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## **Session 35PD**

### **Fair Value of Insurance Liabilities**

**Track:** Financial Reporting/Investment  
**Key words:** Financial Reporting, Generally Accepted Accounting Principles (GAAP), Valuation of Liabilities

**Moderator:** ZAIN MOHEY-DEEN  
**Panelists:** DOUGLAS C. DOLL  
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**Recorder:** ZAIN MOHEY-DEEN

*Summary: The SOA has recently conducted a call for papers and subsequently cosponsored a conference on the fair value of insurance liabilities. This session presents an overview of the conference, including a comparison of some of the methods presented. The session also provides a status update of recent industry and professional activities and what the future may hold for the use of fair value of insurance liabilities in insurance company financial statements.*

**Mr. Zain Mohey-Deen:** The SOA and the Salomon Center at New York University (NYU) held a conference on the fair value of insurance liabilities in December 1995.

Doug Doll will give us an overview of the conference, highlighting some of the major valuation methodologies. Doug is a principal at the Atlanta office of Tillinghast-Towers Perrin. He was the chairperson of the SOA Project Oversight Group (POG) on Fair Value of Insurance Liabilities.

Bob Wilkins is a project manager at the FASB and a member of the American Institute of Certified Public Accountants (AICPA). He has worked on the *Financial*

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†Mr. Wilkins, not a member of the sponsoring organizations, is a Project Manager of Financial Accounting Standards Board in Norwalk, CT.

*Accounting Statement 115* and will likely be the project manager that brings any request by life insurance companies regarding the valuation of liabilities to the board's technical agenda. Bob will give us an overview of the major issues in fair value of insurance liabilities regulations. He will also give us an update on current regulatory activities in this area.

**Mr. Douglas C. Doll:** I'm going to go over the conference that was held in December 1995 at NYU that was jointly sponsored by the Salomon Center at NYU and the SOA. First of all, let me give some background for that. The SOA set up a research project to address the issue of fair value of liabilities. There was a POG set up. I was the chairperson, and other members were Dennis Carr, Klaus Shigley, and Irwin Vanderhoof. We decided that the best way to address this would be to do a call for papers on this subject. Later, we decided that it would be a good thing to take these papers and have a conference. I give a great deal of credit to Irwin Vanderhoof, who organized the conference. It was basically his idea and he pushed it through. Much credit should also go to Warren Luckner, who's also on the SOA staff. Warren put in a great deal of effort towards organizing all of this.

Why did we decide to do a conference at the NYU Salomon Center? The concern we had was that if we did a call for papers on the fair value of liabilities and had a SOA seminar to discuss the results, what we would have is actuaries talking to actuaries and nothing would come of it. The desire was that the conference would serve as a medium whereby actuaries could discuss this issue with members of academia, the accounting profession, and various government bodies. In that regard, I think the conference was a big success because we had about 150 attendees, and only about half of them were actuaries.

The proceedings from the conference will be published by Irwin Publishers and should be out later in 1996.

In my opinion, the cornerstone paper was submitted by an AAA task force. This task force actually preceded the SOA POG. It was formed shortly after FASB came out with its exposure draft of *FAS 115*; *FAS 115* is the statement that requires some assets to be marked to market. Shortly after the exposure draft came out, the AAA Committee on Life Insurance Financial Reporting sent out a couple of letters to FASB. In these letters, committee members basically said that it's not appropriate to mark assets to market without doing something with the liabilities, and they offered to assist FASB with determining how liabilities should be adjusted. That offer was not accepted and *FAS 115* was finally issued in May 1993.

The AAA formed a task force to do a white paper on how liabilities should be adjusted; the idea was that this white paper would just address all the issues.

Coincidentally, the completion of that white paper was about the same time as the call for papers through the Society. We were very fortunate in getting this paper. The AAA paper took an academic approach to the issue. It was not restricted to methods that would “work under current GAAP,” and it also did not come to a conclusion about what the best approach was. The paper simply listed the various approaches and the advantages and disadvantages of each, but did not take a position on them.

The paper described three kinds of methods. The first method actually was a category method called *mitigation methods*. These methods would work more or less within the current GAAP framework and would basically offset the distortions introduced by *FAS 115*. The other two approaches are more direct approaches to determining what the fair value of liabilities should be. The first one is called the *actuarial appraisal method*, and the second is called the *option pricing method*. I’ll describe those shortly.

Let me briefly go over the mitigation methods. There were five of them listed. The first was the interest maintenance reserve (IMR) method. Those of you who are familiar with the IMR and the statutory statement will catch onto this quickly. The bottom line is this method would simply set up a liability that would exactly offset any change made to the assets; both realized and unrealized gains in the assets due to interest rate changes. There would be a liability set up that would run off over the remaining term of the assets. If you had a ten-year bond and you had unrealized capital gain set up on your asset side, then you’d set up this IMR and that would be amortized over ten years. That method would just get us back to old-fashioned GAAP earnings and net worth.

