 1994 Fisher paper has urged that companies disclose value at risk. It does appear to be a new risk management tool, although some of us may recognize it when you think about it in terms of liabilities as risk theory.

Value at risk, in the most simplistic definition, is potential loss on a given portfolio where we usually think of that as an asset portfolio. It could be for liabilities also. It could be for the whole company -- over some time period given a specified probability of loss. Value at risk is a market risk measure that combines, if you want to think about it in the asset sense, currency, exchange, equity, price and interest rate risk all into one number. For example, let's say your value at risk was \$5 million, your time horizon was one week, and your probability was 5%. That means that there is a 5% probability that over one week you will lose \$5 million. Rather than management trying to page through whole binders of data detailing the derivatives' position of a company, value at risk has become a very helpful alternative for them. It gives them a market measure of the risk on their derivatives portfolio. This is a commonly accepted technique or group of methods. There are a number of different value-at-risk methods. There is not just one.

However, we found that as more and more companies have looked into the value at risk for their whole corporation, a number of companies have had problems. In the August 1996 edition of *Global*

1996 VALUATION ACTUARY SYMPOSIUM

Finance, for example, Genetech, which is a San Francisco biotech firm, says that they spent a lot of time looking at value at risk, but decided it wasn't a perfect fit with their risk management goals, because it couldn't give any insight into how the interest income stream might vary over time. Instead they chose to use earnings at risk -- more of an economic value added (EVA) type method.

I think there's sort of an election process going on in corporate America as boards or risk managers are trying to decide how do we look at risk and from what viewpoint. Boards may be able to understand, from a corporate viewpoint, book earnings, but what about this market risk? Using that as a backdrop, what is the value that's at risk -- this market value? It's economic surplus.

Typically, you can think of economic market value of surplus as the market value of assets minus the market value of liabilities. Another definition is the value of future profit from existing business, plus any existing surplus. There also are two different angles of looking at the market value of surplus. One is the market value surplus that's embedded in the business that is currently written on your books, assuming you shut the doors today. Another way of looking at market value of surplus is to include the franchise value. In other words, you can look at it with the asset adequacy analysis viewpoint where you close the books today, versus the dynamic financial condition analysis (DFCA) version where you consider writing new business.

When evaluating new projects or terminating projects, you could look at the risk embedded in and change in your economic surplus, calculated using discounted cash flows. A book that goes into more detail about using this economic surplus for capital allocations, risk-adjusted capital allocations, is *Creating Shareholder Value* by Alfred Rappaport. It's a pretty good book, and it references a number of Fortune 500 companies that use this method for capitalization.

Just as in the case with book surplus, when we're trying to get an idea of some of the risks that need to be monitored and controlled, I think the easiest way for us actuaries to look at them is through the C risks. I'm fairly familiar with the C-1 risk. Typically we think of this as risk of default. As an asset manager, I would monitor that through credit risk, issue risk, and sector risk analysis. On the C-2

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

side, as actuaries, we review this risk even on a market value basis; for example, perhaps there's a sudden increase in mortality or lapses, and we don't have lapse-supported policies.

C-3 risk, I think, is a bit more interesting when you think of it on the market value side. We might have the situation where the market value of liabilities increases more than assets. Let's say the liabilities have a longer duration than the assets. For example, assume we have a structured settlement that's issued to a newborn, and we're backing it with five-year assets. Clearly there's going to be quite a bit of interest rate risk as interest rates change. Similarly, assets could be invested too long in an attempt to get a higher possible or potential credited rate. You're going to see this on the market value side more clearly because on the book side, our liability values may not change much despite the fact that interest rates have changes.

As a portfolio manager, I would certainly manage a C-1 risk regardless of passive or active investment management. In the case of diversity among asset classes, look at issue risk and sector risk. Whether or not I'm a passive manager or an active manager of assets, I still have to keep an eye on the duration of liabilities. Most asset managers will request some form of liability cash flows or an estimate of liability duration to get an idea of their market value target or market value risk. This does not necessarily correspond to some of the book value methods of capital allocation; yet, this is probably how many of your investment managers are managing the C-3 risk.

The easiest way to think about duration is not in terms of any sort of units -- just think of it in terms of sensitivity to interest rate changes. As insurance actuaries, we think of duration in terms of years or maturities. That's not the case in asset/liability management. It's merely a statistic that measures the sensitivity to interest rate changes. Therefore, the duration of economic surplus is nothing more than the sensitivity of economic surplus to interest rate changes.

If the duration of our liabilities, using our earlier example, is greater than that of the duration of our assets, and interest rates drop, the market values go up in proportion to the duration and there is, in effect, an economic loss. This is an example, under one interest rate scenario, of the value at risk, of the economic loss.

1996 VALUATION ACTUARY SYMPOSIUM

The basic formula for duration of surplus -- again this is a market measure -- would be the duration of surplus times the market value of surplus is equal to the duration of assets times the market value of assets, minus the duration of liabilities, times the market value of liabilities. If we take the asset duration of four and divide it by 0.05 and subtract from that quantity three times the liability over surplus ratio, we get surplus duration of about 23. Even with a slight mismatch, you run the risk that, if interest rates were to go down, let's say 1% or 100 basis points, your surplus goes up -- in this case 23%. This is a very leveraged situation. For a small difference in duration between assets and liabilities, you have a big change in your surplus value or your value at risk.

Again, duration is frequently criticized as just dealing with parallel interest rate changes, which you could counter by doing key rate durations or durations at a number of different points. Thomas Ho of Global Advanced Technologies and Robert Reitano have written papers on this problem. Typically, another option is to look at cash flows themselves. I think this is where market value based reasoning for capital allocation can have more importance. If you look at the actual cash flows of your liabilities and your assets, there is some point to managing to the actual cash flows or the market cash flows that are going in and out of your company as opposed to just the book cash flows.

I recommend that there be some balance. We are in a book value accounting world. There needs to be some balance between looking at economic surplus and book surplus, be it on a generally accepted accounting principles (GAAP) or statutory basis, but probably both. We are constrained by both, so that either we are looking at capital allocations from a market value viewpoint where we are constrained by particular GAAP and statutory goals, or perhaps we use a dual objective, where we're looking to maximize both of them.

There will be additional speakers on the topic of economic surplus and also on the interrelationship of how to interpret results when you have, let's say improving market surplus, but not necessarily improving statutory surplus. At the practitioner's forum, Session 91F, they also will be discussing how market value surplus should influence your interpretation of the results of the company. In addition, Session 25PD will cover more about a specific annuity case and single premium deferred annuities (SPDAs). It will cover a duration analysis of liabilities and surplus for an SPDA product.

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

MR. WAYNE E. STUENKEL: My presentation is about the Stern-Stewart method of EVA calculation, the way that my company is trying to apply it to our company's business, and how we are attempting to influence corporate behavior and compensation by it.

There are three questions that I would like to address. First, what is the Stern-Stewart method of EVA? Second, why is it important? Third, how can EVA be applied to a life insurance company?

