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A Tale of Two Values: Direct Response Insurance

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Summary: Panelists present a tale of two values: customer lifetime value and embedded values for direct response insurance. Prospecting for new clients is a critical element of success for any enterprise. Direct marketers realize their best prospects are their existing policyholders.

Panelists describe two of the measurements that actuaries are using to evaluate direct response products. Both customer lifetime and embedded value assessments are needed in a crowded direct response marketplace. Actuaries can provide valuable assistance to marketers by developing both customer lifetime and embedded value models.

Mr. Jay M. Jaffe: I have my own firm, Actuarial Enterprises, in Highland Park, Illinois. I do a lot of work in the database marketing area, which is what we're talking about today, and Rob is more or less in the same position. I've been in the actuarial field since 1964. Do you remember these words?

> "It was the best of times, it was the worst of times;
> it was the age of wisdom, it was the age of foolishness;
> it was the epoch of belief, it was the epoch of incredulity;
> it was the season of light, it was the season of darkness;
> it was the spring of hope, it was the winter of despair;
> we had everything before us, we had nothing before us;
> we were all going direct to heaven, we were all going direct the other way."

These are the famous words of Charles Dickens in *A Tale of Two Cities,* published in 1859. This afternoon we're going to be talking about "A Tale of Two Values."

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The two values are, first, customer lifetime value. This is a topic that has bothered me for a long time. I know we need to do something about it, but the more I get into it, the less and less I'm able to say I know how to do something about it. There are a lot of issues concerning lifetime value and it will be interesting to hear how you deal with lifetime value in your companies. Those of you who aren't using lifetime value may see solutions to some of the pitfalls that we're getting ourselves into.

Rob is going to talk about embedded values, which flow directly from customer lifetime value. I'm going to start off and then Rob will give his presentation.

One of the concerns I have is that these are unused actuarial concepts. How many of you, for example, are using embedded value calculations regularly at your companies or in your consulting practices? How many regularly use customer lifetime value?

What is customer lifetime value? I can describe it, but I can't necessarily calculate it. I can tell you that it's the total of all future "something" from an individual customer. What can you measure? You can measure profits, that's clear.
You could measure revenues. I don't know why you'd want to measure revenues when you can't report revenues as profits, but there could be a reason. You could measure marketing allowances, which might be very relevant if you're doing database marketing or, for that matter, nondatabase marketing. You could measure number of contracts, but, again, I would think that this measurement would be irrelevant.

Profits and marketing allowances seem to be the logical things to measure. We haven't said what profits we're measuring and how we're calculating the marketing allowances, but those would seem to be the two areas that you would want to get into.

For database marketing, if I had to choose one measurement to start with, it would be the present value of all marketing allowances from a customer such that the company earns its minimal acceptable profits. A key phrase is "minimal acceptable profits." You have to start with some return on investment or embedded value which would be, what would you say, an amount?

Mr. Robert E. Winawer: What the minimal acceptable profits are is an interesting question for every company. At Guarantee Reserve, we would use the value of new business, which is the present value of profits at the date of issue.

Mr. Jaffe: A lot of unknowns are part of any calculation. Again, if you think about calculating customer lifetime value in any format, you're making a lot of assumptions. That's one of the areas people struggle with when they do lifetime value projections; they don't believe all of the assumptions. The non-believers will concentrate on one assumption and say because that assumption is wrong, the whole process is bad, rather than work through the process.

Why use customer lifetime value? First of all, marketing costs are increasing. If you are finding yourself with fewer and fewer opportunities to market at the cost levels that you would like to market at, you have to find another alternative. How do you measure your profits? How do you justify what you're doing? One of the ways you would do that is by using customer lifetime value. Second, marketers always want larger marketing allowances. Anybody know a marketer who doesn't? And the third reason to use customer lifetime value is the formalization of customer marketing programs.

Of these three, the customer lifetime value concept may have its largest and most important benefit because of the formalization of customer marketing programs, which are being ignored in many companies, believe it or not. These programs are definitely playing second fiddle to new business activities, and they are extremely profitable.

Although these are on the extreme end, I have seen customer marketing programs where we were able to obtain positive responses from one out of four people who were contacted. If you do the math, you can figure out very quickly that if one out of four people respond to any program, the marketing costs per certificate are extremely low.

Airline frequent flyer programs are possibly the best example of customer lifetime programs. I'll bet you there's not one of you who flew to this meeting who didn't make sure you got your airline frequent flyer points. Some people even took a less convenient airline to get here just to get your points, right?

What about catalogs, record clubs, etc.? Has anybody ever figured out why a book club will give you three books free in the beginning? It's because you're going to buy more books. The book clubs know there's an attrition rate, or what we in the insurance business call a lapse rate.

Another very good example of lifetime value is razor blades. Gillette for years has been essentially giving away the razors in exchange for buying the razor blades. That's one of the classic examples of customer lifetime value. You know darn well

that if you buy the wrong brand of razor blades, they generally won't fit on the razor that you bought for next to nothing.

