

RECORD, Volume 28, No. 3*

Boston Annual Meeting
October 27–30, 2002

Session 126CS Implications of International/ Fair Value Accounting Changes

Track: International/Investment/Financial Reporting

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Summary: Major changes to the accounting models for insurance contracts are likely to be adopted in the not-too-distant future—both domestically and globally. Presenters illustrate the accounting outcomes of proposed revisions to accounting requirements for insurance and annuity products and discuss potential ramifications. Specific topics include case study illustration of the accounting outcomes and implications for companies, financial statement users and actuaries.

MS. EMMA MCWILLIAM: I'll give you a brief background on the requirements for those of you who didn't attend the previous session. We'll discuss the recent developments and the timetable because there's been some pushback on the timetable, especially from an insurance point of view. Then I will look at the top ten things you need to know with respect to the Draft Statement Of Principles (DSOP), which is the working document that's expected to form the final basis for the standard for insurance contracts.

How close do you think international accounting standards (IAS) are? Some people think it's 2005. Some people think it's 2007. All European-listed companies have to report under IAS by 2005. That would include any company that's listed in Europe. If you're a U.S. subsidiary of one of those companies, you may be impacted. In addition, Australia and Canada also signed up to this 2005 deadline.

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There are two major organizations that you should be aware of. One is the International Accounting Standards Board (IASB). That meets usually on a monthly basis to discuss the proposals for insurance contracts. Its Web site, which is worth visiting, has got the full DSOP, with the exception of a few chapters. The other organization is the International Actuarial Association, which has the hard task of checking all the guidelines around the implementation of the DSOP. It has prepared some excellent issue papers. If you visit its Web site, you can see some issue discussions there.

Recent industry responses include those from the ACLI. Its first letter trashed the original IAS proposals and tried to push back the deadline. It looks like there's been some success from the industry at large. There's a group of fifteen major chief financial officers (CFOs) in Europe that have been discounting the proposals and trying to push them back. It looks like they've been quite successful to date. They're now working to try to present other solutions to the International Accounting Standards Committee (IASC). I don't know how successful they'll be in getting through anything other than a fair value based approach.

I mentioned the DSOP, which is this working document expected to form the basis of the standards. That is available on the Web. Now, 2005, as I mentioned earlier, is when all European companies are going to have to report under this standard. If you're reporting in 2005, you need two years of prior comparative, so you'd need 2004 results as well. For 2004 profit and loss (P&L), you would effectively need year-end 2003 balance sheet position. It's much closer than people think. It's not really 2005; it's year-end 2003. If you want to practice and make sure that you're not looking into some potential results, then there's a need to start planning now. Similarly, if it's moved to 2007, then the 2003 date becomes more like year-end 2005.

I mentioned that there's been a lot of industry pushback on the proposals. This is a significant undertaking for the market to implement a fair value projection system for companies that don't have cash flow projection systems, especially some of the minor companies within Europe that will have to do this. The IASB has recognized that and is now moving forward with a phased approach for insurance contracts. There will now be two phases. You'll hear the terms "phase I" and "phase II."

They're trying to make phase I as painless as possible, perhaps because they've got a slightly different agenda. They want to push through phase II more quickly. I'll give you a best guess on where the discussions are with phase I at the moment. Companies will report in local GAAP with some changes that make it more consistent with IAS more widely, such as removing things like catastrophe reserve or claims equalization provisions.

In addition to that being in the main reporting accounts, there will be some disclosures. Originally, they were looking to have fair value projection disclosures in the reporting accounts. They don't want to get too sidetracked with what those

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disclosures will look like. For companies currently reporting embedded value results, it looks like they're going to require minimum disclosures around the embedded value results.

The interim solution for insurance contracts, which pushes the deadline for all the hard work back to 2007 for the time being, doesn't let companies off of investment contracts. Contracts that don't have enough insurance risk to be classified as insurance contracts fall under IAS 39, which is in place. IAS 39 covers financial instruments. IAS 39 is currently a mixture of amortized costs and fair values.

There are discussions around what that may look like for such investment contracts. At the moment, it looks like that is going to be in place by 2005, but the IASC has the hard task of making sure that they set an insurance contract definition. It will need to define what an insurance contract is, so that companies can clearly identify which contracts are investment contracts and so fall under IAS 39, and which are not investment contracts that would be falling under the DSOP for a later implementation date.

There are other projects that are under the IASB. There are some 34 standards or so already in place. The IASB is committed to ongoing improvement of those standards. It has an improvement project to review those standards that are already in place. There's been a recent exposure draft release on first-time applications—the companies that are reporting for the first time.

There are many recent projects at the IASC. The exposure draft (ED) is to be released for discussion before the final International Financial Reporting Standards (IFRS) is issued. You might hear people call them "IASB" or "IFRSB." The new buzzword is IFRS. Everybody will know what we're talking about.

The exposure draft is to be released first quarter of 2003 and an IFRS in 2004. The phase II is still to be determined, which is the full implementation of the DSOP. That only looks like it's going to be delayed by a quarter. It looks like the exposure draft for that is going to come out February 2003.

What are the top ten things that you need to know about the DSOP? These are my top ten. First is that this standard applies to insurance contracts, not insurance companies.

Second, this is a single fair value type approach. That's important because that now means that all contracts, such as life and property-casualty, health insurance and reinsurance, will all be accounted for in the same way under this new fair value type standard.

Third, there are two major fair value type approaches under discussion. The first is the entity specific value approach and the second is the fair value approach. The main difference between the two is in the assumptions used in setting the reserves.

In all cases, this is effectively projecting your cash flows going forward and discounting them to calculate your liability as of the valuation date. Under an entity specific value method, you use the company's own experience assumptions. Under a fair value based approach, you use more market-based assumptions.

For most people, in practice, market-based assumptions probably are not widely available. You may not be able to use things like mortality experience and what the market's view is of that, although you would obviously have industry experience studies and things that were, perhaps, available. One of the main differences that is expected between the two approaches is with respect to setting of expenses and views on expenses between companies and allowances as well for things like overruns.

Fourth is adjustments for risks. All actuaries like making adjustments for risk at some point. The buzzword for those is "market value margins." They could perhaps be in one of two places—in the cash flows or in the discount rate. You could also make them in both if you want to, but you have to make sure that you're not double counting.

Fifth is the discount rate that you use for valuing these contracts. This is perhaps one of the more contentious areas, certainly for the United States, because you're going to have to use the risk-free rate, which makes many products that depend on investment returns look not very profitable.