EVA is a term that has received a lot of attention in the financial press over the past several years. If you look at *Business Week* or *Fortune*, there has been, on average, at least one cover story article per year about the application of EVA to American business, and how to use it to measure and quantify company performance. One of the leading consultants in this area is a firm called Stern-Stewart of New York City. Bennett Stewart, one of the principals in that firm, has written what I believe is the definitive book on EVA and its application. The name of the book is *A Quest for Value*, and we've been looking at that book quite a bit in our company. We think there are a lot of important management concepts in that book.

The simplest definition of EVA is that EVA is the excess return from a business over the cost of capital for that business. Looking at that in an equation form, value added or EVA is the economic return on capital, minus the cost of capital, times the amount of capital used. Now, as actuaries we're probably familiar with at least some of the terms in that equation. Most of us are familiar with looking at amounts of capital to use, as well as returns on capital. Many of us are accustomed to looking at statutory or GAAP financials that show returns on capital, but correlating those together and then putting in the cost of capital as a third term, is what moves us beyond this regular GAAP or return on investment (ROI) type financial reporting to EVA.

The Stern-Stewart method defines EVA as an annual calculation, and that's fairly important. Much of what has been done in the actuarial area, in thinking about value added, has been to consider a present value of future profits -- how much your book of business is worth -- almost an actuarial appraisal technique. Such a present value calculation is, as you know, a heavy actuarial effort with a lot of assumptions that have to be made about future lapses, future interest spreads, future

1996 VALUATION ACTUARY SYMPOSIUM

morbidity, and future mortality. There are many, many assumptions and those become difficult to explain to management. EVA, on the other hand, is looking at an annual calculation, not doing any present valuing, not being prospective, looking only at this year's financial results. Because of that, it has been more generally used in the manufacturing industries. We believe that it has applicability to a life insurer.

As an example of EVA calculation, assume that the economic return on capital for a company is 15% after-tax and including risk-based capital. Let's say that the cost of capital is 12% and that the amount of capital is \$10 million. Then the equation would say that the EVA dollar amount produced by that company is the difference between the economic return and the cost of capital, which is 3% times the \$10 million amount of capital invested, or \$300,000. EVA is not measured as a percentage but rather a dollar amount.

EVA can be positive as well as negative. There are situations where the economic return on capital is less than the cost of capital. If the economic return on capital is 8%, the cost of capital is 12%, and the amount of capital is \$10 million, then EVA would be a negative \$400,000.

Positive EVA means that shareholder value is being built. The return on capital is higher than the cost of capital. Therefore, you're building worth in your organization. Negative EVA implies that shareholder value is being destroyed. You're putting capital out at a rate less than what your cost of capital is, and you're destroying value.

One company that's widely mentioned, in *Fortune* and *Business Week*, as having used an EVA method for a number of years is Coca Cola. Coca Cola has been doing EVA calculations for 15 years. It has a booklet that its chief executive officer (CEO) endorses that's distributed to all its employees that describes what EVA is and why it's important to Coke.

Coke believes that the total return on its stock for the past 15 years is closely linked to the fact that Coke has positive EVA. Coca Cola's EVA amounts have grown year by year, at a compounded growth rate of about 20% per year, meaning that EVA in year X plus one is 20% higher than the

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

EVA in year X. That percentage is almost exactly equal to Coca Cola's returns to its stockholders over that period of time: Coca Cola believes that there is a very close correlation between achieving excess returns on stockholder capital and the value of the enterprise as shown by the company's total return to stockholders.

One could look at various other ways of calculating value. The Bennett Stewart book goes into quite a bit of detail talking about why certain other measures are not as good in understanding increases in stockholder value as EVA. To put it in an insurance context, I would say another method would be statutory income. Statutory income has its flaws, including the conservative nature of reserves, the lack of deferral of acquisition costs, and the uneven pattern of earnings. Also, there is no relationship to the amount of capital employed. If you said that your company made \$10 million of statutory income last year, that doesn't mean anything by itself. That only means anything if it relates to the amount of capital employed. If you made \$10 million on a \$20 million investment, it is great; but if it's \$10 million on a billion dollar investment, that's not so great. GAAP income is much the same way. GAAP income gets rid of many of the accounting distortions that you get with statutory income, but still GAAP income in and of itself does not relate to anything except the dollar amount of GAAP income. It doesn't relate to what your stockholders are earning. Similarly, earnings per share, earnings growth, and so on, don't relate to the returns on capital that are being employed.

If a company adopts EVA as a primary tool for looking at its businesses, then the company would be motivated to plan to increase EVA year by year. There are four general categories of ways that you could improve EVA.

The first, and most obvious, is to increase the return on capital. The increase in return on capital can be either improving from a negative to a less negative return, or a negative to a positive return, or positive to a positive return. Let's say that your cost of capital is 12%. If you're in a business that's earning 8% and you improve that to 10%, you still have negative EVA, but it's better. You're not destroying as much stockholder value. There may be reasons that you want to stay in that business. You may believe that it's just over the horizon where you actually make returns higher than your cost

1996 VALUATION ACTUARY SYMPOSIUM

of capital. You may feel that you strategically need to stay in to support distribution, so if you can move that negative EVA to a smaller negative, you improve shareholder value.

If you're in a business where you're making 13% and your cost of capital is 12%, and if you can make your return 15%, you are making more money, you're making more EVA, and you're doing better for your stockholders. Of course, if you're in negative and you can take it to positive, that's the best of all worlds. You've taken a bad business, one that has been destroying value, and turned it into one that's making value. The first way to improve EVA is to improve the return on capital.

The second way is to use more capital and deploy it at a rate of return higher than your cost of capital. If you're in a business that has a positive EVA where you're making 15% and your cost of capital is 12%, and you can double the capital and maintain your returns, then you double your EVA and your value added to your stockholders.

As I have looked at companies over the years, often I'll see that there is a business in a company that's making an extraordinary return -- 18% or 20% or more. But the company is using a very small amount of capital, and if you tried to push the managers to take more capital, they wouldn't take it. If the managers are being compensated and motivated based on an ROI method, they wouldn't want to do anything that would dilute their ROI. If they're making 18% and they can't invest in anything else that's at 18%, they'd say, no, I don't want the capital. But if you're looking at an EVA method, that business' contribution to stockholder worth will be improved if you can take on more capital that returns more than 12%. If you have an 18% ROI, and you can take on more capital and put it out at 15%, you're still improving value. So trying to push capital into businesses where you can make more than the cost of capital is the second way to have EVA improvement.

The third way is by using less capital in businesses that are making less than the cost of capital. This can go so far as to shut down a business. If you have a business line that you are not making your cost to capital on, and reasonably don't expect to make your cost of capital at any time in the future, it's best for your stockholders to shut that activity down. Of course, you need to go through a fairly detailed shutdown analysis about what happens to your overhead expenses. But, if you're burning

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

up stockholder value by being in a business that is returning less than the cost of capital, you should shut it down, and if you have no place else to put the capital, you should just buy back shares and give the capital back to your stockholders. If you have a business that you don't think can return your cost of capital in the short term, but can in the long term, you might be best off in de-emphasizing it and putting less capital in it right now. For example, you might wait for the cycle to turn in group health until times are better and you can put more capital back in. The third way to improve EVA is to prune businesses that are earning less than the cost of capital.

