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FINANCIAL INTEGRATION OF THE PRICING PROCESS

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- o Involving financial and investment areas in the pricing process
- o Developing consistency between financial reporting pricing goals
- o Asset/liability management versus asset/liability matching
- o Tracking systems and repricing.

MS. PATRICIA L. GUINN: I would like to introduce our speakers. Phil Polkinghorn is manager of Tillinghast's Hartford Life Insurance practice, and Doug Kolsrud is Vice President and Actuary of Aegon USA. I am from Tillinghast's New York office.

Our topic is the financial integration of the pricing process. With the product revolution of the 1980s, the structure of the product development process underwent a lot of significant changes for most life insurance companies. Ratebooks quickly became a thing of the past. Products were developed one at a time, and the time frame for product development was shortened significantly. The cast of characters involved in product development also changed, particularly with the advent of interest sensitive products such as universal life (UL) and the single premium deferred annuity (SPDA). Product development became a team effort, involving representatives from marketing, actuarial, investment, compliance, and administration areas of the company to name a few.

The actuary's role in product development certainly included pricing -- as the actuary is the one in the company uniquely qualified to do this. Another by-product of the product revolution has been the expansion of the pricing function from a hubbub of activity at discrete moments in time (when a new product was under development) to a more continuous process of pricing and repricing the company's portfolio of products. The repricing function has become more critical as more and more companies' in-force business concentrates in products with moving parts (like credited interest rates), and significant policyholder options such as flexible premiums, preferred loans, withdrawal features, and bail-out features, etc.

In the latter half of the 1980s, the product revolution slowed down considerably, but its effects upon the industry will be with us for a long, long time. The markets that our industry operates in are much more sophisticated and financially aware than they were 10 or 15 years ago, and our products are subject to the competitive pressures that are more similar to a commodity-type market than what we were used to in the past. Today, the senior executives of a life insurance company have a whole different set of concerns than their predecessors 15 or 20 years ago.

PANEL DISCUSSION

It's been estimated that critical mass in the ordinary life business has increased from around \$5 million of new annual premium as recently as 15 years ago to about \$50 million today. This far outstrips the rate of inflation. It is a sign of the new environment in which the industry must operate. The number of life insurance companies may not have appreciably decreased, but the ownership of those companies certainly has been concentrated in fewer hands. One of the driving forces behind this consolidation has been the need to reach critical mass and efficiencies of scale.

Capital has become an increasingly scarce resource for our industry, or at the very least, the cost of capital has increased. And senior management today is much more focused on profitability and profitable growth. Focusing attention on sales and market share is no longer enough.

Many companies have gone through a considerable amount of pain in their efforts to move to a profit-driven focus. One of the culprits responsible for this pain was the traditional organizational structure of a life insurance company wherein the financial reporting function, the pricing function and product development had very little to do with one another.

One of the first steps to implement a successful profit-driven focus is the recognition that the pricing, investment and financial functions must be linked. The next step is to develop meaningful financial information for senior management, who needs financial reports that tell the story of what is really going on with the business today.

In the balance of our presentations, Mr. Polkinghorn and Mr. Kolsrud will address how the link between pricing and financial reporting might be forged. Mr. Polkinghorn's presentation will be focused towards companies that are GAAP oriented, and Mr. Kolsrud will talk about a different approach, using value-based financial information to report to senior management on the state of the business. Finally, I'll finish up with some comments on management applications of asset/liability management.

MR. PHILIP K. POLKINGHORN: In my work we commonly see that companies are in situations where the pricing people are being told to start pricing on the basis that they report on, particularly in some of our mutual company clients that perhaps more recently have gone to GAAP or adjusted earnings reporting. Commonly management has mandated a 15% ROE or a 13% ROE, whatever the number is, and it wants that for the whole company. The product managers go away, and they price their piece of the total pie. The individual life people go away and price their product, and perhaps there's a payroll deduction unit, and those people price theirs. Perhaps there's an annuity division. And at the end of the day the company misses its target. At this point, generally, fingers start to point because people have to explain why they missed the target, and various excuses are made. They said they didn't price right. They didn't include target surplus, and management wanted a return on the total equity of the company. Perhaps the various groups used expenses that were different from the ones that corporate gave them. The product managers might argue that they had too heavy of an allocation of surplus or expenses. There may be some argument that the financial reporting mechanics don't recognize the value of new business. Earnings were depressed because of that. But the problem is at this point we have too many variables. We can't

FINANCIAL INTEGRATION OF THE PRICING PROCESS

tell if it's the pricing methodology, the experience that has developed over time, or the accounting system that caused us to miss our goal.

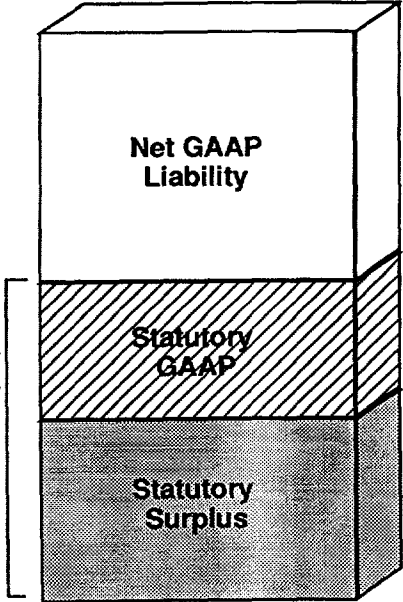
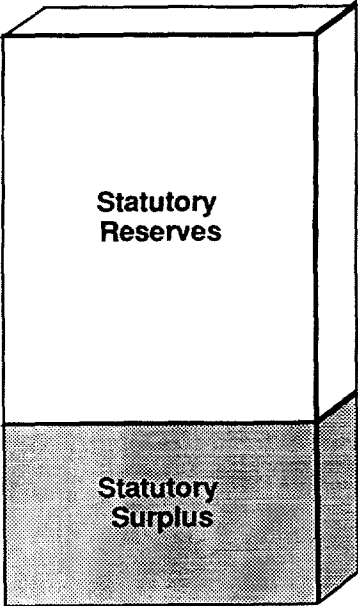
Therefore, for companies that are reporting on a GAAP or a near-GAAP basis, the next step is to incorporate GAAP projections in the pricing process. This sounds relatively simple. But let me begin with some definitions that I'm using for projecting GAAP earnings and ROE in the future examples. In order to project the GAAP return on equity for an individual product, we have to make the typical GAAP earnings adjustments to arrive at GAAP earnings from statutory earnings for that product. Next is to allocate the GAAP equity to the individual product line. Then together we project the earnings and the equity, and we can calculate a GAAP ROE.

Most of us are probably familiar with how to get to GAAP earnings and make the adjustments. However, one question that has been less clear, as we've consulted with companies, is how to allocate equity to product line; if you look at a company in the aggregate, you have statutory reserves and statutory surplus, which equal your total real assets, and those should be equal to your net GAAP liability, plus the difference between statutory and GAAP net liabilities, plus the same statutory surplus piece. And obviously the difference between total assets and net GAAP liabilities is equal to equity or net worth on a GAAP basis. The GAAP equity then is equal to the sum of the difference between statutory liabilities and net GAAP liabilities, plus your statutory surplus (Chart 1). It is fairly easy to allocate the differences between statutory reserves and net GAAP reserves to products because we know what the statutory reserve and the net GAAP liability are for a product. In terms of allocating the statutory surplus, you should do it on the same basis that you would for statutory pricing. Using your typical target surplus formula, if a product line brings about a need for target surplus, that surplus ought to be allocated to that product line whether you are pricing on a statutory or a GAAP basis. For the more literal-minded the way I'm defining GAAP equity in these future examples is that it is equal to the statutory reserve, plus target surplus, less the net GAAP liability. It is assets less liabilities allocated to a product line.

The net GAAP liability used to be pretty easy to define. But with some of the newer products we have some more parts. Typically, we think of it in the past as the difference between the benefit reserve and the outstanding deferred acquisition cost. With the advent of FAS 97 type products, we have to reflect any unearned revenue liabilities for front-end loads or policyholder bonuses and the deferred tax liability because it is important to price on an after-tax basis. That is one of the other reasons you might miss in practice the actual return on equity that you were shooting for.