Sixth, on entity specific value you discount at the risk-free rate. On true fair value you're allowed to take into account the company credit standing. Say it's a company with a AA rating. Then you may be able to take into account a AA corporate rating when discounting your liability, which may help make your position look better. That is good news. But then there's been debate, again, over what your credit standard means. Is it your credit standard as a company or is it the credit standard in claims paying ability of an entity? Credit standards could be more along the lines of the claims paying ability. With regulatory requirements in place, companies could effectively say that insurance companies have more like a, say, AAA rating with respect to their claims paying ability because their policyholders rank above other creditors. While there's an argument for using AA, I'm not sure whether that is actually going to come through in practice. The other thing to remember with credit standards is it's a bit contentious in that it gives companies the incentive to get downgraded because if you get downgraded, then you can reduce the value of your liability. I'm sure there should be something somewhere else on the balance sheet to reflect more financial distress in the company.

Seventh is renewals. That's another area under consideration. You're only allowed to include valuable options of policyholders who are actually going forward. On a term insurance contract, that might be something like no underwriting. Generally, this is like they're thinking about it in terms of economic value to policyholders, so renewals are an issue. On the property-casualty side, renewals will reduce their

reserves. They certainly don't want to be reducing their reserves if they're not allowed to hold things like catastrophe reserves either.

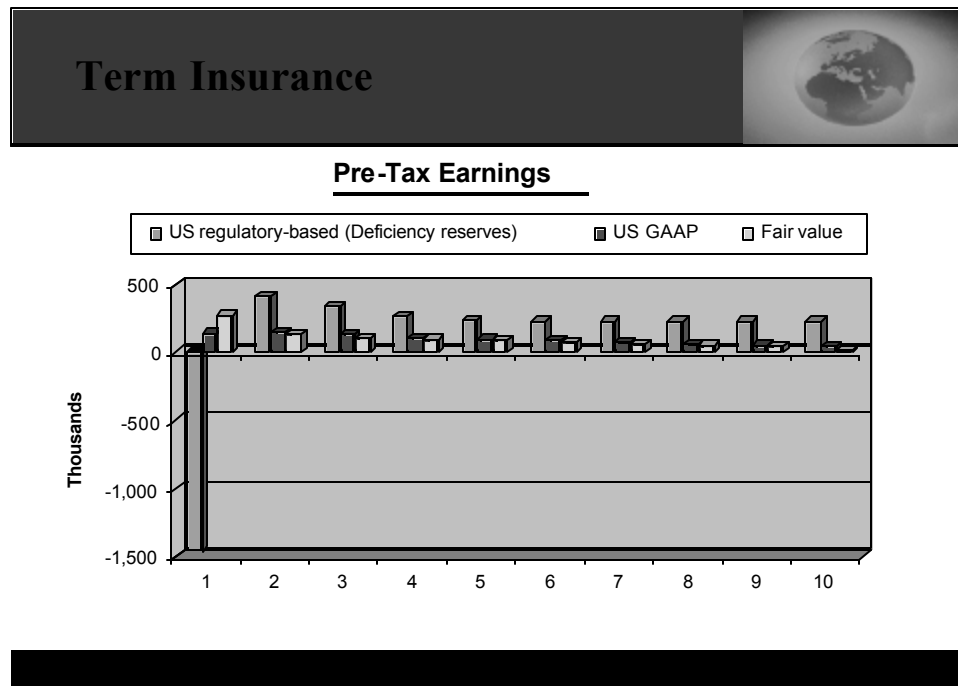
Eighth is option pricing techniques, which have to be used for valuing guarantees and options. For many of us, this is going to be a new area. You will be potentially looking at using stochastic modeling for your year-end or quarterly results. If you've got embedded guarantees and options in your contracts, you're going to have to understand where these lie and where your practical shortcuts can be to get around this.

Ninth, the valuation of the liabilities is independent of the assets backing the business. Irrespective of whether you're in junk bonds or high-grade securities, the value on the liability is exactly the same. That's because you're using the risk-free discount rate and you're not taking into account areas such as embedded value that returns back in the business.

Finally, tenth, reinsurance is reported separately. Therefore, in effect, you are presenting the business gross or net of reinsurance.

Now we're going to show some product illustrations. We're going to look at term insurance products, single premium deferred annuity (SPDA) and variable universal life. I'd like to illustrate in Figure 1 some concepts around changing of assumptions and the pressure that's going to be on actuaries with respect to changing assumptions. Because I'm more from a U.K. background, it's not such a shock to me. It may not be a shock to you if you're reporting embedded values. But it is an area that will place concern and pressure on actuaries offering assumptions.

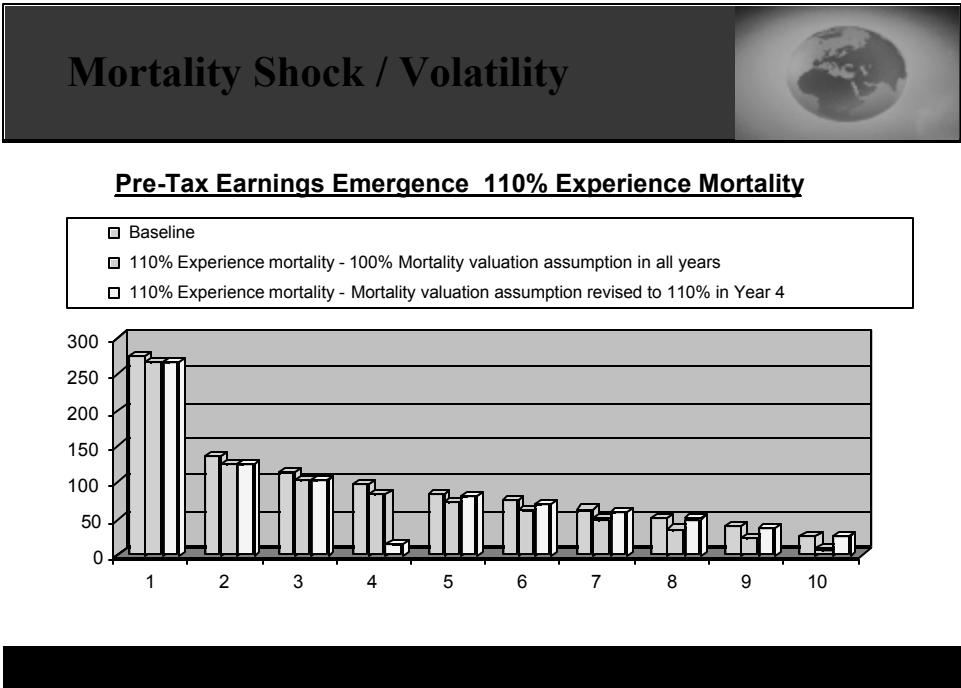
Figure 1



Term insurance products, simple term insurance products, level premium, non-renewable and non-convertible products are all represented. We've got some market value margins in the products as well. For the fair value, we're now allowed to take into account the full premium when we project and calculate the reserves. In the first chart, the left columns show statutory results. Year 1 is affected by deficiency reserves. The middle columns are US GAAP, and the right columns are fair values.

Now we get into the interesting stuff. Figure 2 compares fair value earnings if the mortality experience is 10 percent higher than expected over the duration of the contract. The middle column shows reduced earnings each year. If this is happening and there was no one year to unlock your assumptions, you'd get to this emergence.