The market-yield-adjustment method would take the difference between the book yield and the market yield on the assets and use that difference to adjust the liabilities. If you had a particular interest rate that you were using to discount the liabilities, say 8%, and the difference between market and book value on the assets was 75 basis points higher, then you would use 8.75% on the liabilities. That method would allow for some discontinuity in GAAP earnings if there was a mismatch between the assets and the liabilities.

The market-to-book adjustment method simply would multiply the liabilities by their ratio of the market value of assets to the book value of assets. That would offset most of the adjustments caused by *FAS 115*.

The deferred acquisition cost (DAC) offset method is the method that we actually now have under *FAS 115* where the change in assets can be used to amortize the

DAC. The offset is some percentage of the change in assets, but it varies company to company and product to product.

The index valuation method would define the liabilities as a present value. It would be a discounted cash-flow method for evaluating liabilities, and the interest rate used for that discounting would be based on an external index. It wouldn't be linked to a company's actual assets.

There are various strengths and weaknesses of each method. I guess the primary strength of all these methods is that they more or less preserve current GAAP principles and the incidence of earnings under GAAP. The primary weakness is that all these methods fail to address the true economics of the liabilities. That is, when you issue a liability, the current GAAP earnings can show no gain or loss at issue unless there's a recoverability issue. These methods would all preserve that. Also there's no valuation of any options in the liabilities under any of these methods.

Let's turn to one of the two main methods outside of the mitigation methods, the actuarial appraisal method. Most of you are probably familiar with actuarial appraisals, that is, projecting distributable earnings of a life insurance company and discounting them back at the risk rate of return. That's the appraisal value of the company. The appraisal method would just use that to implicitly derive the fair value of liabilities. That is, the fair value of liabilities was equal to the fair value of assets minus the appraisal value, or the present value of distributable profits.

The advantages of the actuarial appraisal method are, first of all, that actuarial appraisals are well-established actuarial methodologies. There are recognized techniques for how you perform them. There's a clear link of the actuarial appraisal method to pricing techniques. The method incorporates statutory reserve methodology and cost of capital. Essentially, the actuarial appraisal method would put the GAAP value of an insurance company equal to the "real life value of the company," or the value of the company if it were to be sold on the market.

There are several disadvantages to the actuarial appraisal method as a GAAP reporting methodology. First, it's unclear what discount rate should be used. Companies do have their thoughts on what the discount rate should be, but there's no objective standard. Second, the fair value of the liabilities is dependent upon the fair value of the assets. Many people just feel that the value of the liability should be independent of the value of the assets. Finally, the dependence on reserves and required capital or required surplus is regarded by some as a disadvantage.

The other main method is called the option pricing method, which simply discounts the liability cash flows where the discount rate would be at a Treasury yield curve

plus a spread, a spread typically called the option-adjusted spread. In option pricing methodology, of course, if you have options in whatever it is you're valuing, then you also need to use multiple interest scenarios that are arbitrage free to value those options.

If you have fixed cash flows, a single interest scenario would suffice. The advantage of this is that it's a theoretically sound basis. It's consistent with what's used in capital markets to value other financial instruments. There are some insurance instruments that trade in secondary markets; primarily GICs, and I understand that option pricing methodology can be used to value those GICs; it's a basis that's well-established.

Another advantage is that this unlinks the liability from the assets so the liabilities stand on their own. Actually, sometimes the cash flows for the liabilities are connected with the assets, so it's somewhat hazy in those circumstances as to the way we manage to unlink the liabilities from the assets. But, in general, this method unlinks the value of the liabilities from the value of the assets.

The main disadvantage, I think, is, again, the option-adjusted spread or the ultimate discount rate you use to discount these liabilities is unclear. We don't know for sure what that discount rate should be. Also, it ignores capital requirements in statutory reserves, and that seems to be a real world impact on the value of a life insurance product; that seems to be a disadvantage. The third disadvantage is that option pricing methodology is fairly complex.

Let me discuss discount rates under option pricing. The AAA paper listed several possible choices for discount rates. Actually, I don't have all of them, but I have the main ones and not in any particular order of preference. Let me describe the rationale behind these six discount rates. The first choice is the risk-free rate. That assumes that company management intends to honor the policy obligations. It's conservative, objective, and it has a lot going for it. But, in the real world there is some default risk associated with the life insurance company, and there are some other considerations that might argue that the discount rate should not be a risk-free rate.

The second choice is the company cost of debt. This could be considered a proxy to the claims-paying ability of the company, but it ignores the fact that policyholder claims are higher in order of priority than debtholders. That's probably not a very good choice.

The third choice is an asset-based, option-adjusted spread, either gross or net of expected defaults. The advantage of this is that it does tend to link the value of the

liability to some value or estimate of profits that the company's going to get. The disadvantage, of course, is this has a direct link to assets. Again, there's some desire to come up with a fair value liability that's independent of the value of the assets.