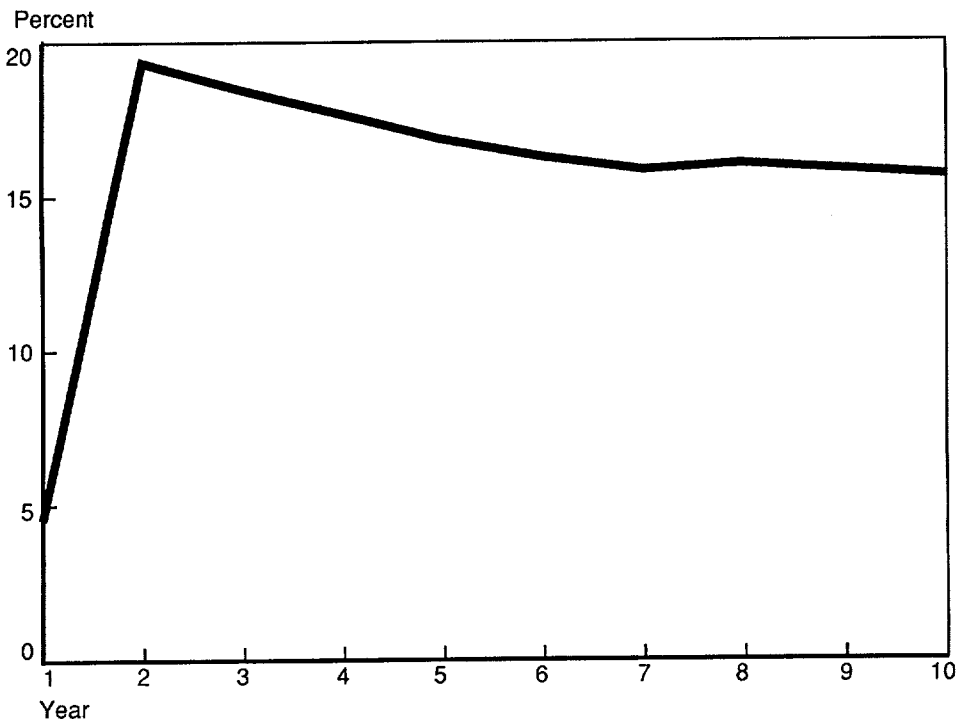
At this point, we know how to make the earnings adjustments. We know how to allocate equity to product line. Let us take a couple of case studies and see what happens when we project GAAP return on equity for an individual product. Consider a case study for an SPDA. Chart 2 shows on a year-by-year basis the GAAP return on equity. You notice that the GAAP return is quite low in the first year, and part of the reason for this is that we had some acquisition expenses that were not deferrable. And then it bounces around a little bit. It starts out a little bit high and then grades off. This is a

GAAP EQUITY



PANEL DISCUSSION
CHART 1

**GAAP ROE – SPDA
Case Study**



FINANCIAL INTEGRATION OF THE PRICING PROCESS
CHART 2

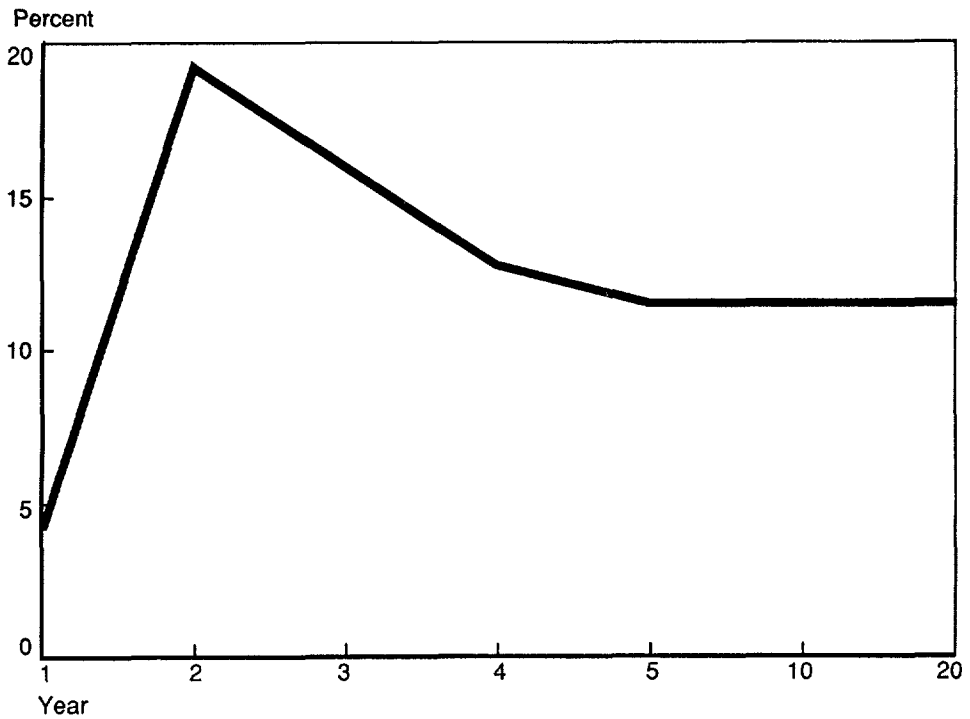
PANEL DISCUSSION

backloaded product. It may have surrender charges that are a tiny bit higher than the typical. But you can see that if your goal is a 15% ROE, it's still not clear whether or not you have met your goal.

Take another example. In Chart 3, for a backloaded UL product, you notice again it's not unique to the SPDA. In fact, in work we've done, when you do GAAP pricing on an SPDA, that's probably a product where it comes as close to being a level ROE as any. This is a backloaded UL. It's fairly vanilla, and you notice that the GAAP ROEs start out low, jump up quite high for years two through four, and grade down. Part of this is the recognition of the surrender charge in earnings under FAS 97. But, if you're looking at this as a stream of numbers or graphically and you have a mandate from management to make a 12% or 13% ROE, you have something that's a little bit difficult to deal with. You can look at this and say, I like the pattern. And if you can do that, you're done. But, if not, you've still got a tough time making a pricing decision. One of the things that is important to point out is that GAAP results are relatively insensitive to new business. What that means is we may be doing some things in pricing right now that may have a severe impact on future management. This UL product was a fairly vanilla product, but you'll notice that the GAAP ROE for a year's issue is slowly declining and reaches a level of about 11.9%. This product had a level assumed investment margin. Today, companies are pricing products that, after a certain point in the later policy years, if you think of them on a FAS 97 gross profit basis, they're producing next to no gross profit. If you could envision a product where the spread was zero, the mortality gain was zero, and the expense gain was zero, after a specified number of years, then that product on a GAAP basis is going to produce a GAAP ROE that's pretty much equal to the rate of return on equity after tax, which would be very, very low, say 6%. In an example that wouldn't be too outlandish given today's products, we could see a product that perhaps met management's goal for several years and then trailed down to a 6% rate of return later on. If any of you are potential members of future top management, envision yourself in that situation. You have this huge block of in-force business that has been built up over the past 10-15 years that has given you a GAAP ROE of 6%, and the marketplace you are in for capital or growth demands, say, 12.5%. There is practically nothing you can do in new business pricing to achieve that goal. The temptation will be great to go after in-force business and reprice it on a basis much different than it was sold.

We've seen that, when we project the GAAP ROEs out into the future, that they aren't level. Why aren't they level? We mentioned a little bit that we had nondeferrable expenses. We have expenses that we've allocated to the acquisition function that we are not allowed to defer. Nonetheless, they come through to the bottom line. There are some small impacts due to taxation differences between GAAP and actual. For example, with FAS 97 products there is a deviation due to the fact that the discount rate is the credited rate. And probably the most important reason that the GAAP earnings won't emerge as the level ROE is that they were never meant to. GAAP was designed to allocate earnings as a percentage of revenue: premium revenue for FAS 60 products, as a percentage of gross profits for FAS 97 products, full release from risk for other products. GAAP was never designed to have earnings emerge in relationship to equity. And given that, it would be mere coincidence if it did for a particular product.

GAAP ROE CASE STUDY – UL
\$500,000 Premium Sold



FINANCIAL INTEGRATION OF THE PRICING PROCESS
CHART 3

PANEL DISCUSSION

So, how do you make a pricing decision? You have several options. Based on the surveys we've done we've discovered that many people today, even those who report on a GAAP basis, are pricing using a capital allocation decision tool. They're pricing for a return on statutory surplus, statutory internal rate of return (IRR) with target surplus. And you can do that and hope that there is a correlation between products with a high statutory rate of return after target surplus and products with a high GAAP ROE. The second way you can do that is to develop some GAAP indices that would help you as decision tools -- numbers that would summarize those year-by-year GAAP ROEs that we looked at -- and help you make a meaningful decision about product alternatives that you are going to study no further and those that you're going to focus on. A third method for pricing might be to develop a total company GAAP model so that you're looking at the impact of pricing decisions on next year's results. And, finally, you can adjust internal reporting. Depending on what you use your reporting for, you could develop things that are a bit more meaningful, and this gets into what's more important to you as a company. Is it next year's GAAP reported income or is it how efficiently you used your capital? And there's going to be a blend here between how you make decisions then based upon capital management techniques and GAAP pricing.