In the January 1999 edition of a magazine called *Direct Marketing* (published by Hoke Communications, Garden City, NY), there is an article about lifetime value. The article has two tables. One is called "lifetime value calculation" and the other is called "lifetime value by introducing a frequent buyer program." Sound familiar? They use what they call an attrition rate (our lapse rate). The term "average spent per customer" is the same as our "premium." The "yearly spending" would be our "premium." Fixed costs and variable costs (those are our marketing costs). The tables calculate a value. They even calculate a present value. So marketers do understand the concept of present value, at least the people who wrote this article do. And they calculate cumulative lifetime value, lifetime value per customer, etc.

There have been a couple of seminars called a "Profit-Centric Guide to Measuring" and "Evaluating the Lifetime Value of Your Customers." There weren't any insurance-related topics in the meeting, but it was interesting to see that the rest of the world is facing the same problem we are.

I'm going to introduce some topics as a way to find out what you are doing. The first is adding riders to policies. Riders are inexpensive to market. I'll go back to my example. If you spent even $1,000 to contact 1,000 people, which would be a very high amount, and you received a 25% response, that would be a cost of $4 per new set of benefits. Now, believe me, you can't acquire business at any price near that any other way. Riders also have a tendency to improve persistency. The concept is that having multiple relations with a company improves the persistency. Therefore, the profitability from the policies that you have on your books that now buy the riders is going to be improved.

So my question to you is, how would you best measure the impact of riders on lifetime marketing allowances? What method would you use? What method do you use? And part of the question is, how do you get this across to your marketing people?

From the Floor: I would hesitate to say that we've done a lot of lifetime value work per se in the direct business, but we've assessed the impact of adding a rider by looking at the profitability of a program with and without the rider. For some of the rider programs, we carved out either a segment or a portion of the file where we thought we'd have a better hit opportunity just to try to look at the impact of adding the rider there versus the block you didn't measure. And we would typically do it just by running present value of book profit formulas.

Interestingly enough, we actually did a rider program that hurt persistency. Therefore, before you do a rider program, you've got to make sure that the original book you sold was a strong and committed enough buy in the first place that these folks actually want to hear from you again. Because if they don't want to hear from you again, doing some kind of an upgrade or a rider program could actually drive business away.

Mr. Jaffe: Why did the persistency deteriorate?

From the Floor: In that particular case, we had an in-force book of business that was sold purely on a direct basis through a third-party endorsement. About nine or 12 months into the first year, we tried to do a rider program. It wasn't right away. We gave it some months. But we gave a group of those people a feel-good follow-up call, saying, "Hi, let me just reintroduce myself, and ask you about the coverage, and see if you have any questions...", with the idea being to try and sell a rider on top of it.

We actually got a shock lapse out of making those calls, because a lot of people said, "Oh, I didn't realize I had bought that," "I didn't realize I had that," or "What is this thing I bought, again?" It actually led us down a path of questions that we weren't anticipating, and the result was often, "Just take the whole thing off," or "I don't really want that." When you go back one step prior to that, in the direct business, the purchase is sometimes a knee-jerk reactive purchase as opposed to being well thought out. I think we called a bunch of people who fell into that knee-jerk reaction mode, so it actually drove some lapses out.

With respect to the people we didn't drive away, some of them took the rider and we actually got pretty good persistency. The key is to be careful who you're calling because sometimes they may not want to hear from you.

Mr. Jaffe: And, at the same time, did somebody recognize during the process what was happening with the lapses and say, we better look at this, or was it discovered long after the fact?

From the Floor: I think on that initial pilot we were going to call 15,000 people. And I'd say within about the first couple of thousand, we started getting feedback that people were lapsing. I don't remember the exact numbers, but we certainly didn't get halfway through the file before we revisited the script and the offer, and looked at all the components. We even took that test and carved it up into three other subsegments. In one, we kept going without changing anything. In another,

we tried to change the whole tone of it. And the last one was a lot more question-asking up front to try and determine the nature of the person we were talking to.

Mr. Jaffe: Well, you've just done something great, because this wasn't planned. But I always try to find a way to remind myself that even the best-laid plans or the best thoughts can go in the wrong direction. And an example like this can be an expensive learning experience if you're the one doing it. We all need to be constantly vigilant in analyzing what we're doing.

From the Floor: I think one of the common thoughts is that an in-force customer wants to hear from you. That's not always the case.

Mr. Jaffe: Ben, did you want to add anything?

Mr. Ben Lutek: We've certainly seen programs where the initial customer base started to lapse a little faster when we did what we called follow-up mailings. But the key is that once you identify those who are responsive to direct response, there's more value added in the long run. We'll do follow-up mailings monthly, in some cases, and we're getting good response rates at 28 months or even 36 months on certain types of business. If you look at that type of response and what it adds to your customer value over the lifetime, the key seems to be identifying those customers who really will respond and persist.