The fourth choice is cost of funds. This is an interesting one and many people use this for pricing analysis. This assumes that at issue the fair value of liabilities equals the value of the premiums. In other words, the value of the contract is exactly what the policyholder pays for it. That, too, has a big advantage of objectivity. One of the disadvantages of this is that it wouldn't be consistent among companies, and also it gets away from the concept that a company might sell a contract that results in a gain or loss at issue.

The fifth choice is imputed quality rating, either industry-wide or company by company. Using a rating agency for some idea to come up with a default evaluation still has the disadvantage of being somewhat subjective.

The sixth choice, the base capital asset pricing model (CAPM), was not in the AAA paper, but there was a separate paper at the conference that addressed that.

A paper, "Allowing for Asset, Liability, and Business Risk in the Valuation of a Life Company" by Shyam Mehta from the December 1995 Conference on Fair Value of Insurance Liabilities held at New York University, looked at the value of liabilities. Basically, he used the option pricing methodology on assets and liabilities cash flows. Nobody has any question on how assets are to be done, but for coming up with the liability cash flows, he had some unique ideas at the conference. He first argued that we should consider risk as being either diversifiable and therefore there should be no spread of Treasuries in discounting those risks, or systematic. For systematic, we should use the CAPM to come up with the discount rate. The CAPM states that the required return is a combination of the risk-free rate and a market rate, and it's weighted by a systematic risk factor which is called beta.

Mehta's point was that once we come up with these discount rates for assets and liabilities, we can combine those and come up with a discount rate to be used for discounting profit. He was trying to connect the option pricing method and the actuarial appraisal method by coming up with a rationale for how you choose the discount rate for the actuarial appraisal method. I just gave a very simplistic example.

In this particular case, if the fair value of the assets was \$100, and the spread to Treasuries was 100 basis points, and if we had a fair value of liabilities at \$90, and the spread to Treasuries was 0, then the discount rate we should have come up with for discounting our value of surplus of \$10 is 10 percentage points. The weighted

average spread of assets and liabilities gives you the surplus spread. If the risk-free rate was 6% here, Mehta would argue that when we discount profits, we should be discounting at 16%.

It's still not clear in my mind exactly how we come up with these discount rates for liabilities. Mehta had some examples there, but it still seems to be fairly subjective as to what discount rates he would use, for example, on mortality. Because mortality is basically a diversifiable risk, you could argue that there's a slight systematic risk there. Maybe if we have a recession, the mortality might go up slightly. Some small margin gets added on to the risk-free rate for discounting mortality benefits, but what that margin should be is difficult to determine.

I think the best thing about this approach is that, if your company has a well-established cost of capital requirement, you have this situation. The cost of capital is, say, 16%. Let's say that all meshes nicely. If the company were to be considering a more risky asset strategy, where the spread on the more risky assets is 150 basis points instead of the 100 basis points, then this structure would say use 21% for discounting those profits instead of using 16%. There are some good ideas here for evaluating how you might change your cost of capital requirements for different asset strategies.

At this conference, most of the papers had discussants. David Babbel was the discussant for the Academy paper, and he made some interesting points. One was that he noted that the value of a corporation consists of three pieces. The first is a liquidation value. And that's the value of the assets minus the value of the in-force liabilities. If you were to liquidate the company, that is the value. But there are two other pieces. One is the franchise value, which is the ongoing ability of the company to produce new business, the value of the company as a going concern. The other is the put option. This is the ability of the company to go bankrupt, if you will. In other words, the company can take a risky strategy, and if it wins, it gets all the gains from that win. If it loses and the loss exceeds the capital of the company, that's a maximum loss. You can't lose more than all the capital you have, so there's some value to that put option.

David asserted that when you look at an actuarial appraisal value, it includes some elements of items number two and three, the franchise value and the put options. His assertion was that when you try to compare appraisal values to option pricing values and they don't match, it is because they're not supposed to match.

For accounting purposes, David preferred the liquidation value, and he said that we understand that we have to go to the option pricing method. He had some thoughts on what the discount rate should be. I think his first preference was the risk-free

rate for discounting liabilities, but later he asserted that maybe we could add, say, 30 basis points for a liquidity risk and 20 basis points for a company default risk to the policyholders.

Jim Hohmann and Bob Reitano, who are the two co-chairpersons of the AAA task force that developed the AAA paper, and who made presentations on the paper at the conference, did make some rebuttal remarks to David Babbel's comments. Their comments were basically that the capital structure of a company is legally required and is important. There is evidence that the buyers of life insurance companies do pay attention to things such as statutory reserves and required surplus. They gave evidence on regulatory initiatives such as Guideline XXX where reserves on term policies are going up, and we see examples of premiums going up in response to that.

With regard to GIC contracts that are traded in the secondary markets, there are observable market prices, and the discount rate being used is not the risk-free rate of return. Obviously, there is some additional spread to Treasuries on liabilities, and assets do have spreads to Treasuries for reasons other than default risk. For example, collateralized mortgage obligations (CMOs) have spreads to Treasuries for the prepayment risk. Municipal bonds have negative spreads to Treasuries on account of the tax advantage that they have. Therefore, there can be other reasons why liabilities might have spreads that are different than the risk-free rate of return.