But I would like to take you through some GAAP indices that we have seen that helped people at least narrow the alternative on a GAAP basis. One method is to look at what would happen if production were level on a particular product line? We know that for a years' issues, the ROEs pop around a bit. And if production were level, then the ROE in a given year would just be the sum of the earnings divided by the sum of the equity for that period of time.

If production were level, the ultimate GAAP return would be:

$$ROE = \frac{\text{Sum of Earnings}}{\text{Sum of Equity}}$$

This is something that you don't need to do a new business model for. This is true by definition. If you do a single GAAP profit test, add up the earnings for five years, and add up the equity projected for five years. Dividing the earnings by equity will be the GAAP ROE that you would get in the fifth year of a new business model with level production. If we look at that for our case study (Table 1), we can see that the SPDA has a GAAP ROE that's going to grow with advancing duration, and so does the UL.

TABLE 1
GAAP ROE -- Level Production

Year	SPDA	UL
1	3.6%	3.6%
2	11.1	11.9
3	13.6	13.4
5	15.1	13.0
10	15.0	12.1

FINANCIAL INTEGRATION OF THE PRICING PROCESS

But the SPDA is going to grow to a higher ultimate level. Depending on what period you're targeting in on, you might say that one of these was a better product alternative than the other. Just for your reference point, the SPDA has a statutory rate of return after target surplus and tax of 14.4%. The UL has one of 12.9%. You can see that for relatively short periods of time, if your emphasis is on how are GAAP earnings going to look for the next couple of years and really concerned with that more than the long-term capital management process, you might say that the UL is a little bit better product because it throws off better early GAAP earnings. But over the long haul, the SPDA will show better GAAP earnings and from a capital management point of view would be deemed a better product.

Production rarely is level. But another rule of thumb you can use and incorporate into a single GAAP profit test without running a new business model is, if production were to increase at a given rate per year, then the GAAP ROE at some point in time, would be the present value at that growth rate of GAAP earnings divided by the present value of the projected equity.

If production increased X% a year, the ultimate GAAP return would be:

$$ROE = \frac{PV \text{ at } X\% (\text{Earnings})}{PV \text{ at } X\% (\text{Equity})}$$

Both of these are things that you can incorporate into a GAAP profit test to get a picture of what the return on equity might be at various points in time under given sales scenarios without going to too much extra work. And if we look at what happens to our case study under a growth scenario, the UL looks more favorable than the SPDA for just a little bit longer (Table 2).

TABLE 2
GAAP ROE -- Production Grows at 10%

Year	SPDA	UL
1	3.6%	3.6%
2	10.7	11.5
3	13.1	13.1
5	14.6	12.8
10	14.8	12.2

We've also seen companies look at a hybrid approach that takes features of both statutory results and GAAP results. This hybrid approach is based on the premise that management's goal is to maximize company performance during its tenure. And for a shareholder company performance can be defined in terms of distributable earnings and the increase in GAAP book value. For a mutual company it wouldn't be distributable earnings but earnings that the company can then invest for growth. I think everybody can agree with the first premise. If you don't like the second premise, then you won't like the index. But we've turned to the management horizon index, and it's equal to the return on distributable earnings over the horizon and the GAAP equity at the end of the

PANEL DISCUSSION

horizon. In the aggregate, management would ask, what did you have in terms of dividends, and what do you have in terms of book value? On a product pricing basis you would have a loss in the first year and negative distributable earnings, followed by some gains during the horizon, and then you would pop in a big number, which is the GAAP equity created at the end of the period. A rate of return is calculated based upon that stream of numbers. This management horizon index reflects not only what has happened to the GAAP book value due to pricing decisions, but also what you have created in terms of true distributable earnings over a given horizon. Over a relatively short horizon, the UL product looks much better than the SPDA (Table 3).

TABLE 3

Management Horizon Index

Year	SPDA	UL
3	12.3%	15.6%
5	13.9	14.2
10	14.4	13.0
Life	14.4	12.9

If your horizon was only three years, you would go with the UL, and this is partly due to the fact that product builds GAAP equity rather quickly. You'll notice that over the lifetime of the product, the management horizon index matches the figures that I told you these products produced for a statutory rate of return after tax and target surplus. A capital management process would say the SPDA is a better product than the UL. It produces a better rate of return and gives us a better return on our capital. Many of the GAAP indices would say that the UL product is a better product if you have a relatively short horizon, say three to five years. You can see that all of these indices trend somewhat towards the statutory rate of return after tax and target surplus if you take them out long enough. This makes a certain amount of sense since the accounting model should not be able to, over the long term, create earnings. Earnings are going to be what they are, and it is just a question of how you report them over time.

At this point, we are left with some tools that might help us. We can use GAAP indices. If we have a relatively short-term focus, perhaps we're going to set the period at three years and look at what the GAAP ROE is for a product line that has three years' worth of production. Perhaps we're going to use the management horizon index to help us weed out products. At that point, we at least have some reflection in our pricing process that GAAP results are important. We can't base this pricing totally on GAAP because the GAAP ROE bounces around by year. But we can develop decision tools to help us zero in on product alternatives. For example, you might say that our GAAP goal is to achieve a 12% ROE. So, we won't look at products that have a GAAP level production index less than that. And within that subset we want the statutory rate of return to be at least some level as well. You would have a dual profit measure partly based on GAAP and partly based on statutory. We also mentioned total company GAAP models. Those could be very useful in terms of determining the impact that your pricing decisions would have on next year's GAAP results. As we've seen from some of the case studies and some of the graphs, if you're told to go out and price for a certain GAAP ROE -- this

FINANCIAL INTEGRATION OF THE PRICING PROCESS

year's pricing decision -- there's very little you can do to ensure that result. But you can take a look at what will happen as a result of your pricing decision and measure yourself against the plan.

We've made some pricing decisions. We've included all the expenses we think are important. We've made best estimate assumptions. And we want to know how we're doing, but we don't want some anomalies of the accounting system to throw us off. Well, we can adjust reporting for internal reports. Obviously for things published externally they have to meet GAAP standards. The mutual company task force on demutualization looked at a level ROE method, and that's just another GAAP method where it is designed that, if assumptions match experience, the adjusted earnings will emerge as a level return on equity for each generation of business. The business that you sell in 1990 might have a level ROE of 13.9%. If experience matches the assumption, that block of business will produce a GAAP earning of 13.9% of equity each and every year. Next year's sales, due to some reason, perhaps higher expenses, may have only a 12% ROE, and that little block will produce a layer that has 12. But in the aggregate for the company you can take a look at your ROE reported against what was priced for. If there are differences, you know that it's due to real world things that are happening in terms of claims, business environment, and interest environment. It is not due to the accounting system.

Additionally, there's the value-added method which I'll discuss very briefly since that is the topic of Mr. Kolsrud's talk. Whenever you get into a discussion of adjusting your reporting internally, it is important to recognize that GAAP merely allocates the total earnings on a block of business. The total earnings on a block of business are what they are, and GAAP just chops them up and allows you to report this much this year, this much next year. For different product lines GAAP does that in a different manner. What we're talking about is changing our reporting to suit our own desires regarding how we want to report numbers. A lot of work and industry negotiation has gone into where we are with GAAP today. For FAS 60 products we're just allocating the profits over premiums and release from risk. For FAS 97 products it is another definition of revenue. It is the gross profit. And what we have talked about was the level ROE method, which is a modified GAAP method that just defines the pattern of earnings so that they do come out as a level percentage of equity if assumptions are met.

As I mentioned, the level ROE method does have earnings that come out as a level percentage of equity. However, they may be higher or lower than your target. One cosmetic advantage to this method is that, if your target is 13% and you are only hitting 11%, at least you are reporting positive earnings. You are short of your goal, but you are reporting positive earnings. An interesting thing about this method is that, if assumptions are met, the level ROE that does come out is the statutory rate of return on the target surplus. There is a good link with your capital management process that most companies use in pricing.

The value-added method that Mr. Kolsrud is going to talk about is based upon appraisal technique and measures the change in values at a given hurdle rate. This is consistent with the capital management process that we all seem to follow in pricing as well. The focus is on distributable earnings and shareholder value. One of the nice things about it

PANEL DISCUSSION

is that, if you look at a projection of what your value is at the beginning of the year and how it will develop to the end, you can think of it as two things: free surplus plus the value of in-force business. In Chart 4, on the left-hand side you've got free surplus. Free surplus plus the value of in-force business are the two key components of value added. And you can look at how they're anticipated to change over a year.