The fourth way to improve EVA is to reduce the cost of capital. Many stock life insurance companies have a capital structure that is composed partially of equity and partially of debt. Equity is the most expensive kind of capital that you can have. Debt is tax deductible. Debt is less costly than equity. To the extent that you can prudently leverage your company up, you can improve the return to your stockholders by reducing your cost of capital.

It's unlikely the insurance industry could do what many industrial companies did in the 1980s and leverage way up. I don't think that the regulators or the rating agencies would permit an insurer to have 10% equity and 90% debt. However, many well-managed stock companies have debt as a percent of total capital in the 20-30% range, and having debt at that level seems to make regulators and rating agencies feel comfortable. It does drive down the cost of capital and does increase the returns to stockholders.

Most of the examples that you'll see in the press about EVA relate to manufacturing and industrial companies. It's easy to see where capital is invested. In an industrial company, for example, you can count buildings, machines, or cases of Coke. That's not necessarily the case, as we all know, in a life insurance company. Another complication is that, in most industrial companies, when the sale is made to the consumer, the sale is substantially done. When Coke sells a can of Coke, there is no continuing obligation to the consumer after that can of Coke is sold. When GM sells a car, there is little continuing obligation except some nominal future warranty costs.

1996 VALUATION ACTUARY SYMPOSIUM

It is different for insurers. If you're selling a universal life policy or any kind of a policy with continuing premiums, there is material activity going on after the initial sale date. That makes the process of trying to apply this EVA to an insurer a bit more difficult, I think, than with an industrial company. Let me describe to you our situation at Protective and talk about some of the questions that we've asked ourselves.

First I will give you a sketch of our company. Protective is a stock life insurance company based in Birmingham, Alabama. We have \$7 billion of assets, and we think of ourselves as a mid-sized company. We're more diverse than many companies our size are. We have six separate profit centers in the company. We do group business, individual business, annuities, guaranteed investment contracts (GICs), acquisitions and credit. Each of the areas of the company is headed by a senior manager who has profit and loss responsibility. That senior manager has pricing, sales, and administrative responsibility. We have fully segmented statutory and GAAP financials, so each business line manager knows what his or her profit and loss is. He or she also knows from some historical work that we've done, what the capital is that he or she has been employing. We've been doing return on capital calculations for a number of years.

Our CEO came to the corporate financial team in 1995 and said that we ought to consider an EVA method. We had Bennett Stewart come to a company retreat, and he gave a day long presentation on EVA to the entire management. Then, we had a team of financial people, corporate people, and the actuaries of these six areas getting together and talking about an EVA framework for the company.

We've been working on this now for six or nine months, and it's our hope to link this into compensation and to have some part of our senior managers' compensation for 1998 based on EVA. We're not all the way implemented. We've done a lot of calculations and a lot of work. Let me describe to you some of the decisions that we reached and the logic behind them.

One of the first questions was whether to calculate EVA for a profit center, for the company, or for both. That was a pretty important decision, and we decided to do both, but to focus mainly on

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

business units. Because of the way the company is organized, business units are substantially responsible for their own profit and loss. We felt that getting that positive or negative EVA down to the business manager level was important. We're going to also do some corporate EVA work, but we think that in our company looking at the division was the most important. We could, if we chose, go down beyond that level to products, because we don't believe that the additional effort required to do that is justified by the output that we get.

The second question is, what kind of earnings are used in the EVA calculation? Should you use statutory income, GAAP income, tax income, or still another basis? Most of us would have statutory GAAP, and tax, already available. We thought for a while about going to some other basis because GAAP is not perfect. But we decided to use GAAP because GAAP is accepted by the company. It's already been done. The managers understand it. If it's one thing that we have learned from the EVA material, it is that a company should try to make it as consistent with current business practices as it can. Because of that we decided to use GAAP earnings as the primary measure. GAAP profits do emerge in a generally reasonable fashion over the lifetime of a business, and are already calculated for each division.

There are certain adjustments that we may make to reported GAAP earnings. The company has generally had a practice of conservatism in reporting its GAAP financials. For example, when we have a start-up venture which has material start-up costs, we have historically written those costs off and not capitalized them. We think that's the right way to do it for GAAP. However, for EVA, the textbook says that these costs should not be written off. Instead we should be capitalizing those costs synthetically for EVA because that is real capital that's being spent. The capital being spent needs to be amortized over the lifetime of the new venture. In the limited cases where we have start-up operations, we will capture those expenses and capitalize them for EVA.

Write-offs are another adjustment. The insurance industry hasn't had many write-offs, and other industries have had more. However, were we to write down a large part of our DAC this year for some reason, then next year we would show a much better GAAP return on capital. The fact is, though, you haven't changed the economics at all. The return to your stockholders hasn't been

changed by you taking the accounting action of writing down an asset. The EVA literature suggests that you reinstate those write-offs that you took and calculate EVA returns without the effect of write-offs.

The third question that we had to address was the amount of capital used in each profit center. We've been doing, as I mentioned, return-on-investment-type calculations by division for a number of years in the company so this was just an extension of what we already do. Capital is the sum of assigned capital, and GAAP adjustments to statutory. For assigned capital, we've been using the risk-based capital formula, and calculating it down to the division level. We make GAAP adjustments to statutory, such as deferred acquisition cost (DAC), deferred taxes, and reserve differences between GAAP and statutory. The start-up and write-off adjustments that we have for EVA are captured by division, and we're able to come to an amount of capital for each division for the EVA calculation.

The next question is, what is the cost of capital? There are a variety of answers. You can go back to finance textbooks and read about betas, risk-free rates of return, and other theoretical factors. The equity cost of capital is a difficult thing to pin down. The debt cost of capital is the after-tax cost of debt capital, which is fairly straightforward. Then you'd weight the debt and equity costs based on debt to equity mix. We've had difficulty in even figuring out what our beta is.

We finally came to the conclusion that somewhere in the 11-12% range is about where the cost of capital should be. That feels pretty comfortable. The EVA literature suggests that a company shouldn't get all tied up in trying to calculate the cost of capital to the nth degree. What's more important is the improvement in EVA year by year. The absolute EVA is less important. It's good to have positive EVA, but it's more important that a business be on a path of improving EVA. The literature suggests that you not get all tied up in having esoteric, scientific calculations of cost of capital.

The fourth question that we've had to address is, does each profit center have the same cost of capital? One could make a theoretical case that some businesses that we're in are less risky than other businesses. The only problem was that every one of the profit center managers thought their business

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

was not as risky as everyone else's business, so they deserved a lower cost of capital. We decided not to fight on that. We decided to say that everyone had the same cost of capital because we can't come to a basis for scientifically saying that there's a difference in cost of capital between our businesses. But in theory, different businesses could be run on different debt to equity mixes, and therefore you could have a different cost of capital for different businesses.