I'm through with the AAA paper. I'm actually not going to cover the majority of the papers at the conference because there were several papers that presented single approaches, but, in the end, all those approaches are either a mitigation method, an appraisal method, an option pricing method, or some combination of those. Most people were expressing opinions as to what they thought was the best. There were a couple of additional papers that I think are worthy of discussion here.

One is Dave Becker's paper. Dave has written a fairly lengthy paper on a concept called option-adjusted value of distributable earnings. Dave is basically looking at the actuarial appraisal methodology. He is considering the shareholder dividends, the cash flows to and from shareholders or owners of a life insurance company, as basically defining the "financial security" involved here. He would then project those distributable earnings out and discount back at the cost of capital rate, or maybe a risk-free rate of return plus an option-adjusted spread that at issue replicates the cost of capital. If the cost of capital is 12% and the risk-free rate is 7%, he then would discount at the risk-free rate plus 5%.

In Dave's paper, he does this using arbitrage-free stochastic interest scenarios so that he values the options embedded in both the assets and the liabilities. Dave is a



proponent of using arbitrage-free scenarios for that. I'm going to make an editorial comment here and say that I have some reservations about that. I feel that the cost of capital rate that he's starting off with is derived from various sources. But whatever the derivation of that cost of capital is, I suspect it's not linked to the use of arbitrage-free interest scenarios. It's probably more linked to "realistic" interest scenarios expected by the investors in the company.

Dave wrote a very large paper, and he's expanded it to talk in generalities about just option pricing methodology, and he also shows a number of uses of option-adjusted value of distributable earnings for company management purposes. He wrote an article on option-adjusted value of distributable earnings that appeared in one of the section newsletters a couple of years ago, although it escapes me now as to which one that was. I think it was in *The Financial Reporter* newsletter.

The last paper I want to address is actually not a paper in the conference. It was an article written by Luke Girard of Lincoln National in the March 1996 issue of *Risk and Rewards*, the Investment Section newsletter of the Society of Actuaries. The article is entitled "Fair Valuation of Liabilities—Are the Appraisal and Option Pricing Methods Really Different?" He starts with the definition of appraisal value, or discounted distributable earnings (DDE), and recaps it into a formula. It's equal to required surplus plus one minus the tax rate— $K$  being the tax rate—times the market value of the assets, minus the market value of the liabilities, plus a tax basis adjustment.

The clever thing that Luke does, and this is the first time I have seen it in an article or a paper, is that in his liability cash flows he takes into account a number of things that we know are required in distributable earnings. He includes a capital charge as one of the liability cash flows. He also includes such things as investment expenses and expected default costs. Last, he discounts at an asset option-adjusted spread. When you do all that, your valuation of the liabilities can use standard option pricing techniques.

But with this discount rate, plus all the other things he's added in—tax cash flows, capital charge, cash flows, and so on—you will end up back at the actuarial appraisal value. His conclusion is we should get over this argument about appraisal value versus option pricing methodology and just concentrate on settling the assumptions. Of course, the key assumption here is still going to be what the discount rate should be. Because he comes up with this capital charge, he's taking the cost of capital as a given, that's part of the cash flow. You still would have to settle on what that cost of capital charge should be.

There was a great deal of theory discussed at the conference, but attendees did have one session at which they could discuss the real world. Denny Carr made a presentation about how the ARM Financial Group uses fair value of liabilities in its financial statements. The ARM Financial Group was formed in late 1993 with the purchase of Integrity Life and National Integrity Life. Their in-force business is primarily single-premium deferred annuities (SPDAs) and payout annuities. Most of their assets are available for sale.

The company was formed in late 1993. When interest rates went up in 1994, their stated GAAP equity went significantly negative because the value of the assets went way down while the GAAP value of liabilities was unaffected. So ARM decided to present a second balance sheet in addition to the normally stated GAAP balance sheet. In the second balance sheet the liabilities were valued at fair value. The methodology used was on the payout annuities that didn't have any options in them, they were just fixed cash flows. The ARM paper discounted those cash flows using a 30-year A-rated bond rate, although Denny tells me that they have subsequently shifted to using spot rates, basically an A-rated bond discount rate.

For the SPDAs, the ARM paper discounted the GAAP margins at 13%. The 13% rate was some rate to reflect the risk in the SPDAs such as the lapse risk. That hidden value of the future GAAP margins was put into the balance sheet as an asset. So the value of the liabilities, in essence, is the account value less its present value of future margins.

Peter Duran with Ernst & Young is ARM's auditor. He also made a presentation at the conference. He basically asserted that in the absence of specific guidance from FASB, the auditors will generally accept different methods. But there are certain things that they look for if you want to make a statement of fair value liabilities in your statement. They look for reasonableness, of course. They also look for objectivity, consistency, and specificity. For example, the 13% that ARM is using for its SPDA margin is arbitrary to some extent, but at least it's consistent. ARM is going to have to use that 13% from year to year. I guess the A-rated bond rate for the payout annuities is not consistent, but it's objective and reasonable.