Back to your question about measuring the impact of riders on lifetime marketing allowances. It's interesting just talking about it from a management perspective. We have marketing management who's very, very interested in the impact on marketing allowances, for obvious reasons, but as part of senior management, we have a CEO and a chief actuary who are somewhat reluctant to accept all the assumptions. So I'm in the middle of this tug-of-war, where marketing is always saying, "Take this study one step further and add on the cross-sells and the up-sells that come from the cross-sells and so on and so forth—just get me my maximum allowance." Senior management just wants to see the basic sale, with the add-on and the cross-sell shown separately, and evaluate each as it goes.

As far as the measures that we use, we look at percentage of premium profitability and return on investment. We've done a lot more work with lifetime value measurement on the percentage of premium profit and total present value future margins divided by present value of future premiums. We find that to be the easiest to get to. The return-on-investment calculation that our company has developed is nonstandard and very difficult to do, so we haven't done as much work with that one.

Mr. Jaffe: What would you estimate that your policyholder marketing contributes to this present value of profits as a percentage? In other words, if you took the base policy, what is the additional value that is being added by the subsequent sales?

Mr. Lutek: I would estimate about 25% off the top of my head.

Mr. Jaffe: That's pretty impressive.

Mr. Lutek: It's pretty significant.

Mr. Jaffe: I think that's also the type of calculation percentage you could get if you were an agency company. I don't think there's any difference if you're agent distribution or if you are database marketing distribution.

Mr. Winawer: I'm going to interrupt here. I'll show you later that my experiences in embedded value might be able to help you be able to get around the hurdles you're having with ROI and margins.

Mr. Jaffe: The next example of lifetime value is policy exchange and conversion programs. These are programs that we see all the time. Term conversions to permanent insurance is the classic. What about the term-to-term conversions? In the marketplace today, with a lot more five-year level term, 10-year level term, 15-year level term, and 20-year level term being sold, that's going to be an issue. Another program that I've seen is term-to-term to 100 conversions. In other words, it comes close to the first one, which is almost to a permanent policy, because it has a larger premium.

So one of the questions that's been going through my mind is, should the marketing allowances be determined with conversion options and, if so, how should we do it? Certainly, if you're converting a five-year level premium term to a term to 100, you could be kicking up your premium by two or three times. That's not the traditional problem that actuaries always have where there is a cost to a conversion. I'm looking at it from the positive rather than the negative side. Is anybody working with positive conversions?

I have one client who's starting to do it with term policies and the results are quite good. We essentially have the same risk, but we have two or three times the premium to cover it. Over a period of time, whether the customers are going to last 40 years or not is another issue. The few that last 40 years, I'll worry about. On a present value basis, I think I'm okay. But during the next 10 or 15 years, when I

have two or three times the amount of the premium, I think we're better off for having done that. Any other thoughts or comments?

From the Floor: I'm not sure I'm following what you did.

Mr. Jaffe: We have a lost-cost entry term product that we're converting to a higher term. Essentially, you could think of it as converting a low-cost, short-term product to a longer-term product.

From The Floor: You're practically trying to up-sell these people?

Mr. Jaffe: Yes.

From The Floor: Does it require new underwriting?

Mr. Jaffe: No. There is a finite period of time when they have the coverage at the low starting premium. We anticipate the fact that we have high lapses at the time the premium changes and we're trying to conserve those people now rather than later. There's a group of people willing to pay a higher premium now rather than later to get more protection, more guaranteed premium.

From the Floor: So the idea is, they bought a low-level, 10-year term and maybe six years into it, they get the opportunity to re-up for another 10 years of guaranteed premium, but at a higher percent than the original one?

Mr. Jaffe: Right. And the antiselection only occurs because not everybody renews, so we're trying to get the people to renew as early as possible and make them a better offer.

Example number three is multiple product sales. It could be more of the same, related products, or other products. When you make these sales, are the additional sales incorporated into the marketing allowances? Esoteric examples would be, if you're a life company with a property and casualty (P&C) product to sell, do you combine those or are you mono-company? In other words, you only do business within your own organization or within your own company.

Is anybody going outside of their own company to incorporate other products or services, which is one of the real values that you have with cross-sells? For example, if you have a bunch of direct mail buyers, wouldn't this be an ideal market for a company like GEICO, which wants to sell P&C insurance to other

direct mail buyers and cut through the prospecting process? Is anybody working on this?

I had a discussion with one of Rob's associates who is going to try to sell a nonmanufactured product to their customer base. I don't know whether it will come back down to your area, Rob, to incorporate this into the marketing allowance, but if I were your marketing director, I would eventually do that if I'm selling another company's product. If I'm acting as an agent and bringing in money because of the value of the name that I've created, I'm actually generating compensation in the form of a commission and should be able to add to my marketing allowance.

Policyholder conservation programs are another form of policyholder lifetime value. What do policyholder lapses result in? Well, first of all, there are acquisition cost charge-offs if you're doing GAAP. Second, there's claim antiselection. Third, there are fewer insured for cross-marketing purposes. And, fourth, obviously, there is lower customer lifetime value. When you lose a policyholder, you've lost a lot.