Figure 2



Under IAS, you're expected to use best estimate assumptions as of the valuation date. You unlock your assumptions. You have to unlock if you believe that there's been a change in experience and that's expected to go forward. After four years, it is not unreasonable for the valuation actuary to say, "I'm going to strengthen my valuation basis for this 10 percent extra mortality experience." Then what happens in year four is you get that big reduction in earnings emerging because you capitalize in the impact of the change all in that one year. You can see the effects of the assumption change there in year four.

The next example is a single premium deferred annuity (Figure 3). The account value is single premium plus credited interest. We've got a minimum guaranteed rate of three percent and surrender charges that vary by year. We're going to consider what happens if the lapse rate jumps up to 20 percent in year six. In this product, we've got interest-sensitive lapses when the product isn't competitive. We're assuming that the future interest rates follow the forward curve. We've got an investment strategy that is a mix of one, five and seven year A-rated bonds. We're crediting the yield less a spread.

Figure 3

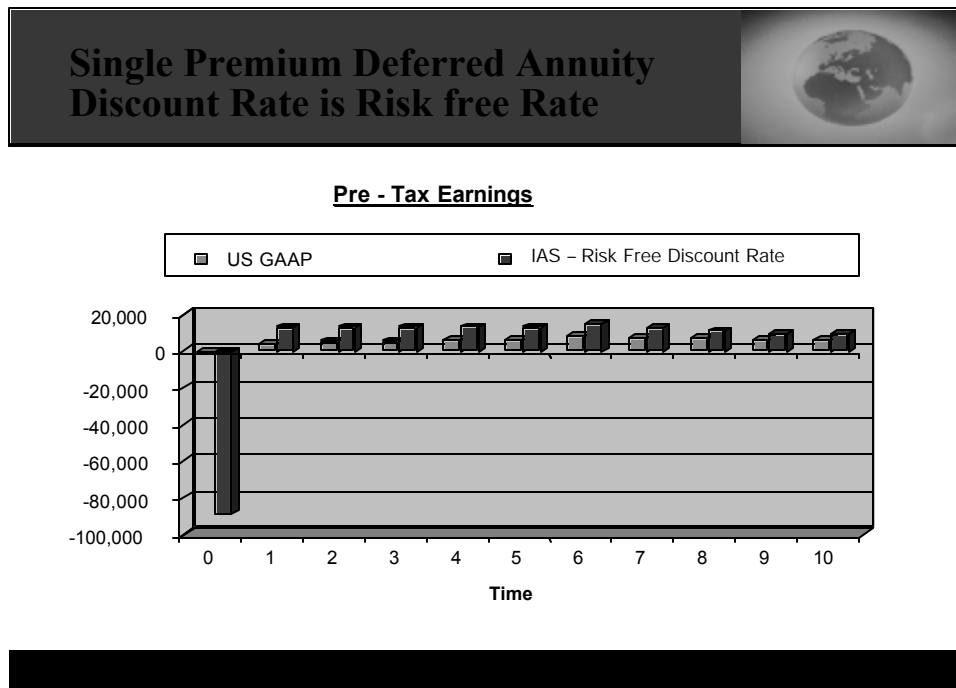
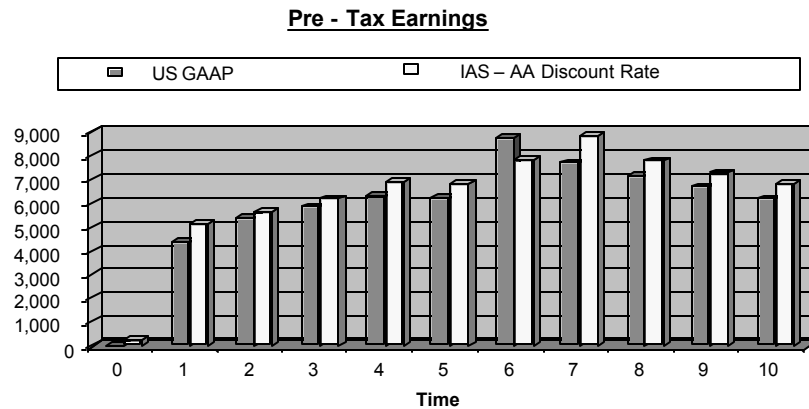


Figure 4, which shows expected earnings, doesn't look so good. We've got U.S. GAAP results and we've got IAS results for entity specific value discounted at the risk-free discount rate. We have negative earnings at issue because you're not allowed to take into account the additional asset credit spreads that you would have otherwise been expected to get because you'll have to discount liabilities at the risk-free rate.

Figure 4

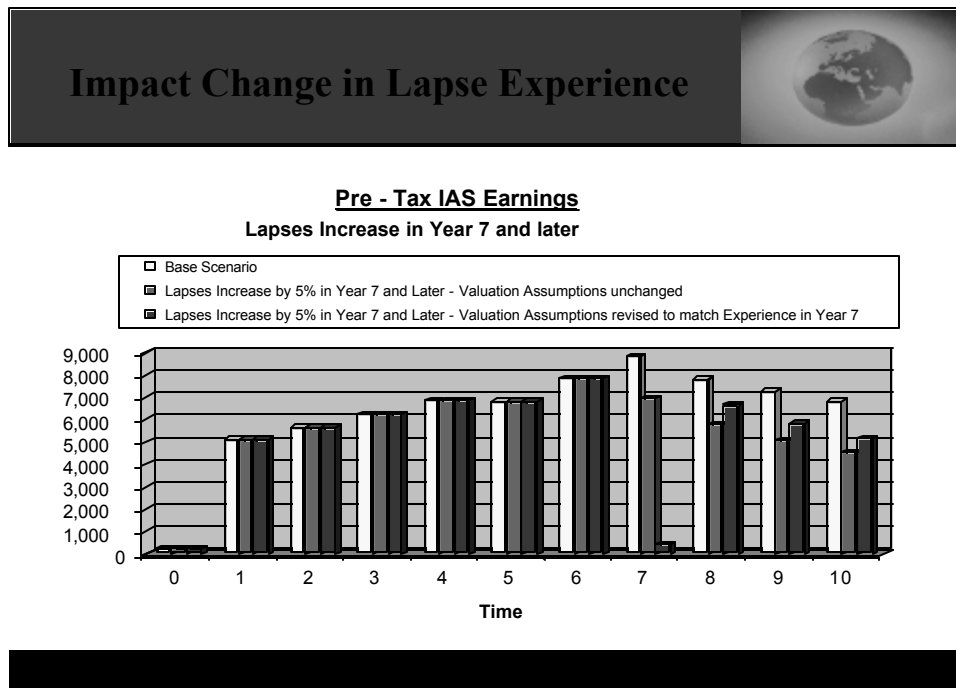
**Single Premium Deferred Annuity
Credit Risk Adjustment – AA-rate**

That is the entity specific value. If now we move over to true fair value, that would be looking at something that allows you to make an adjustment for company credit risk. We're asking if it would be reasonable to use a AA rating. The fair value earnings look much better. Some people might want to argue for fair value rather than entity specific value. Personally, I don't like the effect on credit rating if you get downgraded. But I prefer the higher discount rate.