That's all I wanted to cover from the conference. As I mentioned, there were some other papers there. Zain had articles in both *The Financial Reporter* and *Risks and Rewards*; it was the same article that appeared in both newsletters in the March 1996 issue that summarized the conference. He had one-paragraph summaries of some of the other papers. All in all, the conference was a great success.

Bob Wilkins also made a presentation at the conference. Our primary goal was to have him at the conference so you could be exposed to all these issues, but we

were also interested in hearing where FASB might go with some of these types of techniques. I'm interested in what's happened since December 1995.

**Mr. Robert C. Wilkins:** Irwin had asked me to give a few comments about the FASB insofar as several members of the audience might not be fully aware of who we are. You're aware of the fact that we do set the rules, the standards for financial reporting to investors and creditors, which we refer to as general purpose external reporting. Of course, we have nothing to do with the statutory reporting to regulators. We are an independent, not-for-profit organization. We actually have nothing to do with the government even though Doug kind of grouped us over there with the government types. Some people think that the *F* in FASB stands for *federal* and not *financial*.

We are independent and were set up in 1973 to take over the standards-setting function from a group that was under the AICPA. We have a rather elaborate due process that we have to follow. Our board members are appointed by our board of trustees, and the trustees come principally from our sponsoring organizations. You perhaps may have seen some recent articles that pointed out some conflict between our trustees and the SEC.

The chairperson of the SEC suggested that perhaps we needed to have more independent trustees not connected with different business organizations who have certain business interests as their background because the trustee function is a part-time function. There have been a number of articles in *The Wall Street Journal*, *The New York Times*, *The Times Journal*, and *Business Week* that focused on this.

The bottom line is that we are independent, as are all of our seven board members, the ones that actually make the decisions. They have to make decisions by a "super majority" vote, two-thirds of the majority; that requires five out of seven to agree before we can come out with the standard. They are full-time employees and sever all their business relationships. I cannot get five board members together in a room to talk about a critical issue because technically they could reach a decision. I can meet with smaller groups, less than five, but I can never bring a larger group together unless it's announced in advance and it's open to public observation. We typically hold our board meetings on Wednesdays in Norwalk, Connecticut, and we typically have a number of people in the audience following the various projects that we're getting involved in.

What's peculiar about the FASB is that we set rules, but we don't enforce them. We have no enforcement authority. Basically, the authority for our rules comes from two sectors. The AICPA does recognize our rules as establishing GAAP, and the code of ethics for CPAs requires them to apply our standards. Then the SEC, which

has the legal authority under the Securities Act to set accounting rules for publicly traded companies, has acknowledged the FASB as the institution that sets GAAP as well. That's the peculiarity—we set the rules, but we do not enforce them.

We try to provide many opportunities for people to give us input, and so we never come out with the final rule without first exposing a proposed rule for public comment. We are very close to doing that on the project that I'm now heading on hedging and derivatives. We'll be able to release the proposed rule about June 20, 1996, and then we will give 16 weeks for people to read that proposal and comment. We like comments both pro and con; we look at their input and ask, What should we be doing? What's faulty with our rationale?

In any case, we do operate in the sunshine and try to solicit input. We also frequently will hold public hearings where people can come before us and talk about their ideas. What's most important is we try to be available for questioning so we can contrast the comments we get from various respondents to better understand the particular accounting issues that are under debate in a particular project that we're focusing on.

Let's discuss the fair value of insurance liabilities. We don't have a standard that really focuses on that, yet it's not a new topic to us. Earlier in this decade, in the early 1990s, we had two projects that did focus on fair value and fair value of liabilities. The first was a project that focused on disclosing the fair value in footnotes of financial statements. That, obviously, led us into the area of liabilities. It turned out that with respect to insurance liabilities, the FASB punted—it exempted disclosure of the fair value of liabilities from insurance contracts in the scope of that document because it knew that there was not agreement about how to do that. With respect to insurance contracts, the FASB took the fair value of liabilities out of the scope of our requirement. We still addressed other aspects, and some say we were slightly inconsistent about other liabilities where fair value needed to be disclosed.

The second project was the one that Doug also referred to, *FAS 115*. I also happened to be the project manager on that one. We had started out with that and became involved with it because people were somewhat ignoring the literature insofar as they were using cost basis for securities that they then turned around and sold. Technically, if you're going to be selling them, you shouldn't be having them at cost; they should have been at the lower cost or market according to the then existing rules. We were very much involved with the project on investments, debt, and equity securities with the idea of the FASB members that they thought that fair value was the most relevant information to give investors. When the value changed, the entities were either better off or worse off because perhaps you chose

a fixed-rate versus a variable-rate instrument, or you chose a long-term versus a short-term rate. You're either better off or worse off because of what happened with the interest rate movements, and that ought to be reflected in the balance sheet.