We're going to get some distributable earnings from that in-force business in the right-hand column, and we're going to have a negative hit to free surplus due to first-year strain on the new business, the current sales. But on the value of in-force business we'll get a plus if that business is profitable at the hurdle rate. And we'll end up with free surplus at the end of the year. The value of in-force will grow due to the fact that all those future earnings that we've projected last year at the end of the year will be one year closer. You get growth at the hurdle rate. You'll have a deduction due to the distributable earnings for the current year, and, we hope, have an add-on due to the present value of future profits on the business you sold this year after the strain has been incurred and have the value of in-force business at the end of the year. It's fairly easy to project what will happen if assumptions and sales targets are met from the beginning to the end of the year. You might think of this as two things. The free surplus is a cash management account and the value of in-force business is the bond account. The bond pays its coupons into the cash management account and that's the distributable earnings from in-force business. The cash management account writes a check for first-year strain and buys more bonds, which get more coupons. It is very analogous to that type of a flow. That value-added has been used by a small number of companies in reporting their internal results. It seems to be used heavily by foreign companies not constrained to U.S. GAAP. The techniques are fairly widely accepted because those types of techniques are what are used by the financiers of leveraged buyouts and in purchase situations. The reason is that you can't spend or sell GAAP earnings. The focus here is on distributable earnings. The advantages are that it gives you a long-term focus. If there are changes in experience in a given year, it measures the long-term impact on them rather than this year's impact.

Finally, in terms of evaluating the different options that you have available in this linking between pricing and financial reporting, it is important that the performance measurement system meets several criteria. It is very advantageous if there's a common denominator for all lines of business so that when you're comparing one line of business to the other and discussing performance, you're using the same measure. And we know sometimes this doesn't happen in companies. The pension area likes to look at growth in assets. Another area likes to look at something else. If we look at the value added to the organization, we look at a consistent measure for all lines. We get a little bit closer with GAAP, but we still have some differences because some products report GAAP earnings as a percent of premium, others as a percent of gross profit, and others as full release from risk. It should be consistent with corporate pricing goals. There's two ways to go at this. One is to make your pricing consistent with your reporting. The other is to make your reporting consistent with your pricing. We hope the method is simple in concept and easily understood. Value-added and level ROE probably are. How much value did we add to the organization? And based on appraisal techniques I think people understand that concept. The method also should isolate the results controlled by management and have some relationship to the intrinsic value of the organization.

FINANCIAL INTEGRATION OF THE PRICING PROCESS

CHART 4

Change in Shareholder Value
Value Added

Beginning of Year	Free Surplus	Value of In-Force Business
"Interest"	+ Net investment income on free surplus	+ Hurdle rate x value of in-force business
In-force business	+ Distributable earnings	- Distributable earnings
Current sales	- First-year strain	+ Present value of future distributable earnings
End of year	= Free surplus	= Value of in-force business

PANEL DISCUSSION

To summarize, what solutions do you have in this challenge of linking up pricing and financial reporting? I would say you have two. One is a set of partial links. You could price on a statutory basis using the typical capital management techniques that have become so important to the industry over the past few years and just look at the GAAP projections and say, do they look reasonable? Is this a pattern I can live with? You can price using the GAAP indices we've discussed or you can go to the trouble of building a total company GAAP model and see what this year's pricing decisions were and what their impact will be on next year's results. And, finally, the complete link with the capital management process would be either the level ROE or the value-added method. With both, if you don't meet your goal, you know it's not the accounting system, but it's something real in your business. And with that I'd like to turn it over to Mr. Kolsrud, who's going to go into the value-added system in considerably more detail.

MR. DOUGLAS C. KOLSRUD: I want to talk about what we're doing at Aegon USA in the area of value added. Over the last few years we have implemented value added at our company, and we're now completing the second year of the cycle. We've learned quite a bit, made quite a few mistakes, and we would like to share some of our knowledge to help you to understand the value-added system.

First of all, I thought it would be somewhat informative to tell you about who we are and why we chose to use value added as a way to integrate financial reporting into pricing. Aegon USA is a subsidiary of a Dutch holding company, Aegon NV. We make up a sizable portion of the total for the worldwide organization, although we're not as big as the Netherlands operation. Some of the other places where Aegon NV writes business is in the European countries, the U.K., Spain, Greece, and Belgium and they also have a company in the Caribbean.

Aegon USA is an insurance holding company, and I work in the corporate actuarial department. We are a very decentralized organization. We have business units located throughout the United States, each being fairly autonomous. Most of the units have their own administrative or management teams located on those sites. They have their own actuaries, accountants, lawyers, data processing and marketing staffs. They are almost like self-contained companies. And, it creates a lot of challenges at the corporate level of trying to understand what everybody is doing and trying to put everybody on a level playing field.

Why have we at Aegon USA chosen to use value added as one of our primary management information tools? One reason is because we are so decentralized that it is important for us at the corporate level to have good management information. It is really our link to the business units in trying to understand what they're doing. Likewise, it is important to communicate that type of information to our parent company because to the management people there we are a business unit. They would also like to be able to monitor us and understand what we're doing in an organized manner.

We used GAAP ROE, which Mr. Polkinghorn covered in great detail, for about five or six years. Under the GAAP ROE approach, we discovered some of the problems that Mr. Polkinghorn talked about (e.g., you really don't have a level return since there is some strain incurred up front). So we felt like we wanted some mechanism that would

FINANCIAL INTEGRATION OF THE PRICING PROCESS

better measure management's performance than what we were getting from GAAP ROE. We wanted a system that would be easily understood by the parent company because we were going to use it as a primary communication tool with them, and we wanted something that was acceptable to them. Value added is probably more widely accepted in Europe than it is the U.S. There are companies in the U.K. that provide supplemental information disclosing embedded value in their financial reports. We report to our parent on what we call a DAP basis or a Dutch Accounting Principle basis. In general, that is a statutory base with some GAAP overlaps. But being a fairly fast-growing company using quite a bit of surplus, we were not showing what we thought were good returns mainly because of some of the problems of statutory accounting. So the more we grew, the worse we looked. Compare that to the Netherlands operation, which has been around for many years and is fairly stable, they're showing very good DAP earnings like we would on a statutory basis.

Aegon NV is pretty familiar with value-added concepts just because it has done quite a bit of acquisition activity in the last 10 years. It has made three major acquisitions in the United States. So each time it went through an acquisition it had an actuarial appraisal prepared. Rather than throwing away the information used in the appraisal, Aegon NV thought it would be good to make use of the information. In addition, the concept provided a basis for a long-term incentive compensation program. And so what Aegon NV really wants us to do is focus on increasing the company's investment or the value that it has here in the United States. By the way, the U.S. operations really were the guinea pigs of implementing value-added, and our parent company is now in the process of implementing it in the Netherlands and in their other subsidiaries.

Another problem we have is our diverse business units. Not only are they located all over the country, but also they are in many different markets. We consider ourselves as a collection of niche players. We write SPDAs, UL, traditional life, home service business, credit life, and group health. It goes on and on and on. And so one of the points that Phil Polkinghorn pointed out was that it is nice to have some system where you can look at everybody on a common basis or a level playing field. And again, because we're decentralized, we need to have good management information.

We use internal rate of return or the Anderson Method as a primary profit objective at our company. Value-added is very consistent with that. It rewards you in the year that you write the business for meeting your internal rate of return objectives and it penalizes you for not doing so. That is a big bonus in using value-added as a management information tool. Value-added is a forward-looking type system as opposed to GAAP and statutory which are more backward-looking type systems. In GAAP, until FAS 97 came along, you were locked into your assumptions until you basically had loss recognition problems. Even though you may not have priced at a level in the past to meet your objectives, you continue to pay for those sins in the future through your financial reporting. A manager who would take over a business unit may be paying for problems that were caused prior to his arrival and that are beyond his control. So you allow the managers to have an escape hatch because they can always blame their problems on past sins.

PANEL DISCUSSION

Value-added rewards management for today's actions. In theory, every decision that you make on a pricing basis impacts this year's return, and it is forgiven at that point in time, and you start fresh the next year. The flip side of that is that it also punishes you for inadequate return, but that's a good reason for including value-added.

We need to get into a few definitions. Normally, when you do an actuarial appraisal, you define value as the sum of three items: adjusted book value, present value of future profits on in-force business, which we call net present value, and goodwill. The major portion of that would be the present value of future profits on future business. Some other intangible items might be included, too.

Aegon has chosen to ignore the goodwill term. It takes a lot of subjectivity out of trying to figure out what type of business you're going to write in the future. We have a hard time getting some of our units to project business for next year. It would be even more difficult trying to get them to measure it for five or ten years, trying to understand what business you're going to write, what products you're going to be in and what are the profit margins going to be on that? This introduces another dimension of complexity to the project that we are not ready to tackle. There may be some exceptions though, where we may need to consider making some adjustment for goodwill. For instance, if we made an acquisition, and we paid for some goodwill in the acquisition, we'll need to consider how to handle that type of transaction. Because we've paid the money to the seller, it would decrease our value unless we did something in the area of setting up some goodwill. We have to actually address that problem next year since we bought a major block of home service business from Washington National in the first quarter of this year.