The next issue was identifying the need for other adjustments. There is a fairly important adjustment if you're purchasing a new strategic business. For example, it's one thing if you're going to start a variable annuity business and spend a few million dollars to get a product out. It's something else if you're buying an enterprise for a much larger purchase price up-front, and find that the new enterprise is not currently returning the cost of capital. You believe that the new venture will improve returns over a short period of time, because the business can be improved. The question is, should management be punished under its EVA formula for making a big investment in an enterprise where the initial return on capital might be 5%, but you reasonably expect it to be 20% within five years?

The EVA literature suggests that, for certain strategic initiatives, you consider carrying forward any expected lower returns than the cost of capital for a few years, and not require the profit managers to immediately make their costs of capital on certain investment acquisitions. If there's a strategic investment that should be made, it should be made, and the compensation system shouldn't cause managers to not make it.

However, you do need to keep a short leash on "strategic" investments. I've seen financial projections for new initiatives where a start-up operation is projected to make a lot of money within two years but the two-year time horizon never seems to end. We believe that any variation like this needs to be approved at the board level where we described the business that we're going into, and here's when we're going to cut off the subsidy. It's pretty important to not let things drag out indefinitely.

The last question, how can EVA be used in managing a life insurance company? We think that there are at least three ways that EVA can be effectively used in a life insurance company. First, it can

1996 VALUATION ACTUARY SYMPOSIUM

assess the relative desirability of existing activities. It was very interesting for us to look at the six divisions of our company to see what relative contribution they had to EVA. All the areas have positive GAAP earnings; they're all making money. The areas use different amounts of capital, but when you calculate the amount of capital that they're using and then relate the earnings to the cost of capital, it's interesting and it's a very useful exercise.

The second way to use EVA is in assessing new business ventures. There have been times when I've seen companies not using rigorous methods in assessing new business ventures. The marketing guys will say, "There's a huge market -- trust me." The EVA method suggests that you should apply much more rigor and have real projections that you can hold people to in the future. We think that one of the biggest values of EVA is that it will be helpful to us in inserting some discipline into our process of going into new business ventures.

The third way is using EVA in compensation. You can go through this exercise and deal with these fancy numbers, but if it doesn't come down to affecting people's paychecks, people won't pay attention. People will act so as to maximize their pay. We believe it's important not to have this just be another management tool, something the corporate guys do that gets passed out once a year and goes away. It's important, we think, that management's focus be towards building EVA for stockholders. The way to get management's attention is by putting EVA growth in the compensation formula.

We've had some difficulties in doing that. It's difficult for us to distance ourselves from our business. There is too much politics and internal history for us to deal with all the issues. While all the work we've done so far has been done by in-house folks, we've decided that we're going to go outside for some compensation consultants to help us -- people who have experience in implementing EVA. We hope we can conclude that in about a six-month period and make a presentation to our board in March of 1997 as to how EVA should impact on senior managers' compensation so that they'll earn in 1997 and pay out in 1998.

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

MS. RENEE C. CASSEL: The value-added methodology that I'm going to be talking about is based on EVA or appraisal methodology principles, but it has been adjusted to better reflect the operations of a mutual or a fraternal. Lutheran Brotherhood is a fraternal insurance company and throughout this presentation I'll be referring to what Lutheran Brotherhood uses and how we analyze value added.

My first objective is to review the general design of a value-added-based compensation plan. Next, I'll review Lutheran Brotherhood's definition of value added and how we analyze our results. Long-term incentive compensation (LTIC) is how we refer to our value-added compensation plan. I'll show how the LTIC is tied in with all the value added work that we do for our financial reporting. At the end I'll summarize what we've learned over the last couple of years and some of the considerations we're giving to the future.

The phantom stock plan is the basis for the design of our LTIC plan. How many of you are somewhat familiar with the phantom stock plan or have read anything about it? I'll walk through a simple example. Phantom stock plans are particularly attractive for mutuals and fraternal because they provide a way to mimic stock company plans. Stock company plans can offer stock options as part of their compensation packages. A phantom stock has a share value, and the share value is based on the measure of the company value. Any payout that's awarded will be related to an increase in value that occurs over a specified period of time. Now this time period is longer than one year. It is generally three to five years, so a longer time is given for the performance to emerge.

Assume a company has decided to introduce a phantom stock compensation plan. On the initial date of the plan, the company determines that its value is \$100 million. Human resources creates one million shares of phantom stock, so the share value becomes \$100. There's only one participant in this plan, and the award is stated as a percentage of salary. In this case 25% of salary will be paid if the value of the company increases up to the target. This participant of the plan currently earns \$100,000, so the potential award is \$25,000. The question remains -- how many of those one million shares of phantom stock should be granted to this particular participant to ensure that indeed \$25,000 will be paid if value does increase up to target?

1996 VALUATION ACTUARY SYMPOSIUM

Before any phantom shares are granted, you have to set the target and the time frame. In this example, the goal is to increase the value of the company from \$100 million to \$150 million over a four-year period. Again, we have one million shares of phantom stock in existence, and that remains constant throughout this four-year period. Another way of stating the plan is to say that \$25,000 will be paid to this individual if the share value increases from \$100 to \$150 over this four-year period.

To determine the number of shares, the basic underlying logic is the number of shares that are granted times the target share value should equal the target award. The number of shares times \$150 should equal the \$125,000. Solve for x : 166.67 shares will be granted to this individual. At the end of the four-year period, the actual award that will be paid out will equal 166.67 times the particular share value.

It's possible to put more constraints in your award or in your compensation plan. Any constraints should be designed prior to the introduction of the plan. Lutheran Brotherhood's plan is designed with the following constraints. Again, we will pay a target award if actual share value or actual value equals plan at the end of a specified period. We will pay no award unless actual exceeds some sort of minimum threshold amount. Management can't just achieve a little bit of value. There's some threshold that is set to stretch management. We will pay a graded award, it's not an all or nothing design, if actual falls between this minimum threshold and this plan. To give you a sense of the minimum threshold we use, there's an 8% growth rate that has to be achieved and then the plan hovers around 10%. We've also put a cap on the award to prevent it from becoming too large if indeed actual exceeds plan.

Lutheran Brotherhood began fooling around with value added in the early 1990s, and we introduced it into our management reporting in 1993. On January 1, 1994 we introduced our first LTIC plan. It's a four-year plan, and this four-year plan coincides with the four-year period that we use in our business, strategic, and operating plan that we developed. The award that will be paid out will be paid out at the end of the four-year period.

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

We've introduced a new plan in every subsequent year, so we currently have three plans in effect, and we will introduce another one on January 1, 1997. After we introduce that, we will always have four plans to track. As our 1994 plan ends, our 1998 plan will begin. I'll take this time to point out that the share value on each of the LTIC plans will be different, but there will be an identifiable relationship between them, and I'll go through the numbers on that later.

Value added, again, is not EVA, it's not an appraisal, but it's how we value our corporate organization and what we include in our management reporting. It's the basis for our LTIC plan as well. During this portion of the presentation, I will again be talking about Lutheran Brotherhood's approach to value added. I'll review why we introduced value added into our management reporting. What's our definition of value? What methodology do we use to derive value? What components contribute to the increase in value from the beginning of the year to the end of the year? We'll look at the variance analysis that we do to explain the difference between actual results in our plan or expected results. Where does leverage exist in the plan? Where do we look to increase the value?