Of course, when we pursued this more, and it's very clear that people did correlate their asset/liability risk management, the majority are repricing characteristics of their assets as well as their liabilities. If we're going to have the assets go to fair value, then we strongly felt we needed to do something on the liability side. Again, we ran into some of the problems when determining fair value of liabilities. Since we were looking at investments only in debt and equity securities, not loans or real estate investments, you wouldn't want to have all the liabilities be at fair value. You would have to decide which liabilities relate to the investments in debt and equity securities.

We have a couple of particular problems. Insurance was one principal area of difficulty. Banking was another, particularly with respect to checking accounts or demand deposit accounts. Many banks wanted to assert that the fair value of your passbook savings account was less than what was payable on demand. In other words, if you had \$1,000 in your passbook account, they know they're paying very cheap rates on those funds. They wanted to say that these funds will persist for a while—even though they're withdrawable on demand, they expect them to be here for a certain number of years. The funds are a cheap source of borrowing and the fair value of this liability is not the \$1,000 that could be withdrawn tomorrow. Instead, the fair value is only \$950 because it's a cheap source of funds and they expect it to be around a while. Banks wanted to anticipate the forbearance of the depositor in withdrawing these funds, so we had a problem area with respect to insurance contracts.

I will talk about one of the problem areas with respect to insurance liabilities, and Doug referred to this when he talked about the actuarial appraisal method. We have regular liaison meetings with a number of organizations; the AAA meets with us annually, as does the ACLI. The actuaries have told us that, in their view, the fair value of the liability should be determined by the composition of the assets that were held. This is interesting because Doug pointed out this linkage as a disadvantage. Yet, when we had liaison meetings with various groups with actuaries, the assertion was still made that the fair value of the liability should be dependent upon the composition of the assets held.

I understand that you may use that approach in looking at a particular company and with the work that you do, but the FASB members were bothered by that. They felt that the liability evaluation ought to be totally independent of or at least not directly related to the composition of the assets held. In other words, you wouldn't look at

the yield off your assets in determining the discount rate that ought to be applied in determining the fair value of the related liabilities. That was one problem that existed. We also were aware of the fact that there were differences about how you determine fair value of insurance liabilities.

Also, in much the same way as we talked about how the fair value of a demand deposit liability should not be less, or a passbook account should not be less than the amount payable on demand, FASB members said that if you have liabilities for which there are cash surrender values, shouldn't there also be a floor on the fair value of the liabilities equal to the cash surrender value? If a policyholder can surrender a policy and get a cash payment, and that's his or her option, he can do it tomorrow. The fair value of that liability should be an amount payable on demand if the policy is surrendered. A number of insurance representatives disputed that and said, "No, that's not appropriate because it is in no way probable that everybody's going to surrender his or her policies. Furthermore, when they surrender their policy, it's not like simply pulling money out of a savings account, they're forgoing the ability to continue to get insurance coverage at a specified premium rate level."

In any case, because of these problems, we dropped our original goal of trying to have all assets, all investments in debt and equity securities, have a fair value. We did issue *FAS 115*, which was an asset-only approach. It wasn't long after that we received a letter from 13 life insurance companies that said we need to address the fair value of liabilities. Certainly their focus was the liabilities that are related to the available-for-sale securities that are reported at fair value in the balance sheet under *FAS 115*. They weren't talking about all liabilities, and, of course, their focus was on insurance liabilities.

We tried to avoid very narrow projects. If we were going to look at the fair value of liabilities, we would probably do so broadly for multiple industries across the board. That's typically the way we approach things. When we get a request for an agenda project, and this was a request that we put a new project on the agenda to address fair value of liabilities, we do have to bring that back to a public board meeting so that the board members can decide what to do.

We received this request in July 1993, and, of course, we just issued *FAS 115* at the end of May 1993. If we had done that then, I suspect that they probably would have turned it down because they knew that they had run up against a brick wall trying to do that the year or two prior. The AAA testified at the public hearing that we held onto our exposure draft, indicating a willingness to try to come up with a method. The FASB still went ahead with *FAS 115*, but it knew that this undertaking was still in the plans.

The ACLI agreed to serve as a kind of umbrella organization under which this topic could also be pursued by those who were interested in it. When we knew that these research efforts were under way, we put off and did not hold an agenda decision meeting with the FASB members on this letter request that we had received from the life insurance companies. Unfortunately, it kept dragging out. We thought we would get something within a year, and of course, it went much longer than that, but that was fine. We held off until we received the results. We did receive the AAA paper that was discussed at the December 1995 conference; we actually received it about the middle of 1995.

We have now heard from the ACLI that it is unable to identify a single method that would work for all liabilities. The ACLI said, in part, that while certain methods worked for some liabilities, and other methods worked well for different liabilities, members couldn't agree on a single method. When we asked them to give us information on which methods worked well for which types of liabilities, they declined. At this point in time, we have officially received nothing from them with respect to the efforts that the ACLI oversaw. This is all background.