Which customers do you want to conserve? You can't just decide to try to conserve everybody, because if you have too many lapses it's too expensive. You have to allocate your efforts, because you have limited capital and limited people to do these programs. I would think you'd want to conserve the polices that have the greatest present value of profits if you're going to do a conservation program. You need software to determine which activities to engage in, to allocate your resources, and to measure the results. Don't get into a policyholder conservation program if you're not going to be able to measure what you've done.

Here's a real conservation program that I encountered about six or eight months ago. The conservation program was doing a bang-up job. The individual who was in charge of that department spoke at a meeting and mentioned that she had saved $50 million in cash values and was very proud of herself for having done that. But she didn't have any idea what the profitability of what she had accomplished was—good, bad, or indifferent. The department that she was operating didn't know how to allocate its resources, for example, which customers it should go after or which are the prime or best customers for conservation efforts. The result was that she is not communicating with company management, and the company wants to cut the department budget. Any suggestions? What should she do? It's probably a real opportunity, but also misdirected.

I think what she needs to do is develop some algorithms that are going to pinpoint which of the customers are the most profitable. Once they've lapsed, then you

need a priority list each morning directing you to the customers over whom you are going to spread your efforts.

You definitely have to learn how to communicate to management and say, "We spent so many dollars this year on conservation efforts and look what we contributed." You need some pretty sophisticated software to do the prioritization, but I don't think it's that difficult. I think we can do it. Now, what would the ultimate conservation program be?

Mr. Robert A. Moser: I'm with Crown Canada. I know we had a conservation program within our individual operation. One thing that always bothered me was that there was never any consideration given to lapse supported products. Being a Canadian company and reporting a premium policy method (PPM) reserve, which is a gross premium reserve valuation method, the straightforward thing to do would be to compare your cash value to your reserve and then make a decision whether to conserve a policy on that basis. Where the ratios are better, you want to conserve those and where they're worse, you want to let them go.

Mr. Jaffe: My thoughts have been that you'd like to be able to get to the point where you could pinpoint those customers who have a propensity to lapse and get them before they lapse. I think we're going to get to that point where we can start finding markers for people who are more likely to lapse than other customers.

What about convincing auditors to defer lifetime value marketing costs? Anybody face that problem? I see a smile or two in the audience. I think the auditors are a tough sell in this regard. Auditors always want recoverability. They want to see that you can recover your marketing costs and, if the answer is that you may not be able to, then you can't defer the costs.

Another area where I have seen a very definite reason to go against lifetime value programs is management bonuses. When you have a management bonus formula that gets tied into something that's contrary to lifetime value, guess what happens? Bonuses take precedence.

Here's another conundrum to consider. Munch on this one as you head back home. When should a company stop marketing? Do it when the cost of the next sale exceeds the marketing allowance, or when the cost of the average sale exceeds the marketing allowance?

I've never been able to determine the proper way to do this. The average cost is always going to be lower than the cost of the next sale once you reach a certain

point on the cost curve. When do you stop marketing? If you want to get customers in for lifetime value to sell them more things, you would market to the extreme, which is when the average cost goes up to the level of the marketing allowance that's been built into the product.

Now, I'm going to turn the presentation over to Rob. If you have any doubt as to whether the embedded value (EV) and economic value-added concepts are becoming a major factor in U.S. corporate life, there was an article about eight or nine months ago in *Money* magazine explaining how corporations are measuring value and the topic of embedded value was part of that. I have an annual report with me from Service Corp International, which is a funeral chain. One section in the report talks about "EVA, the new measure of our success." They have deemed this "economic value added," which is very similar to embedded value.

Mr. Winawer: Guaranteed Reserve Life was recently purchased by Irish Life of North America which, in turn, is a wholly-owned subsidiary of Irish Life of Dublin. The primary concern of Guaranteed Reserve, because it was reporting to Irish Life in Dublin, is embedded values. It is our primary financial reporting system. I don't think many U.S. insurers are in our situation. U.S. companies tend to use embedded values as a management tool. Having listened to what everyone has said so far, it seems that a lot of people are using embedded value tools. Specifically, they take into account the present value of profits in one form or another when they're setting up their marketing algorithms and making decisions.

I thought the best place to start would be to discuss how or why people are using embedded values and then to describe the calculations involved. It's important to understand the theory behind embedded values, so you'll understand very quickly how it can significantly improve management decisions for your company.

Embedded values are not new. They've been around for a while. They have a strong theoretical foundation, which explains why they're so useful. Basically, sound theory produces practical results.

There are three major flaws of our statutory and GAAP reporting and, to the best of my knowledge, this exists for PPM as well. Specifically, they are the timing, risk, and value problems. The timing problem is that the current period earnings and ROE do not properly reflect the long-term impact of transactions. The two examples that we're most familiar with are profitable lapses under a statutory basis and earnings. It may be profitable for a policy to lapse, but it's clear to an actuary that, in the long run, that's not the most advantageous result.