I have a laundry list of why we introduced value added. I'll quickly go through these. We thought it was the best performance measure. It provides a single measure linking planning, pricing, and reporting. It also allows us to integrate our required surplus or our benchmark surplus that we feel we should hold for maintaining certain industry ratings. It's both long-term and prospective. It's internally derived, so we can design it to better fit our specific circumstances. It readily allows us to compare actuals to expecteds and provides instant feedback on how recent experience will affect future earnings and future value. Last, it allows us to match management actions with results over the long term.

What is value? Value is equal to vitality surplus, plus the value of in-force, plus the value of field force. Now you may be familiar with the first two components, but perhaps less familiar with the third -- the value of field force.

1996 VALUATION ACTUARY SYMPOSIUM

Lutheran Brotherhood has a career agency field force, and we felt we needed to include a component. We think our field force is a key driver of our capacity to do future business, and we invest a lot of capital recruiting, training, and developing our agencies.

I'll touch on each component. Vitality surplus is equal to statutory surplus, plus any allocations of surplus. This would include asset valuation reserve (AVR) or deficiency reserves. It doesn't include required surplus or benchmark surplus that we hold for industry ratings and any surplus that we have set aside for future distribution to our members.

Value of in-force is the present value of future distributable earnings created by our in-force business. In any given year, distributable earnings is equal to our statutory earnings, less the increase in target surplus, benchmark surplus, required surplus, however you refer to that. The third component is value of field force. Our definition is that it is a portion -- and I'll emphasize portion -- of the present value of future profits from future sales. Now it's only the portion that's needed to recover our field development costs -- those costs that we need to recruit, train, and develop our field. One way to think about the value of field force is that it is an unamortized asset. We wanted to match the cost of recruiting, training, and developing each agent with the business produced over the career lifetime of each agent. The value of the field force is the unamortized asset of these deferred development costs. We did historical studies to determine what this magic portion was, and it was determined that 25% was needed to recover those costs.

The methodology underlying our value calculation includes projection models to project future cash flows; the assumptions that drive these projections; an in-force file to model our existing business; new business files to model all our future new business; any model or assumption changes that are made. We project our cash flows out 40 years. I think typically companies would go 30 years, but we have good mortality and our persistency is so low, we have value beyond the 30 years. We model each product line separately and all the information that we get from each product line is aggregated in something we call a corporate model. It's the same corporate model that we use to create the four-year business plan I referred to earlier that we do our strategic and operating plan from. We also

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

have a field force model that's run independently. That produces the value of the field force. It projects and then discounts the future business from each full-time district representative.

The assumptions that underlie the projections are pricing assumptions, so our expected value is consistent with pricing. The assumptions are current, they're based on recent experience studies. One exception is our interest rate assumption. I wanted to point that out because our earned interest rate assumptions are a combination of recent experience and our long-term expectations. The earned interest rates for years one and two are indeed based on recent experience. Years three and four are merely transition rates. They are used to grade between the current or recent experience and our long-term interest rates. We consider anything from years five through 40 to be long-term and these long-term rates in years five through 40 are level. They remain unchanged over this time, and they're total return kind of rates. We thought that, with projections this far into the future, it made sense not to try to predict long-term interest rate fluctuations. Earlier years only would be better, and it helps in the variance analysis if you're not changing the long-term rates from year to year.

We use a discount rate of 8%. This is not a risk-adjusted rate of return for us. This is a minimum growth rate that's required. This is set by management. In our field production, we also use this 8% discount. We make sure that our projections produce sales that tie to our field production goals.

Our in-force files are cell based. We have a seriatim extract file, which we group into representative cells. Our new business files are cell based. The amount of business that we project is consistent with our sales goals. The mix of business that we have is consistent with what we had during the last year, but we adjust for any abnormalities that we feel occurred. We use five years of new business within our 40-year projection.

The projection models reflect the latest model or assumption changes. These changes have been approved by both pricing and financial management. All requests for change have to be documented and specifically identify the impact they will have on value. This is to be done before our pricing actuaries start using it to price. We don't want to wait until December 31 to find out the impact on value.

1996 VALUATION ACTUARY SYMPOSIUM

We're actually more interested in the increase in value or the value added each year rather than the absolute dollar value. To get from the beginning-of-year value to the end-of-year value, we split the increase into different line items. Our increase can either be attributable to the return on surplus, the value of our new sales, the change in the value of our field force, the change of the value of in-force (this is where we do a detailed analysis of all the pricing variances), and any assumption or model changes.

We're also interested in looking at who is responsible for these changes. For each of the items we just looked at, we determine which changes should be attributable to management and which changes were a result of external forces beyond the control of management. We feel that the return on surplus is fully attributable to management. Value of new sales is fully attributable to management. Change in the value of field force is the responsibility of management. We look at pricing variances, and it's possible that there may be some that are beyond management's control, and we will recognize that. Any assumption changes may or may not be attributable to management. Any model changes with new versions or corrections are considered nonmanagement.

We don't use these management/nonmanagement splits in our financial reporting, but we do them now because we need them when we look at our LTIC that will piggyback on this. We find that it's better to do everything that's consistent between the two of them at the same time.

Of course, we look at our variances. We compare our actual results to the LTIC plan. We look at all of the components and then assign each variance to management or nonmanagement.

Now we're going to complicate things a little bit. As I stated earlier, value is equal to vitality surplus plus the value of in-force business, plus the value of field force. The growth of every component can be analyzed. In our return on surplus, what falls under vitality surplus will be the actual return on our vitality surplus. Now, the underlying rate of return that we're using throughout our value calculations is a minimum threshold rate of 8%. It's very likely that the return we actually achieve on free surplus or vitality surplus will be less than 8%. That difference between actual and 8% will fall in that in-

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

force variance line that occurs later. For the value of the in-force business and the value of the field force, the return is set at 8%. That's just an unwinding of the discount.

Let's now look at the value of new sales. The issue cost of new business is funded through current earnings and falls through vitality surplus, so the distributable earnings that fall under vitality surplus will be negative for new sales. But the value of in-force will increase. You have new business, so the present value of future distributable earnings will be included in the value of in-force column.

Under the value of field force we have something that's a negative 25% of production credit. This is the amortized cost I mentioned earlier. Remember, value of field force is an unamortized asset. For new sales, the cost equals 25% of production credit. Production credit is how we measure our field force production.

The annual incurred cost of developing our field will fall through earnings and fall under vitality surplus. It actually should be in the new district representative's line. The value of the field force is increased for new district representatives because there are now more deferrable development costs, and the unamortized asset is increased. The field force consists of the new district representatives and any productivity variances that happen. Any productivity or retention variances are shown in the value of the field force.

Our in-force line merely shows the shift of distributable earnings from our value of in-force to our current year earnings under vitality surplus. There is no impact on the total value, just a shift.

Any in-force variances are shown in vitality surplus and then in future projections. We also reflect any assumption changes that will affect future value under value of in-force and the value of the field force. We do break down everything into a grid, and as I mentioned before, under the in-force variance line, we look at all the pricing variances, so we could start picking out each of these cells and go into more detail, but I'm not going to.