Next, I would like to talk about adjusted book value at the Aegon USA level. At the business unit or the divisional level, we use a target surplus approach. I will talk more about that as we go along. The foundation and the biggest number in the adjusted book value, and the easiest one to get to, normally, is statutory capital and surplus. Since we have many statutory companies within the group, we have to make sure we get the proper eliminations made so we're not double counting. But that's a fairly easy number to get to. We have some noninsurance companies in which we use the DAP book value, the primary one being a leasing company. That book value is very similar to GAAP, and my primary focus will be more on the statutory side, because that is the bulk of our business. And then we make adjustments which comprise most of the work. You have some flexibility because this is a management information system for internal use. We set the rules as we go along, and we do what makes sense. Since this is our second year, we think we're getting most of the adjustments identified. We are still coming up with new adjustments that we could set up. The primary adjustments and the most obvious ones are we add back the mandatory securities valuation reserve and reinsurance on unauthorized companies. We reestablish some not-admitted assets like the agents' debit balances at their realizable value. We set up federal income tax loss carry-forwards, and we mark some of our real estate assets to market.

Where the majority of the effort and where the actuaries spend their time is computing the net present value, the present value of future after-tax gain from operations. It's a little bit different from what Mr. Polkinghorn talked about. He defined net present

FINANCIAL INTEGRATION OF THE PRICING PROCESS

value as the present value of future distributable earnings. In reality we think he is right. Since we're still trying to crawl before we walk, we have some practical problems of trying to implement that into our system. But I think our long-term goal, and probably a near-term goal, is to start including target surplus in our value-added calculations. Right now we include target surplus in our adjusted book value. Since we include target surplus in our pricing objective, we do have a built-in inconsistency in our system which will be rectified in the near future.

We have chosen to use 12% as our hurdle rate. We didn't really come up with that. It was given to us by our parent. Presumably, it represents some premium over the Aegon NV cost of capital so that the company is making a spread on its investment. It is a fairly typical, middle-of-the-road type number, though. In order to calculate the net present value, you need a model, and you can choose to buy one or build one. There are plenty on the market. We bought one for our life insurance and our annuity business, whereas for our health credit business, we built a model. For some of the minor blocks of business, you can use something as simple as a spreadsheet technique or a back of an envelope approach. Anyway, for any type of modeling, you need to model the liabilities, or price the liabilities on a current basis. But what I really want to talk about is modeling the asset side of the equation. We have a fairly significant block of SPDAs, and this past year we have tried to model the assets rather than using the traditional actuarial approach of starting at 10% and grading down to 8% over 20 years or something like that. We've actually built into our value-added approach stochastic modeling where we project our actual asset, using 120 interest rate scenarios. We then take the mean of all 120, and use that as the value for the business. That has been a tough process. For one thing, the value dropped quite a bit, and we spent a lot of time trying to figure out why the value dropped. We had some data problems which I'm sure, if your investment system is anything like ours, you would run into also. But finally we have gotten to a level where we feel like the number is pretty good although we've still had a decrease in value. I think intuitively it probably makes sense because in a stochastic environment you're pricing options that policyholders and asset holders can take against you. You are pricing the effect on profits, of rising interest rates, and the resulting disintermediation as your interest rates lag behind the competition. We found that some of our traditional pricing approaches have been a bit on the aggressive side.

Once you have a value, then you can calculate value-added, and although it's a fairly simple concept, it's a little more complex than just taking the difference between two values. It really is the difference between two values, but you've got to adjust for capital contribution. At the Aegon USA level we treat both capital and debt from our parent as capital contribution, and then any dividends or interest payments as capital out, so that we're neutral as to the type of funding we get from our parent. But it makes sense that you need to back that out because if you get \$100 from your parent, then it's obviously going to increase your value, but you didn't really do anything to earn that. You really want to take that out when you are calculating a value-added for any particular period. Likewise, if you are providing a dividend to the parent, you want to get credit for it. On a divisional level, we have the same concept in that we contribute capital to our divisions to fund both their statutory strain and the target surplus that they need. Then they dividend out anything that they don't need. So again, we calculate their value-added, adjusting it for capital in and out.

PANEL DISCUSSION

Now that we have value-added and value, we can divide the two and come up with a return. We call it the return on investment where the value is really time-adjusted for capital flows throughout the year. If this particular number is greater than your hurdle rate or, in our instance, 12%, then you've done a good job. If it's less than 12%, you've done a bad job. That is the most basic way to interpret it. You've got to be somewhat careful because it can be misleading if you have a rapidly growing block of business since you have no value at the beginning of the year for new business. And if you're putting on business with positive value, you get an infinite return from the new business, and you can have your ratio explode.

The value-added definition that I am going to discuss is similar to Mr. Polkinghorn's (Chart 5). What this defines is the recursive formula to get from the beginning of the year value to the end of the year value. I want to look at it a little bit differently and focus on two pieces, and that is the third line down, which is the variance on existing business, and the fourth line down, which is the value of new business. So, on existing business we take the actual earnings that we received on that business, both above the line and below the line. We match that against our expected earnings that our models are generating and calculate variances. We do this for a couple of reasons. The primary reason is that it helps you validate your model. The first time through you will spend most of your time finding out that your model is not very good. You've either modeled it too simplistically; you've got data entry errors; you've made bad assumptions; or a number of things. But after you work through that, then this really should be telling you how well you are doing against what you're expecting in the current year. And so we spend a lot of time analyzing this, and it's a primary management tool that we use to analyze earnings. We take the variance and analyze the variance by source. It is not the traditional gains by source that you might do on a statutory basis. But we really try to identify what we call rate variances and volume variances.

Let me give you an example for group health business. Your actual premium that you collected in the year was \$100, and your expected premium that your model thought you were going to get was \$150. For some reason, either lapses, rate increases or a combination of reasons, you didn't get the premium that you expected. In both cases let's say that your loss ratio was 50%. So in the actual case you would have had \$50 worth of losses or claims. On an expected basis you would have had \$75. You had \$25 less of claims than what you expected. But it wasn't because you had better claim experience. It was because you had more premium to pay more claims. And so in that case we would say there is no claim variance or rate variance. We would say that's a volume variance. And so we spend a lot of attention looking at these rate variances. We've done some simplifying to not make these seven equations and seven unknowns, but we try to simplify the process and really look at each rate variance, claims, interest rate spreads, expenses, commissions and so forth.

Then an important number that really ties this whole thing to the pricing process is, what's your value of new business? We compare the surplus strain or the investment that we make in that business with the present value of future profits on that business. If you price for an internal rate of return of your hurdle rate, or 12% in our case, the net value should be zero at issue. As you're putting business on the books at your desired hurdle rate, you are neither adding value nor subtracting from value, but you're doing

FINANCIAL INTEGRATION OF THE PRICING PROCESS

CHART 5

DEFINITION OF VALUE-ADDED

Beginning of Year	ABV	NPV	Value
Return	+ Net investment income	+ 12% x NPV	+ Return
Existing business	+ Actual earnings	- Expected earnings	+ Variance
New business	- Surplus strain	+ NPV	= Value of NB
Capital in/out	+ Capital in/out		+ Capital in/out
End of year	= ABV	= NPV	= Value

PANEL DISCUSSION

exactly what you expected. Then you'll earn 12% thereafter if you can achieve your assumption objectives. What we would like to do is have people put on positive value which means that they're pricing at a rate in excess of our hurdle rate of 12%. Negative value means that they're pricing less than 12% and that we need to put in some sort of a game plan or mechanism to get that lower rate up to 12%. But anyway, all the value of new business, all the problems that you might have in pricing your products, or the lack of achieving your returns is going to be brought into the current year. It all hits you right now. And so each year that you price a product to achieve an inadequate return you're going to be penalized for it in that year. We think that's one of the great strengths of value-added.

I would like to talk about some of the potential problem areas. First of all, value-added requires a fairly significant resource commitment. If you don't have any models in place, it's going to take some time to build those models. Once you get that in place, then it becomes less of a strain on resources. It is a fairly labor-intensive process. I would argue any good management information system should involve some labor. The commitment that we've made is certainly worthwhile. It is important that our board and our senior management are very supportive of the project. One of the problems we run into is time and deadline conflicts. Since this is a financial reporting system, it's done by most of the financial reporting actuaries and accountants. It would be nice to have these numbers as close after the year-end as you possibly can. Unfortunately, the financial reporting people are working on lots of other things during January and February, and by the time March comes around they're ready to start looking at their in-box. We've found we've had to push value-added out into a second quarter project, and I'm getting more comfortable with that all the time. We're learning things along the way -- it's not like we have to wait until the end of the process to find out that a business unit is pricing its products inadequately. We learn it fairly early in the process. But if we can make some meaningful statement six months after the end of the year, I think it's still not stale news.