One other area where I think it's going to bring this fair value of liability issue to the forefront for insurance companies is the current project on hedging and derivatives. Our proposed standard will require that all derivatives be at fair value. For those that are hedges of assets or liabilities, the change in fair value of the derivative would go to earnings, but you would also be able to accelerate recognition of changes in the fair value of the hedged item.

I will give you an asset example. If you hedged an asset and if the derivative lost \$40, that loss would go to earnings. But if the hedged asset gained \$40, as would be the expectation if it's a good hedge, that increase of \$40 on the hedged item also goes to earnings. The net impact on income is zero. If the hedged asset increased by \$50 rather than the \$40, you would recognize only the amount to the extent of the offsetting loss on the derivative. You would still recognize only \$40 of the \$50.

Our proposal will let you recognize changes in value of the hedged item. However, the board did say the hedged item needs to have a reliably measurable fair value. Because of the difficulties, or the differing views, about how you determine fair value of liabilities for insurance contracts, the board members said one may not designate a liability on an insurance contract as the hedged item for a fair value hedge. We also have another type of hedge called *cash-flow hedging*: where there's a variability in future cash flows, you can hedge that variability. That is open for a possible designation, but just in terms of hedging assets or liabilities.

I wanted to point out that our proposal will put friction on the fact that you can't hedge liabilities from insurance contracts. I'm differentiating insurance contracts from, say, GICs, because those are investment contracts. You could designate those as a hedged item. But, in any case, it seems to me that the issue of the fair value of insurance liabilities is one that we will probably receive some further comments on. It would not surprise me that the comments we acquire on our proposed standard will encourage the board to work on this, so that the opportunity to be able to designate the liabilities as hedged items would exist. By the way, keep in mind you can always designate the corresponding asset as the hedged item. I was just pointing out you can't designate the liability for an insurance contract as the hedged item under our proposal.

Our project on hedging and liabilities is new in the sense that we have an exposure draft out now. We've been doing this project on hedging itself for about four years, and it's only now that we're able to come up with an answer, an approach for which we have five board members willing to support the approach and the proposal, so I do see some tension there.

Let's return to this letter we received from insurance companies saying that we need to add a project. We had talked about this in December 1995 and the plan was to bring it up in the third quarter of 1996. Why then? Why not last December? Well, our board members serve for a term of five years. Just by circumstance, we have two board members whose terms are expiring. One is completing his second term, which is the maximum period he can serve, so he has to leave the board. A second decided he wanted retirement. He's already had a career at Lockheed, and now he's had five years with us and he wants to retire. We are losing two board members at the end of June and getting two replacements on July 1, 1996.

We thought that we ought to wait until we get the new board members on board so that then we can have the seven board members who will continue going forward; let that group make the decision about how they're going to allocate the resources. The fair value of liabilities is only one of a myriad of topics that had been recommended to us to look at. We are completing some work on our securitization project, the transfer of assets document. That should be coming out as a final document next month. We will have some staff resources available to pursue new projects, but we have a number of candidates, and the FASB has to decide how to allocate resources and which projects it wants to undertake now versus at a later date. We decided it made more sense to wait until we had the new board members to let that group make the decision.

That was a decision we made in December 1995 to say that the letter from the life insurance companies would be considered in the third quarter of 1996. It wouldn't



surprise me that we might put that off another quarter. The reason is because of this proposal on hedging and derivatives that, to me, puts stress in the fact that we need to come up with a reliable measurement of the fair value of insurance liabilities. This is because they, too, would be eligible to be designated as hedged items.

I would expect to receive many comments on our exposure draft, but the comment period on the exposure draft does not end until October 11, 1996, and people typically take their time to analyze our proposals. We typically don't get the comment letters in until very close to the deadline. Since the deadline is in the fourth quarter, I suspect we'll probably hold off to see what kinds of comments we receive that focus on determining the fair value of insurance liabilities in response to this proposal. That's why it wouldn't surprise me, if once we get the seven FASB members together and we point this out to them, that we might decide to wait until the fourth quarter before actually asking the FASB to decide whether or not they wished to undertake a special project to focus on the fair value of insurance liabilities.

I do not have a crystal ball. As I said, I suspect if we had asked the question of the FASB when we first received the letter in July 1993, the FASB would have said no. But a great deal has happened and we've received a great deal of input. We received good input from the December 1995 conference and it continues. As Doug also commented, there are still papers being written. The topic is being debated and the more input we get, the better position we are in to decide whether to move forward. That's really the story from the FASB side. We don't have an answer for this issue.

Obviously, as the conference pointed out, there are diverse possibilities, and I'm not sure exactly what procedure would be followed, so I wouldn't expect anything in the very near term. As I said, I would expect some discussion of this issue in the fourth quarter and will probably decide whether or not we want to devote resources in this direction versus somewhere else. This is something you can keep in mind when you receive our exposure draft on derivatives and hedging, and send your comments to us. This is an area you might want to focus on.