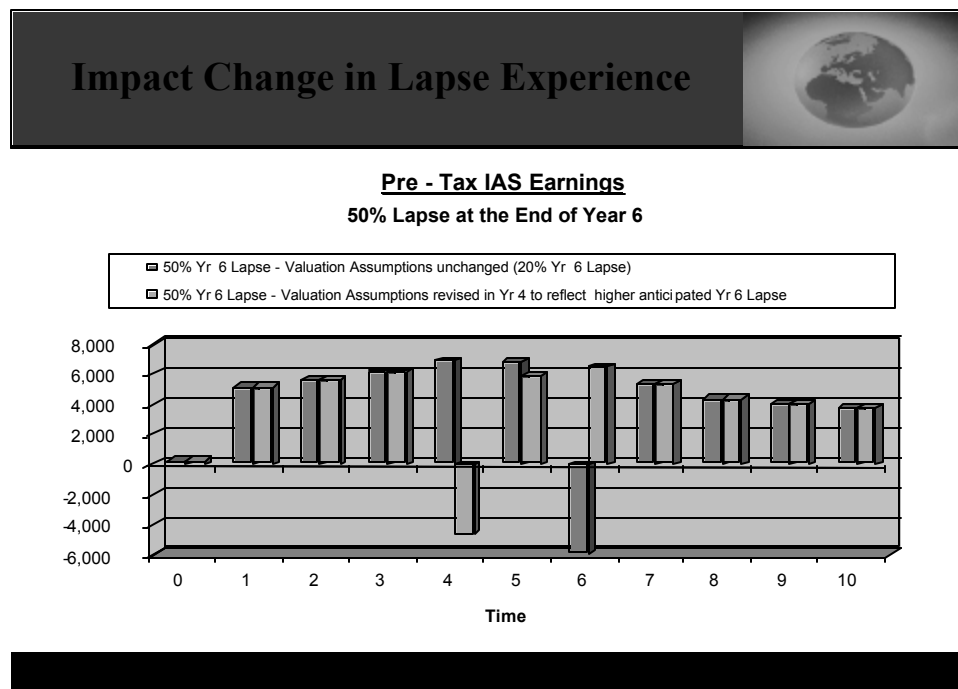
Figure 5 shows the impact of a change in the lapse experience and taking that into account. This chart is similar to the one on mortality experience we had earlier. The left column is the baseline. The middle is the change in lapse experience, without a change in assumption. The right columns show the impact of making the full change to the valuation assumption.

Figure 5



What happens if we can foresee changes that are about to happen, and when do we make those changes? In Figure 6, we've got lapses increasing by 50 percent in year six. If we had anticipated that earlier, in year four, then the actual bottom line impact in absolute terms could have been reduced.

Figure 6



Now consider the impact of different investment strategies on the block. The base scenario is the mix of the one, five and seven year bonds. Now, the assets are invested in seven-year bonds. What happens if interest rates spike up in the third year by, say, three percent? In the case where we're invested in longer-duration bonds, we get a much higher impact in year three. We'd get the reverse impact if interest rates went down.

Finally, on variable universal life products we had similar results to the interest rate shocks. This is actually a bit of a profitable product, so that's why you have got the high profit at issue. I'd like to share with you what happens when you get a shock in equity growth in year four. It flows straight through to the net income.

What have we learned? Actual reported profits under this basis may be volatile. If you're making assumption changes, the impact is going to be capitalized in the year that you made the assumption change. If you're looking at changes in interest rates or the economic environment, changes in the market will flow through to your bottom line. The gain or loss issue on the products is going to be highly dependent on the product design, how much insurance risk you have in the contract compared to the investment component and how much is dependent on additional returns above the risk-free rate to make the product profitable.

There's a large impact to the net income if you change a valuation assumption. If you're more closely matched with your asset and liabilities going forward, then the impact of the changes in the interest rate will be reduced, which may push

companies more toward the closest match position. Finally, large changes in the equity market may cause swings in your results.

MR. ALBERT JOSEPH ZLOGAR: I was asked to talk about the practical implementation and project plan with respect to the International Accounting Standards. I'm going to give you a bit of background on the ING business—the structure and the way we're set up. I will include an overall vision statement, the timetable, the target deadlines and the critical dependencies.

We've divided this thing into about three major phases. I'm going to drill down toward the end on some of the nearer-term deliverables and deadlines that we have, and that's appropriately labeled "phase one."

ING Group is a global financial services firm with headquarters in the Netherlands. We divide the businesses into five executive centers in the Americas, the Netherlands, Southwest Europe, Asia/Pacific and Central Europe. The Americas is further subdivided into Latin America, Canada and the United States. Of course, I'm part of the U.S. business groups. There are several business groups in the United States; I'm in the individual life and annuity business group.

We are kicking off the project with it being controlled at the group level. We are working very closely with the accounting profession in Europe, and there's an actuarial subcommittee. We have a representative on that committee. A lot of the training and the knowledge are being initially done at the group level. It will then be pushed out into the executive centers. Finally, it will be sent out to the business units where we'll have to do a lot of work coming up very shortly.

For any big project like this, you have to have a vision statement. This is not just another accounting project. This is going to be a major issue that will have a significant impact on the management reporting, performance measurement and investor relations in our entire operation. I don't think the enormity of it has hit me yet. We're talking about getting rid of deferred acquisition cost (DAC), the current methodology for deferred acquisition costs and computing everything on a net liability basis. It's a major change in the way we do things.

Currently, we do annual systems requirements. We're lucky we just have to do annual embedded value reporting. Of course, we still need to do the quarterly GAAP, Dutch GAAP reporting and annual embedded reporting. This really is going to be a quarterly fair value, embedded value type of a thing on a real-time quarterly basis. There will be a lot of deadlines. It's going to be a substantial project.

As far as the overall scope, the ING Group chief actuary was given the responsibility to determine and set up the project for contracts, which will include the insurance contracts and the investment contracts that Emma mentioned. The investment contracts will fall under the IAS 39 standards. The insurance contracts are being covered under this DSOP, which is now pushed out to 2007 on the insurance side. The investment contracts are still on a faster track there for 2005, I believe.

In parallel, ING will have a different group working on the banking operation, and then a third group will be working on the asset side. These three groups, the chief actuary on the liability side, the assets and the banking will all come in integrated to get to the finish line.

We're spending most of our time now on education and training, by learning about the standards, all the different implications and training a lot of people on it. For modular training, we are breaking it up into all the different pieces: the DSOP, the market value margins, fair value, entity specific value and all the different aspects. We are breaking it up into smaller units to learn this.