The next timing problem would probably occur when you make a new sale. There's the first year of statutory loss. However, GAAP addresses that issue to some extent.

The second problem is the risk problem. Statutory and GAAP profits don't reflect the risk involved. Analyst ratios adjust for liquidity and leverage among companies, but they don't take into account product and market characteristics. For instance, if you have two ventures that were juxtaposed and one had a large amount of disintermediation risk and the other didn't, unless you get highly involved in range estimates, you may choose one over the other without reflecting the uncertainty of cash flows from year to year.

The last problem is a value problem. Management should be responsible for furthering the interests of the company's owners. The value problems, basically, are that ROE measures the current year distributable earnings on the investment or the equity at hand, but it doesn't take into account the change in the value of the equity from year to year.

Theoretically the best answer I've heard is to manage the marketer's share price. It represents the owners' investment and management should have as its objective the owners' best interest. Even if your owners have no interest in the disposal of their earnings, market value is the potential future earnings relative to other ventures of similar risk or the most efficient use of the owners' capital. The other thing that makes embedded values so great is, because of all the theory, it's an effective management tool. It answers the three problems that we've just dealt with.

You should theoretically manage to an appraisal value. An embedded value is different from an appraisal value because it serves a different purpose. *Actuarial Standard of Practice No. 19* on actuarial appraisals says that, "An actuarial appraisal should measure the value of an organization to the particular user." The value of a company can be very different depending on who's acquiring it. Buyers have different capital structures, different risk pooling setup and, most definitely, different economies of scale. There are different tax structures and tax implications on a sale.

This is a very important point. The future business capacity of different acquirers will be quite different. And, as a matter of fact, the value of new business is not part of embedded values. As we'll discuss later, at least for management reporting, it would be a good idea to include the value of future business.

Probably the most obvious thing is that an appraisal is a point estimate. It is the value of the company at a particular time. It might be prepared using stochastic

models, it might be a range of values with a sensitivity analysis, but it's the value at a given point in time. Embedded value analysis, also called value-added, does more than that. It analyzes why the company is changing value, and that's the real worth of embedded values.

In the United States, EV is used primarily as a management tool, whereas it's used as a reporting system for European insurers. The differences between the two are fairly subtle. Probably the biggest is that, if it's your financial reporting system, the results are audited, so you tend to have a lot more rigor in your calculations and management and pay greater attention to results. And, finally, midnight changes, which literally happens around midnight, are frequent if you're on the management reporting system.

Now that we've gotten the theory out of the way, let's go to some definitions. First, let's define embedded value. If you do embedded value as a reporting system, you're looking at the balance sheet. The value of in force is to be thought of as a type of liability that regulates emergence of profits, the same way that a net GAAP liability does. A GAAP liability will regulate profits to emerge in proportion to premium. If everything happens as expected, profits from your liability will emerge as release of risk, which we'll define in a few minutes.

Your adjusted book value is the remainder. It's the value of accumulated earnings and the paid-in capital that are not used to back the liability. The adjusted book value is the cash, surplus, and other items that are essentially allocated to it, including certain nonadmitted assets. For instance, if anybody has prepaid marketing costs, this is set up as a prepaid marketing asset and taken into account in conjunction with your future business capacity.

I consider required capital to be a fairly theoretical concept; I'm not sure it's essential, and it depends on the needs of your company. It's also called the solvency margin or target surplus. It's the capital and surplus levels required to support existing business. At Irish Life North America, we use an amount that is double our risk-based capital (RBC) requirements, for example. I should note that the assets backing the adjusted book value are marked-to-market and usually after-tax.

The value of in-force policies is the future profits discounted at risk discount rates. Profits are defined as the amounts available for distribution to shareholders, if you're a stock company, or to policyholders for a mutual company. Basically, you're looking at your in-force contracts the same way you'd value a bond. I think that's an important analogy because discussion has gone on for years about what the

market value of the liability is. In my opinion, the value of in force, if correctly done, is exactly that, and in that way you're solving the value problem.

Adjusted book value includes the cost of capital or the change in required capital and after-tax interest earnings on that. This just reflects the statutory earnings that are not wholly available to the owner. You've got RBC requirements from your regulators, capital adequacy dictated by the rating agencies, and your own organizational solvency concerns.

At Guarantee Reserve, we use models—liability-only models with a single flat interest rate. There is no reason why it can't be improved to include assets. Also, in Europe, a lot of companies are turning to a database or factor approach as electronic data processing equipment becomes more advanced.

Setting risk discount rates often means just using one number. The discount rates should be commensurate with the risk undertaken by your owners, but can vary by company, market, even line of business. I'm very big into it varying by line of business, which will distinguish relative risks that are available to your company. A lot of people use the capital-asset-pricing model, which is basically a risk component over the risk-free rate. Similar to setting your discount rates for bonds, you should take into account the capital structure—equity versus debt, depending on how you've financed your company—and your owners' expectations. The expectations on return that your owners are expecting to see should drive your risk discount rate.