1996 VALUATION ACTUARY SYMPOSIUM

Where is the leverage? Where do we look to increase the value? We can look to new sales; we can look to our field force; and we can look to our current experience and our future pricing assumptions. The value of new sales will increase if the return or the rate of return on our new sales is greater than the hurdle rate -- in our case 8%. Value of new sales will increase if the sales volume increases, if sales shift from less profitable business to more profitable business, or if we reduce our acquisition expenses.

The value of the field force will increase if our development expenses are reduced, if the number of recruits increases, if agent retention improves, or if agent productivity improves.

If our experience is actually better than we priced for, value will increase. If we decide that our future assumptions can be improved, that will also increase value.

This summarizes how we look at our corporate value or our value added, but there's a strong relationship between our value added and our LTIC. The first question is, is the Lutheran Brotherhood value different than the LTIC value? The answer is yes. Two adjustments are made. We back out those variances that we determined were not attributable to management. We introduce a new component that we call value passed through to members.

Value passed through to members is a direct add-on to Lutheran Brotherhood value. So far we are using two areas where we believe that we pass on value to our members that's not included in the corporate value calculation. The first one relates to investment return, and the next one relates to the management of our administrative expenses. Because the value-added calculations include only the margin between the actual investment return and the actual dividend we pay or the credited interest that we pay, the Lutheran Brotherhood value only includes what we keep for ourselves. It doesn't reflect what value or what benefits our contractholders had by investing in Lutheran Brotherhood. We look at relative investment returns. We offer series funds, mutual funds, and our product line investments, and we compare actual returns to a market index, for example a Standard & Poor's (S&P) index. The difference between actual minus index is how well we feel the contractowner did

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

by investing in Lutheran Brotherhood instead of investing in the market. We believe that is value passed on to them. Again, it's not already in Lutheran Brotherhood's value.

We also look at how well we manage our expenses. We look at unit expenses. We don't look at absolute total dollar of expenses because we want to remove the effects of mix and volume changes, but we compare actual unit expenses to pricing unit expenses. Then management is again fully responsible for this actual minus index.

We have three plans that are currently in effect, and we will introduce another one in January 1997. At year-end 1996, we'll have to calculate the year-end value for each of the three plans. Again, the values will vary by each plan, but there should be an identifiable relationship between all of them. All three plans will be based on Lutheran Brotherhood's value as of December 31, 1996. That's why I spent so much time talking about value. Each year we have gone through and backed out the nonmanagement variances, and we've added the value passed to members. For the 1994 plan, the net effect of what we did in 1994 is accumulated or brought forward at 8% to December 31, 1996. The net effect of 1995 is brought forward to December 31, 1996, and then we include the 1996 adjustments. Our 1995 plan only includes the net effect of the 1995 adjustment, and they are brought forward and the 1996 is included. The 1996 plan will only include the adjustments for 1996.

Again, you can see that Lutheran Brotherhood value is a basis for determining our LTIC. All the details that we think will be needed when we calculate our LTIC value, we try to do with our value calculations again, to make sure we're consistent and they're easier to track.

Actually, when you're done doing all your calculations and you want to share with everyone what you've done, we've learned that we should really keep it very simple. Try to avoid extensive variance analysis; maintain a consistency between statutory and value added variance, remembering distributable earnings are statutory earnings minus your increase in benchmark. When you're doing your statutory variance analysis, carry that through to your value added and then be able to reconcile your corporate values with your compensation values. Look at the relationship between the different

1996 VALUATION ACTUARY SYMPOSIUM

plans that you have documented. Know it well enough so that you can explain it to someone or have someone come in and audit it. This makes the next year go a lot better.

What are some of the things that we've learned? Set your initial assumption very carefully. It isn't that you wouldn't, but the less you have to question what you've done in retrospect, the smoother your variance analysis will go.

Assume a long-term horizon. That worked well for us on our earned interest rate. Again, years five through 40, we assume long-term stable total return rates. It's important that you test changes in models, or changes that you decide you need to make early. Don't wait until December 31 to determine the impact on value. Set aside resources or be prepared to devote time to this. It can be pretty complicated, and every year we have more questions. The more you learn, the more you ask. I think it's important to do a retrospective model validation. For example, this year we picked a few lines, and we looked at our December 31, 1994 in force. We now have actual 1995 new business, and we created 1995 earnings statements. It produced a premium that looks like what we really got. It produced benefits like what we got. It gives you additional confidence in your projections.

Ultimately, all this will go up to the board of directors or human resources. Limit it to simple, consistent, timely, and common sense things.

You should have in mind some sort of level annual growth rate you feel your management should be able to achieve before you would be willing to pay them that target award. You may find that something happens during your three to five years that may change the value, maybe make it lower due to sales or expenses. Something happens that may not give you the stretch that you really want your management to do.

We determined that it is better to set a level growth rate like that 10% that I mentioned. Coincidentally, when we were doing our projections, we automatically were achieving about a 10% annual growth rate, so we feel that's quite a reasonable rate for us.

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

Where are we going? What things are we considering? There is quite a bit of communication that should be going on between the financial management and pricing, and so we want to continue that and improve it. Also, we've talked about creating a standard new business file that has a standard mix. We haven't done that yet, but we thought maybe there should be some perfect standard we could develop. We want to continue to simplify any board reporting we do. Continue to educate the board and management about how time-consuming this is and that you have statutory going on, GAAP and value added, and things aren't necessarily done in parallel. A lot of it is sequential. The board reporting dates vary from year to year, and it would be nice if we had simply a fixed reporting date every year, and we could go about the year-end more calmly. We'd like to automate as much as we can. Ultimately we may be able to make more capital management or allocation decisions based on the value that would be added as a result of those decisions.

MR. STEVEN A. SMITH: Wayne, do you have excess capital when you're determining how much capital goes into each line of business? You say some lines don't want to take extra capital, but suppose the company is overcapitalized by \$100 million, do you force that down or do you have a corporate line of business, and what do you do if you're undercapitalized?

MR. STUENKEL: We do have a corporate line of business in the company, and we haven't fully developed exactly how that would all work out. In theory if you're overcapitalized over a period of time, you should be returning capital to your stockholders, by buying back stock, or doing something to decapitalize the company. We will be encouraging product line managers to improve EVA year by year, and then to the extent that they need more capital, it is the obligation of corporate to go out and get more capital. To the extent that product line managers use less capital, but improve EVA, then they'll return that back to corporate. That whole relationship hasn't been fully defined, but in general we like to give the line of business managers all the capital they can use profitably and no more.

MR. SMITH: Renee, I guess it would be vitality surplus that would be a similar thing for you.

MS. CASSEL: We have that on a corporate level. We can calculate value or value added on a product-by-product basis, but we don't have capital by product and we aren't managed on a product line basis.

MR. SMITH: I did have one other question for Renee. You discussed long-term performance cycles. You have four plans that are kind of overlapping and at the end of the four-year cycle, an employee would get a target bonus or something or other, so that if you've been there for four years, you have a bonus coming up every year. How do you deal with the situation? You're trying to hire new people, and they're not going to get a bonus for four years but all the people that have been there for a while are getting bonuses every year. It seems like it would make it difficult to hire good new people unless you have a plan for that.