We are beginning to undertake work on the impact analysis. It will start coming to us at the business unit level from the group where we'll have to pick all of our major core products and do the product impact studies, the profit emergence and determine what's it going to mean.

Once we have that done, it will culminate in a report to the board. The report will communicate to the board the initial big issues, any concerns and educate the board as to all the implications of this. Once we successfully get through that, we'll start rolling it out into the next three issues: the more detailed planning and the money you're going to have to spend on doing this, the solutions and implementation.

The deadline for the insurance side on the DSOP is pushed out a bit to 2007. We were expecting to do the impact analysis in October 2002. We haven't had to do that yet. It's going to come to us very soon, in the next couple of months, to work on the impact on the core products. I expect we will work on it by fourth quarter of 2002 or first quarter of 2003.

We're going to be building more of the processes and the design. We will also need to work on the parallel reporting that Emma mentioned for European companies. The requirement for 2005 reporting means that you have to have comparables in your financial statements for 2004 to compare to 2005, which means that at the end of 2003 you have to have your fair value balance sheet so you can do the P&L in 2004. The first-time reporting would be in 2005. Ongoing throughout will be the training.

I'd like to talk a little bit more about the timeline. We were originally going to have an interim solution to report IAS fair values in the notes to the financial statements. That's no longer going to be a requirement now near term. We're still reporting embedded value in our notes as opposed to the IAS fair values. The longer-term solution needs to be ready for the final 2007 deadlines.

We're going to organize this project, too. We don't want to compromise the integrity of the financial reporting, so we're going to put strict controls and

processes in place and try to make sure that any interim results can flow into the final results with no material discontinuities.

Let me explain the hierarchy of this plan. At the top, you have our chief actuary of the group in the Netherlands, and then two different project managers are under her; one is on the systems side and one is on the insurance side.

On the systems side, that's really looking at the actuarial systems. You can imagine right now that we're all equipped to do a lot of modeling and reporting. But to be able to do that on a real-time basis in the middle of reporting is going to require some more substantial changes. That will take some more hardware and software. The accounting and the ledger systems will have to be integrated so that the management reporting will be able to do this brand new paradigm of reporting. It's a change in all of our current integration of the finance and the ledger and the ultimate consolidation in the reporting.

The project management side for the insurance will be pushed out into the different groups. The five executive centers will each have their own systems and insurance project managers as well to get this done at that level.

In the middle, we have the technical specialists and the project manager. There's an actuarial committee now in Europe. We have a representative on that committee so that, at least, we have the real time to know what's going on there and have some input, hopefully.

At the group level, which is in the Netherlands, for the insurance side we have a full-time project manager and a few staff. On the systems side, we have a project manager. At the five executive centers, there will be a full-time manager. Once the systems project manager at the group level looks at things further, my guess is that we'll have maybe one full-time project manager that will handle both the systems and the processes, at least as far as integrating all the deadlines. At my level, the business unit level, there is the local staff assigned to the projects.

The critical dependencies are, of course, that we need buy-in from management. We need to finish the final standard for the insurance contracts, which is the DSOP, the implementation, timing and the interim solutions before the DSOP is finalized. The IAS 39 is for the investment contracts and there will be some amendments to finalize that. We will also need to consider the systems capability and the resources.

For our near-term objectives and deliverables, we want to understand the impact on the profit emergence for the core products. What is it going to do to our economic profit and reporting, our systems impact on resources and technology? A key deliverable as part of this is what's called the "insurance rule set." What we're really developing is an instruction manual of how we're going to implement the international accounting standards throughout ING. That covers the methodology and assumptions, general guidelines and all the rules. We're trying to put an owners'

manual together there. We're going to do the pilot profit projections that I mentioned, all the knowledge sharing and training and systems work.

For the phase I time line, the first draft of the insurance rule set is basically wrapped up and will be sent out shortly to all the business units throughout ING. I understand the first draft of that is complete now, which means we will start doing the pilot projections and that part will be shifted forward into the beginning of 2003, I would think.

The "instruction manual" that I was talking about is the insurance rule set. I want to describe that a little bit. That's a critical document that will be used quite a bit. The key areas there break it down into the definitions, the insurance definition and the classification of all the contracts into insurance versus investments. We're all used to that a bit from FAS-97 and so on. Similar approaches there will be used.

On reinsurance, as Emma mentioned, we'll have to report this on a before- and after- reinsurance basis. If you have intercompany reinsurance, that will be netted out. With external reinsurance, you have to show the impact on the balance sheet and P&L before and after. You need to include all the implications on the financial reporting—what the P&Ls are going to look like, the templates and the balance sheet. The insurance rule set is going to get into all these areas. We're going to take advantage of some work that we had done a couple of years ago on what was called "risk-adjusted return on capital" (RAROC), which had a lot of similarities to this.

We had a rule set instruction manual there that we're going to fold into this and take advantage of that work. Once the rule set is done and distributed, we start pilot projections. For the United States, we're going to be working on our variable annuity (VA), fixed annuity, universal life and variable universal life products. There will be a lot of sensitivity testing on the in force and new business. We'll be doing sensitivity tests on the various critical assumptions on the DSOP—the market value margins, the discount rates, all those types of things—to get a feel for how this is going to work. We want to compare and be able to show management the differences between our current Dutch GAAP reporting and this new standard.

Some of the initial concerns and issues include the profit and loss issue, the profit emergence and the volatility in earnings. We're all used to that now. This will bring in even more uncertainty. The entire paradigm for pricing and product design will have to be reexamined. Profit sharing refers to experience refund type of business. Other issues are performance measurement, capital management and systems and technology requirements. These are all major concerns. It's remarkable to me that this is going to be out there. The analysts and so on have enough trouble understanding insurance earnings. When we bring this in, it will be interesting to see how it unfolds.

Our next step is to roll out the insurance rule set. We'll get our marching orders on the pilot projections and the impact analysis. That will probably move ahead a little into 2003.

MR. DOUGLAS C. DOLL: Tillinghast does a lot of embedded value reviews for companies, and its rule of thumb on embedded value is you have to do it for about three year-ends before you get the model stabilized. It seems like when comparing the first two years of the actual results to what the model had predicted, you find a lot of improvements you can make to your model.

A growing number of companies are using embedded value as one of their ways of measuring financial performance. I've heard it said that fair value is not much different from embedded value. In fact, there are some significant differences in fair value versus embedded value, at least as far as how embedded value is typically calculated these days. We ought to think about whether any of those differences in fair value are worth adopting for embedded value. That's going to be the basic theme of my presentation.

I'm going to first talk about fair value versus traditional actuarial appraisal values. I'm using the terms "actuarial appraisal value" and "embedded value" a little interchangeably throughout this presentation. I'm going to give some additional examples of fair value methodology on the value of new business.