And, finally, pricing ROI should be consistent. Basically, if you're pricing to a return that is less than your owners expect, then every time you put on new business you're going to lose money. It is typical to use one flat rate for the ROI, but there's no reason why it can't be a spread over a Treasury curve, for instance, if you wanted to take into account the duration of your business.

Now, let's define the value-added analysis. In terms of a financial reporting system, this is your income statement. It's a management tool and it's an analysis of how and why EV changed. This is where a lot of the wealth in embedded values is.

First, there's release of risk, which is your risk discount rate times your initial value of in force. If everything happens as planned, you also add in the value of new business, earnings on adjusted net worth, and what's not here if you pay out dividends. That could be shown separately or you could call that part of earnings on adjusted book value. Then you will add or subtract experience factors. As a lot of the information comes in, you can start figuring out the experience factors.

What's not here is your statutory profits in a given year. If everything happens as planned, the statutory profit is transferred from the value of in force to the adjusted book value. What you're planning to do is have product earnings be the risk discount rate times your initial value of in force. It becomes clear that the only way to make the company grow is to issue valuable business.

There are links between pricing, planning, and financial reporting. If you do your value-added and start explaining the experience variances as you see the embedded value change in a year, your management is going to see the impact of experience variances in a much more tangible way than with GAAP.

More timely actuarial experience reporting is valuable. Most studies have reporting lags and, probably more important, your actuarial studies are of little interest to management unless they're current.

Say you're in a company where the first-year experience of very good mortality compensates for the ultimate mortality, which is quite bad. So, in aggregate, your mortality's fine and you keep writing lots of new business. When you set your financial plans for the year, which might be set by your accounting personnel, they're going to look at the trends in mortality relative to in force and premium. Again, mortality seems to be fine, but you're looking at mortality studies, and it becomes fairly obvious that you're creating a fairly large time bomb for yourself. Once the in force becomes more sizeable in this block of business, it's going to be very unprofitable, and management won't react to that until it's much too late. You, as the company's actuary, may be very aware of it, but unable to communicate the impact of that.

Many of the Statutory Accounting Practice (SAP) and GAAP problems are avoided. We've discussed profitable sales losses and lapse gains. If you're working on embedded values, you're taking into account all of your future profits immediately, not just in your new business models, but also when you're looking at your in force, so it very quickly resolves the profitable lapse situation. And, when you start analyzing your in force, you're analyzing the present value of future profit. So, by solving the timing problem of financial reporting, you're going to be able to tell management which policies you want to keep, how much it will cost for them to lapse, and how much you should spend to keep them.

Value added helps management focus on what they control. In value-added analysis, we look at earnings on adjusted book value and experience variances. The release of risk is generally attributable to prior management. Earnings on adjusted

book value come from prior management and experience variances are traced to current management.

If you're in a very large company, you're going to have a mix in profitability from what you are doing today and the run off of a large block of business that may be profitable or not. Now, when you're doing earnings on adjusted book value analysis, the two are going to be separated completely, and you'll be able to see very quickly what your current management is doing at the company and what the effects were of prior management.

The way that I analyze experience variances is to put them in several forms. The first one is to compare current year profits to projected profits. When I change an actuarial assumption, I state the impact of that change on the value of the company. So, in that sense, I have a venue to communicate to management exactly how important the situation is in relation to experience variances. For example, a 10% change in the withdrawal rate would outweigh the value of new business for most companies.

I think the most important or at least the easiest aspect of embedded values to apply is the value of new business analysis. It seems that a lot of people are already doing this. I don't feel embedded value is the answer to the question of how to optimize lifetime customer value, but I think this is a tool that may help to find some of those answers.

Our company sets a value of new business in the company's business plan, which is developed by the marketing staff and the actuary sometime around the third quarter. We'll set up production plans by product, age, mode of premium, whatever. And, at the end of each year, the plan is compared to actual and this is quite helpful. We also check the plan throughout the year and it's of great interest to our management. And we look at variances in such areas as production, business mix, acquisition cost overruns, and the change in actuarial assumptions.

EV analysis encourages writing profitable business. If you write something with an ROI less than your risk discount rate, you're going to reduce the value to the company. And, if you're looking at value of new business (VNB) by product or by marketing campaign, negatives will show up and it will provide immediate feedback. As a matter of fact, we recently pulled a program simply because it showed negative value in new business immediately.

I deal with acquisition cost overruns separately when I calculate our gross value of new business. No matter how you're going to break it up, whether by product,

marketing campaign, etc., it's the present value of profits at the point of sale based on the acquisition assumptions allowed for it. Then I show acquisition expense overruns, so you can see what's coming in as planned in terms of production and what's not, what's costing more to put on the books than we expected it to. It's important to show those things separately just to illustrate to management where the problems are.