MS. CASSEL: We only have five people in our company that have this plan, our president and the four reports. We wanted to reward strategic long-term performance. I actually don't know specifically what Human Resources would do if someone left. Value-added compensation hasn't been brought down to all the levels.

MR. DAVID A. RICCI: Regardless of how many people you've implemented now, it's quite an achievement. It's really the leading edge, and your staff is to be complimented on how far you've gone with it. Not to diminish your achievement, but some of your success is due somewhat to the structure of Lutheran Brotherhood as opposed to a standard stock structure.

I wanted to discuss a little about these adjustments you have made. I'm sure there was a lot of compromise that was involved in getting this implemented as a compensation measurement so that basically some of these, particularly the values passed on to the members, were done in recognition of value being produced, but didn't necessarily show up under distributable earnings.

Also, I was wondering how you would comment on the adjustments that were made to the nonmanagement variances, particularly the value of in-force and the assumptions. We all know, as actuaries, the only reason our assumptions change is because the performance changed. There's never

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

any problem with the assumptions in general, so it's really being nice to management. I was wondering if you felt that there is a disproportionate amount of that being sent to nonmanagement, or do you feel there's a good split there?

MS. CASSEL: Actually I think it's the other way. We give everything to management unless we can prove otherwise, so that's where the default falls. It's true that, as you get results, you do some retrospective thinking. You really don't know what's going to happen until it happens, so the goal is always to do the best and try to be very equitable.

MR. BENNETT: I'd like to comment on that for a second. From the perspective of a review, Milliman & Robertson has been retained by the Lutheran Brotherhood board to essentially keep management honest. One of our primary functions is to look at those assignments of value and given an opinion to the board on whether they are reasonable or not. I'd say over the last three years, that the variance that was usually assigned away from management tended to be mismodeling. As the modeling technology improved, as management learned how to use its system better, the management people found instances where they were either over or understating value because of a mismodeling. I would characterize most of them as being those types of assignments.

The management people have a rule for change assumptions such as mortality or an expense assumption. If, in fact, they can point to specific things that they've done -- that have improved underwriting or what they have done specifically to their dividend scale -- then they can change the assumption. Have they reflected it in their dividend scale or are they reflecting it in their pricing? Our experience in reviewing them has been, there isn't this sort of wish list, or yes, we're going to change our underwriting and we're going to get a big improvement, so we're going to start assuming better mortality. That hasn't happened yet.

MR. JOHN W. BRUMBACH: I have a couple of remarks directed to Wayne Stuenkel's presentation. First, as far as the Stern-Stewart method, you indicated that it's not prospective and does not involve present value or future result type calculations. That may be true, but it is highly dependent on the reserve basis, which is, in fact, prospective, and therefore subject to future

assumptions on the experience of the company and on *SFAS 60*-type products, that would be locked in at time of issue. I guess I would question how realistic the results might come out from year to year using GAAP for that basis. That's the first comment.

The second one has to do with lowering the cost of capital where you indicated that may be able to increase the debt within the company to lower such cost. I would think there's a trade-off there because, if a company has more debt, then there's more risk associated with the equity capital. Therefore, the equity capital should deserve a higher rate of return, so in combination, the composite cost of capital may not change all that much.

MR. STUENKEL: On the first question, we certainly recognize that GAAP income is not a perfect measure year by year. We can see in our pricing runs and our actual runs that the incidence of profit is not level. However, GAAP is the world that we live in. GAAP is the way that our stockholders measure us; GAAP is the way that security analysts look at us; GAAP is the real world. We decided to use a more real world, practical, understood measure of earnings rather than some more theoretically correct measure that would be not as well understood and that also requires significant additional effort to calculate. There is a trade-off, and we leaned toward simplicity and also tying in to what our stockholders are seeing on an annual basis.

On the cost of capital, that's kind of a fine balance. Different industries seem to have different levels of debt that seem to be tolerable. As we look at our peers in the stock life insurance industry, there are some that have no debt at all, and there are some like us that are in the 20-30% debt range as a part of total capital. It seems that given the kind of products that we write, given the kind of returns that we get, and given the certainty of returns on the products that we have, it works well for us to have a debt level in that range. It's acceptable to rating agencies. It may modestly increase the cost of equity to use debt capital.

We think that the cost of capital curve goes down as you get to that 20-30% level. Were you to go to 70% debt or 80% debt, not only would you not get ratings and probably be shut down by the regulators, but your equity holders would also require significantly increased returns on equity. In

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

theory, the total cost of capital would probably trend down for a while as the debt ratio increases, and then trend back up. That 20-30% range has worked out pretty well for most companies.

MR. ALLEN D. AFFLECK: I have a couple of questions for Renee. I'm intrigued with the value passed to members' adjustment, because I think it adds an additional dimension that we don't usually think of. Would I be right in assuming that if it's negative, you make that adjustment in the same direction?

MS. CASSEL: That is true.

MR. AFFLECK: The second question is related to who's responsible for changes in value. I wondered if you could maybe give us a couple of examples, particularly on the assumption changes. For example, if interest rates are just say 2% up or down from what they were assumed to be, is that something allocated as the responsibility of management or is that nonmanagement? Maybe you could talk about some of the other nonmanagement assumptions.

MS. CASSEL: We did make an assumption change, and we went through what should be management or nonmanagement. Because we introduced the plan on January 1, 1994, we determined that management should be responsible for issues from 1994 and later. We did a split. The impact on value that resulted from those changes, we split into pre-1994 issues versus 1994 and later issues, and assigned management responsibility for 1994 and later. Another example, is you can think of the total variance, actual minus expected, as equal to A minus E . The A minus that I referred to earlier is fully the responsibility of management. What do you add to that to get A minus E ? That's I minus E , which is nonmanagement.

You wonder what happens to your series fund returns, for example. If a compensation value goes up because you've done better than the market or better than index, that will impact your profit, too. That will effect earnings, not just the value you pass on, so to the extent that A minus I impacts profits, it goes to management, but what's left over of your A minus E then goes to nonmanagement.

1996 VALUATION ACTUARY SYMPOSIUM

MR. BENNETT: Another way of looking at that, Allen, is if you look at a mutual fund, for example. In a year that the company's investment performance beat the index, it passed the value on to members. But there will be future margins on that account value now. Out in the future, management gets credit for the profit-based margins on the increased account value.

MS. KAREN OLSEN MACDONALD: We've actually done quite a bit of work on value added, and we can't decide which method we like best. So we have both a GAAP measure and an economic value-based measure, which makes it interesting. One of the questions I would like Wayne's input on, that's related to the GAAP measure, is how he deals with the issue of capital gains and losses in terms of making an annual GAAP-style calculation. Do you attempt any smoothing? How do you deal with that problem?