I mentioned embedded value, but you can generalize embedded value to be discounting profit using a hurdle rate or a cost of capital discount rate. I also will refer to this as the traditional method of actuarial valuation. In a sense, the embedded value, or actuarial appraisal value, has become the standard approach to measuring the economic value of insurance companies for lots of different uses. Those uses include product pricing, appraisals, financial reporting for the companies that do embedded value reporting, internal performance measurements and even risk and capital management to the extent that the amount of capital you hold governs the cost of capital that all these other calculations take into account.

It's been argued that the actuarial appraisal value is an appropriate method to determine the fair value of liabilities. In other words, if you've got the appraisal value of a block of business, then the fair value of the liability is simply the market value of the assets less the appraisal value. That gives you the value of your liabilities. That's been called the indirect method, as opposed to the direct method of simply looking at the liabilities by themselves and discounting the value of those liabilities.

This indirect method, so far, has been rejected as a basis of fair value accounting. The main reason for the rejection is that the actuarial appraisal method links the assets to the value of the liability. A number of people don't like the idea that you can effectively change the value of your liability by changing your asset from one kind of asset to another kind of asset. But I do think that with the indirect method or the actuarial appraisal method, even if the direct method ends up being chosen,

we still may see that used as a means of calibrating the market value margins in the liabilities.

The indirect method can be shown to be mathematically equivalent to the direct fair value method. There have been articles with the formulas for how you can show that mathematical equivalency, but sometimes the equivalency can only be shown using unrealistic assumptions.

Sometimes just adjusting the discount rate is not a viable option. For example, let's say that the insurance company sells a bond that can borrow money at six percent and invests in equities that are assumed to earn eight percent. The net impact at the beginning of the year is zero, but your expected profits are two percent. What discount rate do you discount that two percent back to get the appropriate value of zero?

Now, the counter argument to that is, if we really were in that situation, we'd have to hold capital to reflect the mismatching, and there may be a discount rate that will make it equivalent. That's true, but it still boils down to the fact that you have to do the fair value measurement of both the assets and liabilities to determine what the appropriate discount rate is that gives you that equivalency.

For practical purposes, if we want to look at pricing of products on a fair value basis, what I've also called a "market-consistent valuation basis," what conditions does that impose? One condition it imposes is that your risk margins on your assets are not earned at issue. In other words, the value of a \$1000 Treasury bond or a \$1000 BBB-rated bond is \$1000. The impact on the value of the company today is not influenced by whether or not you've invested in treasuries or BBB bonds. It affects the value of your company in the future because your expected returns are different under those two types of assets, but it doesn't affect the value of the company today.

The value of the liability is a mean expected value. I don't think there's any quarrel with that. A market-consistent discount rate, if your liabilities are not correlated with the market, may be the risk-free rate. However, we do have the limited liability put option that the company might default on its payments to the policyholder. Emma already discussed this as the company credit rating. We can value that by putting a credit spread for the company onto the discount rate, plus any market value margins that might be appropriate.

In a fair value valuation system, there's no provision for a cost of capital. In fact, in an insurance company environment, there is a cost for holding capital. There are actually two costs that you can name right away. One is the taxation on interest. Assets backing capital earn investment income, but that investment income is taxed. That's a cost for holding capital. Plus, the market will impose a cost of capital, sometimes called "agency cost," which is the risk that the company management might do something bad or wrong with that capital. Various articles have said that cost could be somewhere between zero and two percent per year. If

Implications Of International/ Fair Value Accounting Changes **18**

we're going to be looking at valuing our business on a market-consistent valuation or a fair value basis, that might be something we have to add in on top of fair value accounting for liabilities. As Emma already mentioned, there might be possible assumption differences, with expenses being the most likely candidate.

I've done some profit analysis with sample products. If you want to do this yourself, there are a couple of simple adjustments you can make to a profit test to see what it might look like in a fair value environment. Simply discount your profits at the appropriate liability discount rate and assume that the assets earn the same rate. When you think about it from the asset point of view, if you're assuming the assets are earning the same rate that you're discounting back at, then the asset cash flows are going to replicate the asset market value. This also gives you a cost of capital equal to the tax on the interest assumed earned on the capital. If you want to add in additional agency cost on that, we can do that as an adjustment at the end. As Emma mentioned, the fair value environment has scenarios that must be market consistent or risk neutral.

The first sample is a variable annuity product (Figure 7). In a traditional environment, we might have assumed that the general account earned interest rate is seven percent. There are funds in the separate account that are earning nine percent, and, if this were an embedded value calculation, we might be discounting the profits back at a nine percent discount rate.

Figure 7

Variable annuity specifications

- Issue age 60
- Premiums = \$50,000
- Acquisition expense: \$150 per policy plus 8.35% premium
- Maintenance expense: \$90 per policy
- Fund loads: 1.50% plus \$30 per policy per year
- Surrender charges: 7, 6, 5, 4, 3, 2, 1, 0%
- Lapse and partials: 5, 6, 7, 8, 9, 9, 10, 37, 22, 17, 15%
- Profit test: 20 years

Traditional: 7.00% general account interest, 9.00% fund growth,
9.00% discount

Fair Value: 5.50% interest/fund growth/discount (risk-free rate
instead of company credit rate)

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On a fair value , we might assume that all these rates are equal to the risk-free rate of, say, 5.5 percent. Since this is a performance-rated contract, that is, all the risks of the asset are being transferred onto the policyholder, then the company credit spread does not come into this calculation.

As we look at the results, we find that there is not much difference in results between a traditional approach and a fair value approach (Figure 8). The traditional valuation has an internal rate of return of 13.6 percent, and the present value of distributable earnings at a nine percent discount rate is equal to .90 percent of premium. On a fair value basis, the value of this product at issue is .77 percent of premium. That is not a whole lot of difference. If you think about it, that's because our primary source of profit on this product is the asset charges—the mortality & expense (M&E) and other charges on assets. If we're assuming those assets are growing at the same rate that we're discounting, it doesn't matter that we're growing them at nine percent and discounting at nine percent, or if we're growing them at 5.5 and discounting back at 5.5. Either way, you get about the same answer.

Figure 8

Variable annuity results

Traditional		Fair Value
IRR	PV @ 9%	PV @ 5.5%
13.60%	.90% premium	.77% premium

Change in Value:	
Cost of Capital	.18%
Surrender Charge	.05
Maintenance Expense	(.14)
CARVM Adjustment	(.34)
FIT Timing	.11
Each 1% Agency Cost	(.07)

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I did look at the components of the change in value and tried to break it down into what was causing the profit to go up and what was causing the profit to go down. The cost of capital actually caused the profit to go up some because the cost of capital in the fair value calculation was smaller than when we were using a hurdle rate of nine percent. The surrender charge is a gain to us, but we're discounting at a lower rate so that's worth a little bit more to us in a fair value environment. Maintenance expense is an outlay that we're discounting now at a lower rate so that actually depresses our profit.