Most of the critics of value-added will tell you that this system is very sensitive to the assumptions that you make, and that's true. Of course, it's true of any other system. It's true of your GAAP assumptions, too. So, corporate actuarial reviews each business unit's assumptions and opines on whether they're reasonable or not. We're in a unique situation, since we have a long-term incentive compensation plan, that we have an outside firm also come in and review our assumptions. So, we have two levels of review to determine whether the assumptions are reasonable.

Finally, value-added is a fairly complex system. I think once you get into it a little bit, you'll understand it. And it is really kind of fun because there is not a lot written about it, and you sort of get to make up your own rules, and you're developing new formulas. But it's difficult for nonactuaries to really understand value-added. Therefore one of the goals that we have over the next year is to try to explain the black box without going into all the detail of the formulas. I think what you need to really do is to make sure that you get the message across of what the system's trying to do. We just had a discussion with one of our business unit heads before I came out here, and he said, "This thing is too complex. How can I tell my marketing people what to do?" I said, "You don't want to go into formulas with them. You basically want to tell them a couple things. One is

FINANCIAL INTEGRATION OF THE PRICING PROCESS

write profitable business, and two is, if you write profitable business, you'll be rewarded this year." That is really why we've chosen to use the system.

MS. GUINN: Let's turn to asset/liability management. Asset/liability management has come a long way in the last decade. The historical approach to financial institutions, not just insurance companies but a lot of financial institutions, investment management has been coined as the 3-6-3 approach: take in money at 3%, send it back out at 6%, and be on the golf course by three in the afternoon. In the late 1970s and the early 1980s interest rates became very volatile, and started an unprecedented climb. Pretty soon insurance company executives figured out that their assets and their liabilities weren't independent, and that the old 3-6-3 approach was not going to work anymore. It produced for them a level of mismatching that exposed the company to a significant disintermediation risk. The focus came to be on, in those days, asset/liability *matching* or minimizing disintermediation risk. A lot of research went into how to quantify how well matched a company's assets and liabilities were. Modeling techniques, procedures and systems that are widely in use today were born.

As we indicated earlier, the environment for insurance companies has changed dramatically over the last decade or two. Consumers are more sophisticated; insurance companies are competing not only among themselves but also with other financial institutions. When you get right down to it, an insurance company is really a financial middleman or an investment middleman. What makes the insurance company special and sets it apart from other investment middlemen is that it's a risk-taking entity. The result is today's markets are too competitive to allow a company to match its assets and liabilities. Asset/liability matching has evolved into asset/liability *management*. The rest of my presentation is to explore how an active and disciplined approach to asset/liability management can enhance a life company's success starting today and continuing into the future.

Senior management of a life company must wrestle today with some concerns that have become very familiar, and we just talked about some. We've got a fiscal policy that allows considerable capital market volatility. Our products have become unbundled, and our customers really more sophisticated -- where *customer* is loosely defined to include both our sales force and the ultimate consumers of our products. And, finally, there's an increased competition with other life companies and financial institutions outside the insurance industry.

Management also has several pressure points that it has to keep its eyes on. There are outside rating agencies like A.M. Best, Moody's, Standard & Poor's, Duff and Phelps. Their opinion of the company has taken on heightened importance because many customer segments are increasingly concerned with insurer "quality." The flight to quality probably traces its origins back to the brokerage houses burned by their association with Baldwin United. The troubles in the high yield bond market have further focused attention on the quality of insurers' asset portfolios and their overall financial strengths.

Financial strength is affected by profit and growth goals. Stock companies are in business to provide an attractive return to their equity holders, and life insurance companies' stocks as a group probably haven't been outperforming in the market in

PANEL DISCUSSION

recent years. The mutual companies' reason for being is a little different from the stocks': the mutuals' charge is to provide product to their customers at low cost. Both stocks and mutuals are concerned with staying healthy enterprises. Call it any name you want, but profit and growth are both major concerns for senior management.

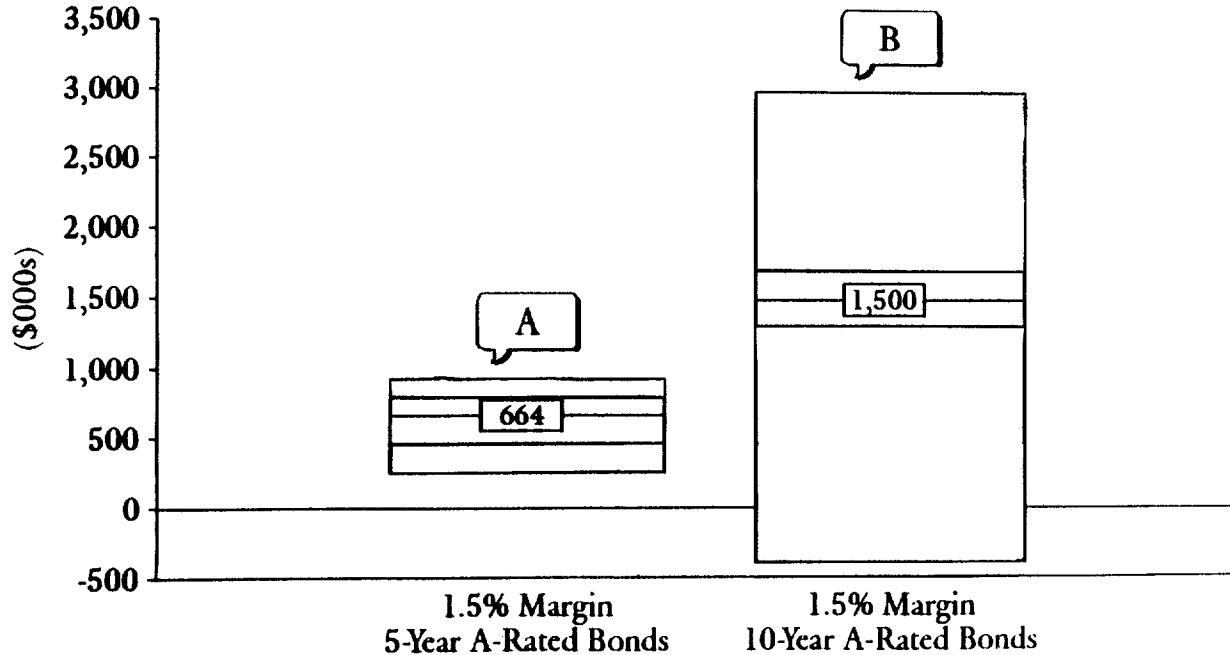
Risk control also determines financial strength. The business of insurance is centered around taking risk. Managers are essentially risk managers. Their charge is to be smart about the risks they take. In order to do that effectively, they need good information about their risk profile and the consequences of the various options that are available to them.

And finally, the regulators form another pressure point. They are very concerned about the financial health of our industry. Sometimes it appears that their viewpoint is: if it moves, regulate it.

Within this environment of a life company in 1990, what is asset/liability management, and more importantly, what does it do? Asset/liability management can be viewed as a process using up-to-date projection technology to perform financial forecasting and budgeting in a volatile environment. It can help management assess both sides of the coin: what is the future impact of decisions I make today and what is the value today of decision paths I might follow in the future? Asset/liability management can help clarify issues that are critical to the successful management of a company. It can do that by helping management answer the right questions. A lot of financial management systems don't lend themselves to answering the right questions. At its best, the results of asset/liability management don't have to be expressed or presented in some foreign language, but they can be used to improve communications throughout the company about what exactly is important. Strategic alternatives can be evaluated and quantified. Teamwork is required to implement successful asset/liability management; and the process can be used to nurture and foster a sense of teamwork inside the organization.

The work of asset/liability management includes: developing scenarios that will be used for testing; projecting cash flows and earnings under the various scenarios; making an analysis of the range of results; and comparing the results for different strategies. Along the way a lot of paper can be generated. Graphics have been found to be a fairly useful tool for succinctly summarizing the results and to make "the answers" stand out. Here is one way to compare the results of two or more strategies. In Chart 6, we tested two investment strategies, not crediting strategies. We are, in both cases, looking at a product that we are trying to manage to a 150 basis point spread. We are looking at that product under one investment strategy using a five-year bond and the second strategy a 10-year bond. Profitability is measured in terms of present value of distributable profits at 13%. We have graphed the results from identical sets of scenarios. We projected the earnings for the two strategies under, say, less than 200 scenarios. We have graphed the results side by side showing the range of results and getting some information about the concentration of results. The clear area represents the outlying 20% of the results. The shaded area is the middle 80%. And the bar with the number is the median value. This type of analysis is pretty useful. From it we can see which is the riskier strategy -- it has got the biggest bar -- and the expected return from each strategy. What the analysis doesn't tell is whether either of those strategies is giving us the best return that we can

Present Value of Distributable Earnings at 13% *Alternate Crediting Strategy*



1707

FINANCIAL INTEGRATION OF THE PRICING PROCESS
CHART 6

PANEL DISCUSSION

expect for a given level of risk. To do that we need to test more than two strategies, and we need to look at the results in a little bit different way.