MR. STUENKEL: To date, most of our management measures have been based on operating earnings. Our strategy has been, as a corporation to try to have net realized gains and losses be about zero in a year, so we haven't had to face the issue of capital gains. It would seem equitable to go and spread realized gains over a future period. I think we would do that if there were a time when we had material realized gains. That's only fair, because by taking a gain, you're taking future investment income and bringing it back to the present and taking it all at once. So it's only fair that, if the divisions are not going to get the investment income in the future, then today's realized gain should be spread over the future.

MR. DANIEL J. KUNESH: I thought all three of you did an excellent job in your presentations, and I want to commend you. Like John, I also have some problems with using GAAP as a measure of economic value for an insurance company. I think it works in many general purpose corporations, but insurance is based so heavily on present values and future values. GAAP has been affected by the history of SFAS 60 and what has happened in the last 20 years of interest rates. It seems like, in many situations, at least in my view, a substantial portion of your GAAP gain or loss is really variances, more than it is really GAAP gain or profit margins flowing from the business. Also, I think you have problems like unrealized capital gains. In some companies it will be a significant movement, and it seems like you're also doing it for external purposes more than internal purposes. I have not

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

really heard a major call for the investment community for EVA results. I think it's a great thing, but most companies that use statutory in my view have done it for internal measurement purposes -- kind of like in some compensation. Would you comment on that?

MR. STUENKEL: The points about GAAP income and the usefulness of GAAP income as a measure are well taken, and it really is that balancing act between introducing new measures versus using what is out there in the public.

To address the interest of outside parties in EVA, we sold two million shares of new common equity in May 1996 in a public offering. As we were doing the road show for the equity offering, Goldman-Sachs, our lead advisor, asked whether we were doing anything about EVA. When we said that we were, Goldman-Sachs thought that the topic was important enough to put a bullet point in the slides for the road show. Our EVA work seemed to be one of the best received things about the road show.

I think the perception of the financial community seemed to be that insurance companies are behind the curve in doing value-added type of analysis. The financial community looks positively on a company like Protective that is at least trying to do the work and trying to incent the management by doing that.

We also know from Stern-Stewart that it has been retained recently by several investment banks to train the investment bank people about EVA so that they can talk to management about EVA. I think there's a rising perception that well-managed companies are at least looking at increases in shareholder value. EVA is one way of looking at that.

MR. KUNESH: That's very interesting. In my experience with international companies, it's just the opposite, however. Generally it's a situation where a company wants to get financing from the U.S. or whatever, so GAAP does come into play. I am not aware of a situation where economic value is being measured using a GAAP indicator, but it's going to a statutory embedded values or value-added type concept, and it's being called for by the investment bankers themselves. So I guess it just depends on the situation and the investment banker.

1996 VALUATION ACTUARY SYMPOSIUM

I did have one question for Renee. The problem that I think has been pointed out with this, and it doesn't invalidate the process in my view, is the tremendous volatility that can be obtained in present values quite obviously, so that changes have to be watched extremely carefully because they can have a tremendous impact to leverage on results. What individuals are involved in this process of evaluation before there is a sign-off annually on assumption changes primarily? Do you get your results just for protection of senior management independently verified or reviewed by external, say your auditors or consultants or whatever?

MS. CASSEL: We do have them reviewed. It's helpful for us, and it's helpful for the board, too.

MR. BENNETT: Milliman & Robertson is one of the companies that does the reviewing of it. We make a separate presentation to the board on our opinion. The sign-off tends to be done by basically the five senior people reporting to the president. Again, we're involved in a review of why they've changed, and it has really been handled in the past, so they have to prove to us why they made those changes.

MS. CASSEL: We have a compensation committee that's part of the board and they approve it. But before it gets to that process, the chief financial officer (CFO) and the financial actuary, and financial reporting are heavily involved in that.

MR. ROBERT W. FIELD: The question is for Renee. What set of financials are you actually managing to do on a day-to-day basis, and do the rest of the staff other than these five people receive all these value-added calculations? Are they basically running their areas on the basis of those or on GAAP or on statutory?

MS. CASSEL: We use statutory. We will be using GAAP (prior to this we had modified GAAP), and we've been using value added. We discuss all three of them any time we make any presentation quarterly or annually to the board. We are working toward more of a value-added capital management. We've not done enough detailed work yet to get to that level, but that is where we're going. But everyone is so familiar with statutory and with GAAP, we will always have the three.

ECONOMIC SURPLUS, ECONOMIC VALUE, AND APPRAISAL VALUE

Then we'll try to make sure there's the consistency among them and the potential managing is going towards the value.

MR. TIMOTHY L. PATRIA: I'm wondering what the resource commitment is to calculate the economic value every year. In particular it sounds like, Renee, in your company, you have maybe more of a corporate commitment because you're actually using this for compensation levels. Not only the resource commitment, but also how is the work split between the business units, the profit centers and the corporate areas?

MS. CASSEL: In the past everything was driven out of financial management. We had a unit that did the modeling, ran all the production, and then would give the financial, or the value of information to me. Then we combined it in the corporate model numbers. What we've done now is move that individual down into pricing to get a better working relationship with pricing. Pricing tends to be more new business focused, and so we want to make people more aware of their impact on value as a result of in-force management, so they'll become more involved. We hope to be getting the pricing actuaries to provide us all of the value numbers that we will in turn aggregate and produce a report for, and it should be circular. Right now it has been mostly driven out of financial management.

MR. STUENKEL: From our company's view about resource commitment, we've been doing these return-on-capital calculations at the corporate level for a number of years. The way that we're talking about EVA is not going to be a significant expansion of what's already done. What I think may cause more effort, though, is that in the past, return-on-capital calculations have been interesting but not really used for anything. When we tie EVA into compensation, there will be a lot more interest in all the specifics and mechanics behind it, so I imagine the discussion process and the thought process behind it will significantly expand.

We do have actuaries in each of the business units right now, and they're not really concerned with return on capital because it doesn't directly affect them. When the managers' bonuses start getting hit or helped by EVA, I suspect they'll be putting pressure on those financial actuaries to understand EVA a lot more and help them to improve their EVA.

1996 VALUATION ACTUARY SYMPOSIUM

MR. RANDAL J. FREITAG: Wayne, we have to deal with the cost of capital. I guess it's easiest to think about in terms of acquisitions. We're purchasing long-term profit streams, and we're using this blended cost of capital often, which is a long-term equity rate mixed with a shorter-term liability rate. So we're coming up with cost of capital that is lower right now, but the debt portion is subject to fluctuation in the future. That doesn't come into the EVA cost-of-capital calculation.

MR. STUENKEL: For the purpose of EVA, it might be simpler to use a simplified method. Were we to introduce varying cost of capital year by year by having debt cost change or equity cost change, that would be a variance similar to what Renee is talking about -- EVA could go up or down based on that change in cost of capital. I think as we go forward, probably, we'll try to have as much stability in the cost to capital as we can. What we're emphasizing is increase in EVA. The cost of capital is a necessary component of that, but we don't want that to be the discussion. We want the discussion to be about how do we improve value to our stockholders, not about what is the theoretical actuarial cost of capital. We may end up with using a number that is theoretically defensible in that 11-12% range and say that's good enough until there are materially changing circumstances that would cause us to reassess that.