The big change was in the commissioner's annuity reserve valuation method (CARVM) adjustment. In the typical variable annuity profit test, you have the entire account value in the separate account. It's basically assuming that you borrowed the asset to put in the separate account from the general account. In a traditional profit test, effectively you're borrowing from the general account at a rate of interest, say, seven percent, put into a separate account where it's assumed to earn nine percent and you get some leverage there. In the fair value valuation that goes away, so you lose that benefit. The federal income tax (FIT) item, I think, is just the DAC tax—it has a different value when you discount it at a different rate.

If you want to do some additional cost of capital due to agency cost, every additional one percent agency cost of capital would have reduced the fair value by seven cents. That is not very much because variable annuities don't have much capital.

The next example is a guaranteed minimum death benefit (GMDB) (Figure 9). I tested five different benefits—a return of premium, an annual ratchet benefit, a roll up at a five percent rate, the ratchet plus the roll up and back to the return of premium—but we assume that the return of premium was already 20 percent on the money. That represents where a lot of products are today.

Figure 9

GMDB specifications

Same underlying VA as prior example

- ROP: Return of premium
- Ratchet: Annual ratchet
- Rollup: 5% annual rollup
- Both: Ratchet plus rollup
- ROP Drop: Return of premium with initial 20% fund drop

Traditional: 9.00% mean fund growth and discount, 14% fund volatility

Fair Value: 5.50% mean fund growth and discount, 16% fund volatility

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For traditional valuation, assume the nine percent underlying fund growth rate and a discount rate, and assume that the funds had a 14 percent annual volatility rate (Figure 10). For the fair value we go back to the risk-free rate, 5.5 percent, for the new fund growth and discount rate. We have to use the implied volatility now if we're going to be valuing the options represented by this guaranteed minimum death benefit. I've just assumed that the implied volatility of the funds was a little bit higher at 16 percent annual volatility. We get a fairly dramatic difference in the cost of this benefit from the traditional actuarial approach versus the fair value approach. I don't think this is a shock to people because we are finding companies that have decided to try to hedge their guarantees on their variable products and then, when they go to the capital markets and attempt to hedge, they find that the cost of that hedge is, in fact, much larger than what they had been assuming is the cost of this benefit.

Figure 10

GMDB results — cost of benefit as % of fund

	Traditional		Fair Value
	Mean	90%	Mean
ROP	.01%	.03%	.05%
Ratchet	.05	.09	.13
Rollup	.06	.20	.22
Both	.08	.20	.25
ROP - Drop	.09	.20	.19

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Many people, when they priced these benefits, didn't price using the mean cost. They priced using something higher than the mean cost. I'm not sure if too many of them priced as high as using the 90th percentile cost, but even if you had used the 90th percentile cost for these benefits, the fair value cost or the capital market cost of these benefits is significantly higher, except for the return of premium, which is 20 percent on the money. In that particular case, the fair value cost is roughly equivalent to the 90th percentile cost.

My last example is a general account SPDA product (Figure 11). For this particular product, if we assume an earned rate of 6.75 percent and a credited rate of 5 percent, it has an internal rate of return of 12.6 percent. The present value of distributable earnings at a nine percent discount rate is 1.31 percent of premium. It's not unusual for SPDAs to have credited rates that are equal to or in the vicinity of the risk-free rate. It's crediting the risk-free rate. How does it manage to achieve a 175 basis points spread?

Figure 11

SPDA traditional results

If earned rate = 6.75% and credited rate is 5.00%

IRR = 12.6%

PVDE @ 9.00% = 1.31% premium

How to get 1.75% spread (credited rate = risk free)?

- Lots of credit risk
- Duration mismatch (?)
- Lower renewal rate (?)

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In today's environment, companies are achieving that by, primarily, taking on lots of credit risk.

To some extent, especially with today's yield curve, you can get some extra spread by a duration mismatch, which is having the duration of your assets longer than the duration of your liabilities.

Third in priority is that perhaps the company might be crediting five percent, assuming a spread of less than 175 basis points in year one, expecting to increase the spread in later years. I don't think that's very common today and, if it is, it's a fairly small effect.

We're assuming that the company needs 175 basis points or reasonably close to that to achieve its spread. What kind of assets is it going to have to invest in? For a BBB asset, the expected rate of return net of expected defaults and net of adjustment expense is only 160 basis points.

Let's say a BBB asset portfolio is what it takes to be competitive in the SPDA market today. What does that mean now if we evaluate this on a fair value basis? If we use the asset earned rate and discount rate that reflects the risk to the policyholder, we assume that this company is AAA, AA or A rated. If the company is an A company and, therefore, has a 150 basis points credit spread to the policyholder, we can get the same profitability at issue on this product that we were showing previously. But if the company is AA or AAA rated, it's going to show a loss at issue (Figure 12).

Figure 12

SPDA fair value valuation

Use an asset earned rate and discount rate that reflects the risk to the policyholder

Rating	Spread	No Agency Cost	1% Agency Cost
AAA	88 bps	(1.53)%	(1.91)%
AA	108 bps	(.60)	(.98)
A	150 bps	1.31	.93

Value is the same as traditional if we assume an “A” spread. Can companies rated AA or better sell this product? Alternatively, are corporate bonds worth more when held in an insurance company environment? (And, how much does this valuation rely on book value accounting?)

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That raises the question, can companies that are rated AA or better sell this product? Can they come back and say, "This fair value analysis is all wrong. Corporate bonds are worth more in an insurance company environment than they are if you want to look at corporate bonds just by themselves."? Then you can raise questions about what causes this to happen. Maybe it's because insurance companies don't have to have the liquidity in corporate bonds because they're matched against the illiquid policyholder liability. Maybe it's because of the book value accounting that insurance companies enjoy. That then raises the question, if we actually switch to fair value accounting, will some of these advantages that we have go away? It does raise a lot of interesting questions.

If you're a AAA-rated company and you sell this SPDA, that means you're borrowing funds from your policyholder at a risk-free rate plus 175 basis points. Why would you want to do that when you can just go out to the debt market and borrow money at an 88 basis points spread and invest that in corporate bonds? That gives us some interesting things to think about.

This trend towards fair value accounting does suggest possible enhancement to traditional actuarial appraisal techniques. It would behoove us to go back and look at the risks that we have inherent in our cash flows on our products. Take a look at the credit risk that we are assuming on our assets that we hold, but also take into account the credit risk that we're transferring to the policyholder.

We ought to take a hard look at the materiality of valuing financial options and guarantees using techniques consistent with capital market prices. Finally, if we do

all that, we need to have methodologies for valuing our cost of capital that's consistent with the points above.

FROM THE FLOOR: What are the implications of all of this for U.S. companies that are subject right now just to U.S. GAAP? Is it coming to U.S. GAAP? Is it inevitable? Is it a 50/50 chance? Just what's the prognosis?