This problem of analyzing investment strategies has been around for a while, and our brethren in the investment community have a fairly well-accepted approach for trying to answer the question. They call it the efficient frontier (Chart 7). The traditional approach to the efficient frontier has concentrated on measuring asset total return based on historic performance data. Return going up has been defined as the average or expected asset total return. Risk along the bottom axis has been defined as the standard deviation of historic total return from period to period. Once you calculate risk and return data for a lot of different asset allocation strategies, you can plot each strategy using its coordinates on the risk basis being the bottom and the return basis going up the side. The resulting diagram gives you a picture of the relative efficiency or inefficiency of each strategy. In Chart 7, portfolio A is an inefficient strategy because for the same level of risk Portfolio C gives you a much higher total return, while for the same return you can take a lot less risk with Portfolio B. You can do these curves and plot this and that, but professional judgment is needed to pick the strategy that lies on the curve. Pick one from the efficient strategy that gives the company the right balance between how much risk it is taking and what return it is getting, and that decision needs to be made in the context of the company's overall risk-taking profile and its tolerance for taking risks. That is the efficient frontier for investment management, and the concepts themselves can be generalized and turned into an efficient frontier for product management or an insurance company management. Instead of testing asset allocation strategies, we look at combinations of product management strategies which include both the asset side, the investment strategy and the crediting side. In place of asset total return we look at product profitability (Chart 8). Instead of looking backwards at historic performance, we look forward at expected future performance using our scenario modeling technique. Finally, in place of variance of asset total return we define a measure of risk, risk of business failure, and that doesn't necessarily mean risk of insolvency. It is some measure of how much risk we are willing to take, and what our key pain thresholds are. We are measuring the profit upside and downside of each of these particular strategies.

Definition of risk is pretty important. It is critical to the whole technique. It might be the probability of failing, say, the A.M. Best leverage ratio, or you could even use a compound probability. Say that there are three functions in the organization, and they each have goals. Sales wants to grow at 30%. The investment department wants assets to grow at 10%. And the chief executive and the actuaries want a return on their product. So, that leaves 12%. Risk can be defined then as failing one or more of the criteria. And the definitions of return need to be carefully formulated as well. If your corporate goals and profit objectives involve a hurdle rate of 12%, then the definition of return should be consistent with that. You might look at present value of profit or distributable profits discounted at 12%. And another clever point is that the definition of return and risk can be based on different variables. Risk can be based on a financial variable like growth and surplus, while return can be based on something entirely different like present value of profits or a measure of sales. The power of the method is your flexibility in defining both return and risk, and you can end up with a system that is very flexible, indeed.

The Efficient Frontier

Investment Management

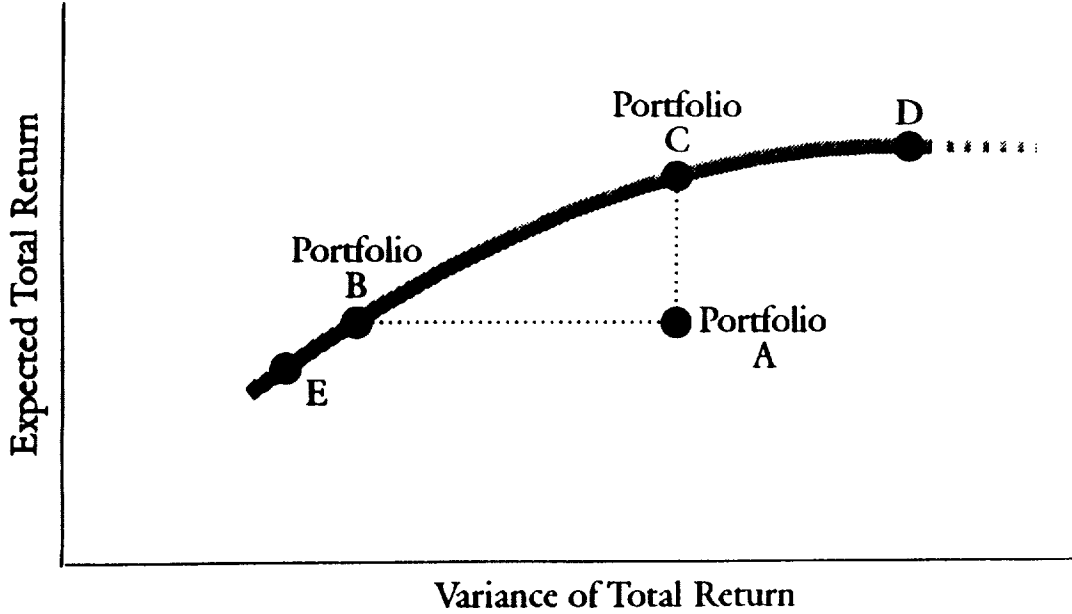
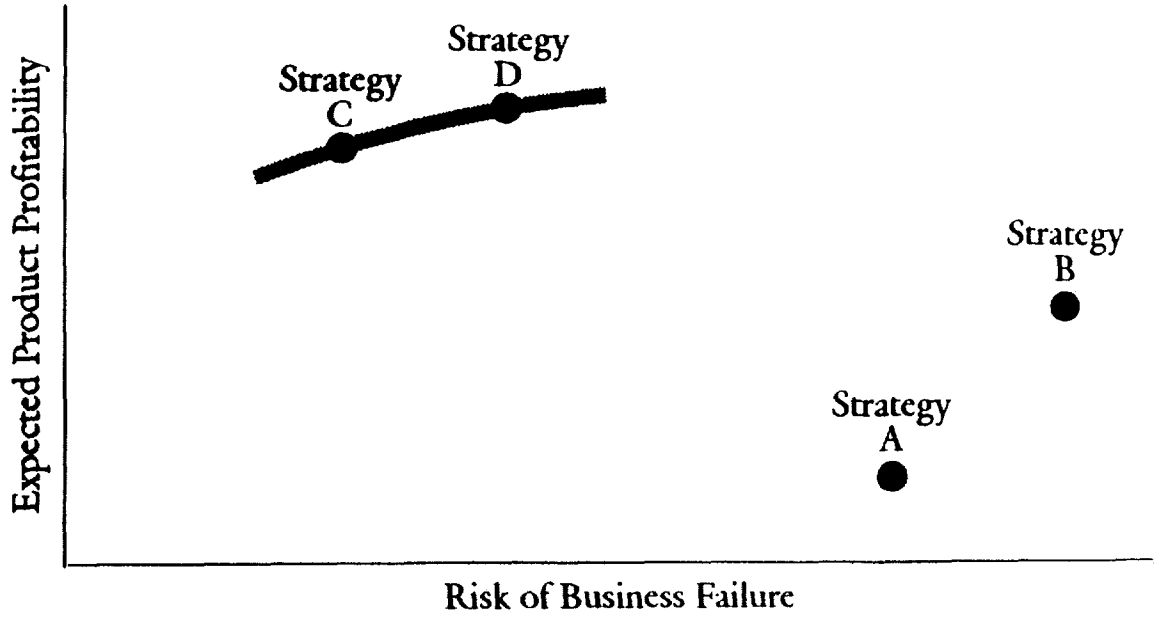


CHART 7

FINANCIAL INTEGRATION OF THE PRICING PROCESS

The Efficient Frontier

Product Management



1710

PANEL DISCUSSION
CHART 8

FINANCIAL INTEGRATION OF THE PRICING PROCESS

Let us suppose we defined a universe of strategies. That universe would be investment strategies and crediting strategies that are plausible for the company, and that is real important. I mean you'd be wasting time testing a strategy that is totally unacceptable to management no matter what its risk and return profile. If your management is not going to have more than 10% in high yield bonds, it does not make any sense to be testing strategies with 100% in high yield bonds. Come up with a spectrum of strategies that are plausible and fit the profile of the company. Run your scenarios and your projections and plot the results against your definitions of risk and return. And the efficient frontier then falls out. It is interesting that if you have done this sort of analysis within the investment department on an asset allocation basis, then those people may be very much surprised to find out that strategies that were clearly on the efficient frontier, from an asset allocation standpoint, may no longer be so efficient when we look at them in the context of product management and the company's overall financial goals.