We're currently using the return on investment and profit margin as our pricing criteria but I'm campaigning for a new one. It's called the value of new business criterion. It's slightly different from ROI, and it's just another manifestation of the timing problem. Probably the best way to communicate it, again, is through an example. Consider a 10-year term policy and a whole life policy. Both have the same ROI and the same margins. While this isn't practical, to illustrate it, let's say the policies also paid the same premium. But the first policy pays premiums for 10 years and the other pays them until age 100. Both policies have the same marketing allowances. You'd be indifferent between the two, but I think it's pretty clear that customers would want the whole life because you're going to get premium a whole lot longer. So if you look at a VNB statistic, you're going to highlight that high-margin riders are profitable and sales to existing customers are profitable.

VNB analysis encourages macro pricing. You're going to be taking the price production curve into account. In macro pricing, the war between marketing and the pricing actuary inevitably occurs. I've talked to some people who tried to implement macro pricing and, at the end of the year, the marketing people just say, "You asked for a production estimate. I gave you my usual marketing estimate, so you should have taken half of it."

You need to be able to price to volume, particularly in the direct response market. Our acquisition costs are somewhat fixed and happen before issue. This makes a very disciplined estimate necessary, because at the end of the year, the actuary comes back and says, "I macro priced and that's why we're not profitable. You said you're going to have production in this particular product in this particular way." The analysis falls out very quickly, very simply, and is very easy to communicate to anyone.

If you're doing a lot of database marketing with a lot of seriatim database work, VNB makes a very handy utility score. Basically, you want to try to ferret out who you want to sell to. You're going to take into account who's most likely to buy, but I think you'd also want to take into account who's a profitable person to sell to. So you're looking at the difference between maybe an expectation and a utility function.

The value of new business is not included in EV strictly and I don't think I'm ever going to get Irish Life in Dublin to include it in ours, but I don't see any reason why it can't be used for management reporting.

There normally is a problem including marketing allowances from future renewal sales into EV calculations because sales estimates are often subjective.

The classic argument for not including future renewal sales in embedded values is that the stable production from year to year comes from the same customers. Of course, that begs the question, too, because that's what you're trying to change. And a highly theoretical aspect of it is that stock prices already take into account your current earnings as well as your capacity to write new business, so you'll be giving mixed signals to Wall Street.

Here's a list of arguments of why renewal sales should be included in EV. Most of the sales effort is in acquiring the lead. Direct response markets are philosophically different from others. Many sales are based on names already on file or to existing customers. Adding renewals leads to a recognition of the lifetime value of the customer, because you're going to end up with more disciplined models if they're a part of your management reporting.

And, finally, it's unavoidable to take into account lifetime customer value. As you start having changing markets, this is becoming a more dramatic issue. For instance, consider a direct response company that has a very short-term earnings focus. It would do little to generate new names for a year or two. It could live off of the existing names on file for a while, but after about two years, it would run into a lot of problems. That might be an exaggerated example, but through the exaggeration you can see the problems with not including the value of future sales.

Mr. Jaffe: Wow, it makes a lot of sense. Does anybody have questions or want to take exception to what Rob has said?

Mr. Lutek: It was interesting. We don't use an embedded value calculation per se. I've only been with the company four years and when I arrived there was a system in place that we've maintained for monitoring whether we're increasing or decreasing the value of our total block of direct response business. It's a very simple system that predicts the total present value of future margins and the total present value of future premiums and generates a percentage of premium profit.

We track that for all policies that are in force, so every year we repeat this study. We want to know if a policy's been on the books for five years or if a product's

been selling well. We look at the actual premiums received, the actual claims paid, and all the actual values up to the current date, and then we continue the projection from that point forward.

So, on a block that's five years old, we originally had a projected profit margin that was all projection. Now, we have a projected profit margin that's partly fact and partly projection. We can watch over the lifetime of that business to see whether that total present value of future profits is increasing or decreasing. We do that on all the blocks, add them all together, and our management takes a look and asks, "What's the total profit margin that we've developed this year as a result of the new business added, net of what's been lost on the old business?"

It's a very simple technique. It's based on cash items only, which is the surprising thing. We don't touch reserves. We just look at premiums and claims, express the simplest stuff, and the process works. Our management has been able to make the right decisions using this system. We've tried putting the value of the future sales into this calculation, but our management people have steered us away from that right now. They just want to go with the simplest calculation possible, so they can understand it. And they make all the serious decisions about pulling product lines or adding products because of that analysis.

Mr. Jaffe: Are there any alternative profit measurements that people are using similar to EV, such as the one Ben mentioned?

From the Floor: The big problem with using profit margin measures is they ignore the cost of capital. You could be selling a product that's a lot more risky and generating profits, but you don't know how much required capital you're using up. For most companies, that's a major concern. If you're selling a simple product that's been consistent and homogenous throughout the years, you might be able to use a measure like that. But most of the companies that we work with use EV or an ROE calculation, at least as a measure of the profits of the product. You can't ignore the RBC issues.