MS. MCWILLIAM: FASB has recently come out in a press statement with IASB saying that they're going to work together on any new future standards that come out. For the U.S. market, it's probably not going to be here soon unless, of course, you've got a listing or you've got some subsidiaries that are listed on one big standard and trying to raise capital in Europe.

The main concern is that FASB may try to get some of these fair value approaches in by the backdoor and use the IAS standards as a way to get something in that maybe otherwise it wouldn't have been able to have in.

MR. DOLL: Recent FASB statements have been adding fair value to various things. We have FAS 133 fair value derivatives, FAS 115, a fair value on certain categories of assets, and the recent FAS 142 on goodwill has to be justified on a fair value basis. It's not going to happen by 2005, probably not by 2007, but the long-term trend seems to be in that direction.

FROM THE FLOOR: If discounting at a risk-free rate is right for the liability, why is it wrong for the asset?

MR. DOLL: My personal opinion is that it's not right for the liability, so I'm guessing that you're asking from an accounting point of view why it is right for the liabilities.

FROM THE FLOOR: No, not from the liabilities, the assets.

MR. DOLL: If you want to assume that the asset earned the risk-free rate, then yes, you could also discount those earnings back at the risk-free rate and do the same market value. Most assets have a visible market value that we can point to. We say we know what the market value of those assets is. If you want to project the cash flows and discount back and try to arrive at that same market value, there are a couple of ways you can do it.

You can discount the expected cash flows. Let's say the risk-free rate is five with a corporate bond with a rate of six. You could either discount those six percent coupons back and then you have to risk adjust your discount rate, which means you're using a six percent discount rate, or you could adjust the cash flows for the riskiness, which means you assume you're earning five percent coupons and you discount that back at the risk-free rate.

MS. MCWILLIAM: The main difference is that on the asset side you do have the market value that is observable and on the insurance side you don't have that.

What they're trying to say is that nobody gets anything for free in this world. If you take on additional risk, then there's a price associated with that.

FROM THE FLOOR: As I think about this risk-free rate, one of the things I'm concerned about is that it could drive the companies or the product development process to pursue things that are not necessarily logical from a real risk assessment perspective. I assume the lower your risk-free rate is, you're basically saying, "Don't make long-term guarantees because those liabilities are going to seem a lot more expensive than they really are." I would assume, eventually, it is going to drive product development and other design decisions to provide pretty lousy long-term guarantees so that you don't mess up your accounting statement. Are any of these issues being discussed by the International Accounting Standards Board, or is that part of the ACLI's message?

MS. MCWILLIAM: I agree with you. The issues have been raised. There are companies also looking to implement similar frameworks where they consider the economic value of their business. They're facing the same concerns when it comes to things like performance measurement on this sort of basis because you're effectively saying that. Most of the insurance companies in the past have depended on these additional returns. If they're not going to be measured on a basis that now reflects those, are you actually going to say they're going to drive out this market? For the company as a whole, that might be the wrong decision. It's almost like moving the performance measurement from the underwriting and the people that are writing the insurance business over into the investment management or Treasury side of a company. That's where they're going to see the benefits of it going forward rather than on the insurance side.

Interestingly, some companies have been concerned that in order to reflect renewals in the valuation, some companies might now start to offer loyalty by providing a back-ended guarantee to make sure that they can take into account future renewals. Product design is a concern.

FROM THE FLOOR: Were you projecting the liabilities going forward at the risk-free rate as well? Not just discounting back, but the value going forward?

MR. DOLL: What kind of liabilities?

MR. ZLOGAR: For variable annuities, you are.

FROM THE FLOOR: Deferred annuities, universal life, any of that? Are they of any interest to the product?

MR. DOLL: Universal life is an interesting one, as is an SPDA, if the credited rate is linked to the asset earned rate, because then you have to decide if you have risk in your assets how much of that you will actually be able to transfer to the policyholders. It's as if the expected earnings rate does not materialize. It's probably easiest to visualize the impact of the risk-free rate and the credit spread if

you think about, say, an SPDA with a several-year guaranteed interest rate on it. The cleaner example is the pay out annuity where, from the insurance company's point of view, those liability cash flows are fixed, and what discount rate we should discount at.

FROM THE FLOOR: In order to gain buy-in from senior management, what messages need to be delivered to senior management? Do any of them have the potential for change in behavior?

MR. DOLL: Maybe we could split that between the companies that are impacted by the European standard and stand-alone U.S. companies.

MR. ZLOGAR: I think it's going to come down to some of these issues that are still open for discussion on discount rate and the risk-neutral pricing, and how it's going to impact the products. The product projections and impacts will be very important. If it changes the current mix or focus of products because of the profit pattern, that will drive some of management's behavior. I'm still wondering how the whole analyst community or the financial community will start to view insurance company earnings now under this new paradigm. It's hard to predict how that's going to impact and drive behavior. I have to believe it will change things, but how that's going to happen exactly will be interesting to see. This is such a big change in the way volatility of earnings and that kind of thing are viewed.

MR. DOLL: I was going to make that same comment relative to the U.S. stand-alone companies because I don't see management getting too excited by this. From my own point of view, it's several years down the road. As far as the theoretical framework, until the rating agencies and analysts start asking or viewing products this way, I think we will continue to see U.S. GAAP be dominating—the traditional actuarial approach being used.

MS. MCWILLIAM: I'd like to respond to that comment on the United States and European companies. Something that I observed very early on, about a year ago, was whether or not European companies should work together with U.S. companies because obviously there are going to be some arbitrage opportunities in the market. If you get to understand how the European companies are going to be measured, then you might have an advantage over them or they might have an advantage over you that you want to learn. If you're acquiring a company in Europe, then you're going to want to understand the financial. That would be something to consider as well.

I think people realize that this is an enormous process and it's much better to work together on this. It is important for everybody to understand it together. Companies are working together rather than alone.

FROM THE FLOOR: Obviously, big changes are coming down the line. The Canadian financial reporting system is currently one of the closest systems to fair

value. My comments are thinking about the future where assets and liabilities are both on a fair value basis. I think the concern about earnings volatility disappears.

On the one hand, if both assets and liabilities are built with a concept of matching assets and liabilities, then the volatility is not going to come from the left side and the right side of the balance sheet fighting against each other. I think the volatility occurs, when we see this in Canadian financial reporting, when you suddenly realize lapse experience is not at one level. It's just jumped to another level, or mortality has just changed from one level to another because that impact is front-ended at the moment you make that reflection in the fair value of the liability. That's where the volatility comes from. Quite rightly, it should pop into the financial statements at that moment.

I listened to the session earlier at this meeting with respect to analysts' views on financial reporting. The presenter followed the Canadian market considerably. He outlined some of the things that he saw going on in the marketplace. It seemed to be complimentary about some of the types of disclosure that are coming up on the Canadian side now. I think these things can be addressed. I think the a number of the analysts are moving in the direction of understanding much better the earnings analysis flowing from things like Canadian GAAP. It's a learning curve for each one of us.