Once the efficient frontier for a bunch of alternative product management strategies has been prepared, management is then ready to select an investment and crediting strategy to measure itself by and implement that strategy. Also very importantly, management is ready to implement tracking systems to measure how well it does relative to the strategy.

In an age when mismatching is nearly essential to produce expected rates of return that are in line with the company's goals, the efficient frontier analysis can help quantify the risk charges that need to be made and charged to the policyholders in order to compensate the company a fair price for its risk-taking. The analysis can also be used to assist the company with a host of other projects that might not seem at first blush to be directly related to investment strategy. For example, take the outside rating agencies. If you go to the rating agencies and you have a story to tell about your strategy and how you developed it, and you show that it's well thought through, that can help a lot because the rating agencies are usually very receptive to trying to understand more about your business.

The projections that you've developed along the way can also be useful in helping define your target surplus or required surplus formula and can be useful in surplus planning. You can see whether at your target rate of growth surplus funds will be able to be generated internally or whether it's time to start looking now for outside sources of capital and to get a plan together for where the capital's going to come from.

The projections can also show the trade-off that's being made between asset growth and surplus growth. They will be useful in testing reserve adequacy for Regulation 126. Finally, the projections will provide a basis for determining the expected value of in-force business, and they lend themselves to a means of tracking and monitoring the emerging profitability of the business. In this way the ALM function can be integrated with financial reporting and pricing in a cycle that starts with pricing, moves to monitoring, and ends up with repricing. It is a continuous cycle rather than discrete. Management information can be developed that clearly presents the management's options, and the implications of those options. Performance measurement systems can be set up that reward the "right" thing. You want performance measurement systems that reward increasing value which is more appropriate than rewarding selling more business if that business is not profitable.

PANEL DISCUSSION

Integrating pricing, investment and financial areas of the company can be quite powerful. Within the current life company environment effectively accomplishing this integration and fully utilizing its potential can result in a true competitive advantage to a life company.

MR. BENJAMIN GEORGE PETERS: We are doing some embedded value calculations for our U.K. owner, and it has always asked us to do the work on a pretax basis. It was interesting to note that you, Mr. Kolsrud, had done it on after-tax. Can you explain why you did it that way?

MR. KOLSRUD: We haven't become too sophisticated on projecting future taxes. What we've done is calculate after-tax statutory profits, and the only adjustment we make to statutory profits to get taxable income is to recognize the difference between tax reserves and statutory reserves. The other tax adjustment we make is to reestablish our tax loss carryforwards and carrybacks to their realizable value. But, other than that, we're not projecting our company tax situation.

MS. GUINN: It could be done pretax. But there needs to be a coordination between the hurdle rate and the profits that you're discounting. If your hurdle rate is an after-tax objective, you'll get some distortions if you're not discounting after-tax numbers.

MR. POLKINGHORN: Because of the adjustment that Mr. Kolsrud mentioned that Aegon makes for the difference between tax and statutory reserves, it is important to do this on an after-tax basis, as it's important to price on an after-tax basis. If taxable income and statutory income were exactly the same, it would be fine to do value-added and just measure the change in the pretax value because what you're really worried about is how did it grow from one period to the next? If you're just interested in growth, that may be appropriate. However, if you're interested in the absolute value of the number, like you would in an appraisal situation, you know that taxes aren't directly proportional to statutory income. Then it would be very, very weak to reflect and project taxes as a value-added calculation.

MS. CHING-MEEI LEE CHANG: At a session I attended at this meeting, one of the speakers said that we should emphasize the market value of the financial statement. He brought up the so-called economic surplus concept. I want to know, is there any connection between the value-added method and that concept?

MS. GUINN: We believe that there is. Value-added techniques have as their roots appraisal value techniques. If you believe that purchase prices of insurance companies are related to their appraisal values, (whether or not good will is included) you can say that the total value-added or the total value that's calculated in this process is a proxy for the market value or the potential purchase price somebody would be willing to pay for the company. In that sense I think it is very consistent with what was said.

MR. RICHARD D. CRUISE: I have a question for Mr. Kolsrud and Mr. Polkinghorn. What communication links do you have set up between the pricing actuaries and the financial actuaries? How do you maintain the balance there between the pricing and the financial fees in a value-added structure?

FINANCIAL INTEGRATION OF THE PRICING PROCESS

MR. KOLSRUD: Through the value-added process our pricing actuaries are very involved in that calculation. It is something that I think the pricing actuaries can identify with because it's really just pricing your in-force block. From that point of view they are active from the very beginning in setting assumptions and coming up with a number. They're integrated into our process.

MR. POLKINGHORN: Also, in many companies there's a review or at least a presentation process by the pricing actuaries to, say, the corporate or financial actuaries. That doesn't necessarily mean that you get approval, although in some instances it does. But it can take some of the surprises out of things, rather than having the pricing people say they have a mandate from corporate to get a 12% return, and the only way they can do that is to not allocate full expenses. They then send out pieces of paper and say this product meets our goal of 12% rate of return, but at the end of the year everybody is surprised. If you have this sort of communication process established, then perhaps the marketplace is such that the company has to price this year at a 9% return. At least that is communicated to the financial reporting people, and it avoids surprises at the end of the year, and it also can then trigger action plans to change that situation.

MR. KOLSRUD: I would just like to add that one of our business units is kicking around the idea of actually creating a position which is neither a pricing position nor a financial reporting position but a link position that would provide the bridge to both sides of the house. That's an interesting concept. That position's major project would be putting together the value-added numbers. Some of our smaller units can't afford to do that. One person does everything.

MR. STEPHEN PAUL TAYLOR-GOOPY: I work at Tillinghast in London. I would just like to offer a couple of observations on differences between the U.K. and U.S. insurance industries that I've noticed. The first difference is that in the U.K. we don't have GAAP. The second difference is that in the U.K. the insurance industry is generally profitable. Now, listening to Mr. Polkinghorn's presentation earlier, I think perhaps those two are linked. Typically the U.K. companies price to achieve a 15% return after-tax on investment, plus generally some value-added on the order of 30-40% commission. That is calculated by taking the present value of distributable earnings. The reason why companies run themselves in that way is because that's the way they think that the stockholders view them. Stockholders want to see cash out of the company rather than GAAP earnings. Looking at the numbers Mr. Polkinghorn was producing earlier, leads me to the conclusion that U.S. GAAP has the direct effect of leading you to underprice your products. When you think about it, it's obvious. If stockholders really do look for distributable earnings as their measure of return, and you're respreading distributable earnings at an interest rate that's below the stockholders' desired rates of return, you're naturally going to inflate the early earnings and inflate your GAAP equity. That, in turn, leads to the effect of a drag on the return on equity in later years as you suggested. Just looking at that leads me to think that the two really are linked, and GAAP has had this effect on the U.S. industry and is really the reason why we see companies that are not adding value with their new business. Typically in the U.K. companies traded prices might include up to 30-40% goodwill. That's not just a feature of supply and demand in the U.K. market but generally because new business,

PANEL DISCUSSION

for the better companies, really does add value. It is accepted in the market that pricing should be on this much more stringent basis.

MR. PHILIP JOHNSON TWYMAN: I've got two questions for Mr. Kolsrud. You mentioned that the value-added system was very sensitive to future assumptions and that you use this system for long-term remuneration. How do you cope with a change in assumptions when it's necessary to change assumptions without destroying the expectations of management? You mentioned that you didn't take into account the value of the business that you could write in the future. How do you reward people for building the capacity of one of your business units to write lots of business in the future?

MR. KOLSRUD: Those are two good questions. I'll take the last one first. We need to give that one some more thought especially when there is massive investment in a new venture. I mentioned the example of buying a block of business where we included goodwill in our purchase price because we're buying a marketing system to achieve economies of scale and drive our expenses down. One of the challenges we have in the next nine months is, how do we attack that problem?

Your first question concerns change in assumptions. We separate changing assumptions into two categories: those which are beyond the control of management and those which we think are under the control of management. Let me give you a couple examples of each. First would be a change in the federal income tax rate. Management has no control over what taxes are going to be in the future. Another one might be the parent company decided that it wanted to use a different hurdle rate that would increase or decrease value at that moment in time. Again we would tend to wash that out at one point in time so that it did not impact the value added for any given year. The second category is assumptions management can control. A change in the perception of the future that management could control would be lapse rates. If we thought that our lapse assumption needed to be better or worse, we would actually isolate the impact of changing the assumption. We would isolate it so that it wouldn't confuse our analysis. But we do allow the change in assumption to impact the change in value for that year. Another example might be loss ratios on health business. Again we try to be the referee and decide which assumption changes are under management's control, and we have our outside consultants agree or disagree with us. We try to come to an agreement, and then it is ultimately up to the board to decide on which side of the line it falls.