From the Floor: For the longest time, we had traditional pricing based on Anderson's book on profit-based pricing. About five or 10 years ago, asset-liability pricing came in and that's becoming more and more popular. Do you think that 10 years from now lifetime customer value and EV will be the more popular pricing methods?

Mr. Winawer: EV is completely consistent with Anderson's pricing method. You're measuring the distributable profits to the owner, which is the basis of Anderson pricing.

Mr. Jaffe: And lifetime value is consistent with embedded value?

Mr. Winawer: Lifetime value is a little harder, because you're going to be looking at the future marketing capability. Depending on whether or not you take that into account when you're doing your pricing, it could be integrated into Anderson's pricing.

Mr. Jaffe: For those of us who started out many years ago, Anderson was not the norm. It was quite a shock to read Jim's original paper. But I think lifetime value and embedded value are improvements in levels of sophistication, and they do highlight the need to know more about your business. That's the key point we're talking about. In Rob's presentation, the real value is in management discipline. Management is forced to respond to what's happened and directly take action that will improve the value of the company. So, if you can show that persistency has improved because of actions that you have taken, management will get an immediate hit—to the company's earnings and in the value.

My concern is that managements don't all have that kind of discipline. And there are going to be a lot of them that never have that discipline down to this level. The more you know about your business, the more profitable it will become.

Mr. Moser: When you mentioned that lapse rates got worse, was it because you were using a different method of marketing to these individuals, such as calling them up on the phone versus through direct mail?

From the Floor: It wasn't a different medium. I would say the biggest difference was the timing of it. That was the first time we had proactively gone back to people that far after the point of original sale. We had done some follow-up calls after two or three months. But I think these calls may have started between nine and 12 months after issue. But as far as the medium, the company had been using telemarketing and direct mail communication before that.

From the Floor: Are all riders equal, or do you find better experience with some riders rather than with others? My second question has to do with to whom you target for up-selling. Are you trying to find propensities of people who are in a lower tranche or decile to move them up into the better lifetime value class?

Mr. Jaffe: My experience is that you're going to have several different tranches. There are some people who, no matter what you give them, will buy everything. Those are absolutely your best customers. You can put cans of dog food out there with Lincoln Re or any other company on the labels and they will buy them. On the other hand, you're going to have the extreme on the negative side. You're going to have people who will buy one thing from you and one thing only. And I think the obvious desire is to get the people who will buy one thing and one thing only to move up. You may not be able to do that. In fact, you may wind up definitely with tranches within your customer base.

A model that I use continuously is an inverted triangle. Those at the very top of the triangle I call suspects. And those suspects are approximately 290 million people if you market in the United States. Then you have the next level, called prospects, and those are the people in your marketplace. If you're selling senior products, those are people over 60 or 55 and maybe less than 85. Then you have the next level, called "customers." Those are people who will buy exactly one product or service from you. People at the next level are called "clients," and that gets to your question. The clients are people who have bought more than one product or service. And in your question there would be a tranche. Finally, people in the last level are "advocates," people who will buy anything from you and will tell others to do so, too. So, yes, I think you get into tranches or submarkets. You may not know from the beginning who they are, but they will come through pretty quickly. If you have a name, how many years will you mail to them?

Mr. Winawer: Oh, about two years or more.

Mr. Jaffe: Some companies will go even further than that, Mike, but then they begin to cut it down.

From the Floor: Maybe I'm missing the forest for the trees, but I'm struggling with embedded value. I knew nothing about the concept coming in, so I think, clearly, we're not doing anything with it. But I'm just trying to think of some of the examples that came up earlier. For example, if I wanted to do a rider program, how would it work. I'm struggling with the context. I've got a book of term life business out there, and I want to do some kind of rider program with the idea being that I can improve overall profitability. I'm having trouble seeing practically how I work embedded value into that program.

Mr. Winawer: Actually, that's an excellent example. You wanted to sell, for instance, term life to existing policyholders?

From the Floor: Yes.

Mr. Winawer: Depending on how you're setting your analysis of your business, I think you are using embedded values to a large degree, because you take into account the present value of profits. Granted, it's without the cost of capital, but you're taking into account present value of statutory profits already. What you'd do is project how much you're going to sell, how much it's going to cost you, and the present value of the profits, less the first year of loss or less how much it's going to cost you in acquisition costs. That is the gain to the company.

From the Floor: Right, but where is the embedded value?

Mr. Winawer: The embedded value impact is that value of new business. Your company will grow by that exact amount.

Mr. Jaffe: The biggest value of this comes from the fact that management has a goal for every year to increase the embedded value of the company by so many dollars or whatever the unit of currency. Where are you going to get the biggest bang for your buck? It may even be with something, such as a rider, that will increase the embedded value of the company, relative to what you've spent for it, bigger than any other investment that you might make.

Mr. Winawer: At the beginning of the year, you had nothing but capital and you employed that capital to acquire this business. At the end of the year, you'll have lower capital and surplus and you'll have a value of in force equal to present value of distributable profit.