**Mr. Irwin T. Vanderhoof:** I think several things need to be said about the December 1995 conference and about the quality of that conference. First, and to me most important, the whole topic of fair value of liabilities would not have the prominence it has and deserves without the work of Doug Doll. I don't know that his efforts and accomplishments in this area have been adequately recognized. I certainly want to recognize them now.

I have a couple of things to mention about the conference and the topic. Bob Wilkins was there, but also Tracey Barber was there. I don't think that name has been mentioned. Tracey Barber is the person at the SEC who works on fair value of liabilities—fair value for insurance companies. This is important, I think, because the SEC doesn't have any objection to companies actually experimenting, even going so far as experimenting in financial statements supplied to stockholders. There is not a bar. You can't say, because you have not been given permission, you can't do it; this doesn't work that way. The fact that you haven't been given permission to do something specific means that if you want to do something reasonable, you are allowed to do it subject to the normal disadvantages of being sued for putting out false financial statements. But if you get something through a reasonable auditor and it's a reasonable method, you can provide that as supplementary information.

How important is it? One of the speakers at lunch at the conference was Derek Kirkland, a principal at Morgan Stanley who's their contact for the purchase and sale of life insurance companies. He made one comment that I think is crucial and that is, the value of GAAP equity for investors and for investment bankers has been compromised by the failure to have a fair value of liabilities. The ARM Financial Group, as represented by Denny Carr, started reporting the fair value of liabilities because they saw their GAAP equity go from \$110 million at the beginning of the year to -\$20 million at the end of the year, and back up to \$100 million positive at the end of the next year. They felt that this just didn't make any sense, so they set up the system of fair value of liabilities so that the GAAP equity would bear a better relationship to what was going on in the company. I think that's important.

I think Kim Staking, who was one of the discussants at the conference, has a paper which shows that stockholders do seem to pay some attention to asset/liability management. If you are showing a fair value for liabilities and you are properly matched between the assets and the liabilities, the GAAP equity doesn't vary a great deal based upon changes in interest rates. If you're using a statutory basis only, then there's going to be no change in your capital and surplus on account of any change in interest rates, it doesn't tell you anything. If you have fair value on assets and fair value on liabilities and you're not matched, then your statements are going to show that you're not matched. That's the one way that the investors can see that the company, in fact, is properly managing the asset/liability matching problem. It's a plus and it's important to investors.

There are companies that are providing fair value of liability information to management. Merrill Lynch Life provides this information to management, but it's not published in their financial statements or provided to the stockholders. You are allowed to do it if you try to provide it and find one of these methods that are

included in the papers that Doug got going. You may find one method that works for you and another does not. If you find a method that doesn't work or fails, for heaven's sake, get it to Mr. Wilkins because he needs to know.

Unless the financial reporting actuaries start experimenting with this, and start finding the things that work and the things that don't work, then all of a sudden something is going to be imposed, which may turn out to be very poor indeed, and it certainly will not be as good. As a result, it could be achieved if people check with their own companies and managements to find out what seems to work. Go and try it out because if you don't try it out and find out what works, then somebody's going to hand you something that you may not like at all.

**Ms. Charlene Marie Barnes:** I have a couple of questions. The first question is, I have a problem with using the company's cost of capital to measure the fair value of liabilities. My reason is this—if you use the company's borrowing cost or whatever, the worse shape that company's in, the higher this rate's going to be, the lower the liability is going to be because you're creating surplus, but this surplus is not going to be available to bondholders or shareholders in general. How do you respond to that?

My second question is about hedging for liabilities. Has any thought been given to equity-index annuities? There are basically perfect hedges that are available that offset the liability, and won't necessarily have anything to do with the assets.

**Mr. Wilkins:** Let me make one comment, and then we'll let Doug take over. Your first question goes at an issue that we looked at, but did not resolve because we have different views. How should the fair value of a liability be impacted by a deterioration—should we say a change—in the creditworthiness of the issuer?

Some people believe if the creditworthiness of the company deteriorates, it's appropriate to recognize, in essence, a gain on the liability. As you were saying, the corresponding impact will be increasing shareholders' equity. Some people will say that makes no sense; as a company goes down the tubes, you're going to say that its shareholders' equity increases. But typically, when it suffers this impairment of its creditworthiness, there have already been other losses that have been recognized that have reduced shareholders' equity. By reporting the liability at a fair value, using a discount rate that recognizes this increased riskiness, you are, in effect, reporting the reality that the impact of this is being borne not only by the shareholders, but also it is being shared with the debtholders. It's appropriate to go ahead and mitigate some of these decreases in the shareholders' equity that has already been reflected by other losses. Some people would say there's nothing

wrong with that. If somebody was the holder of this debt instrument, they would recognize a lower fair value when holding it as an asset.

Earlier, I said that when we did the marketable securities project, we had problems with determining the fair value of different types of liabilities. This is one of the issues and we have people on both sides. They never had to resolve it when they decided the project would address assets only. We ended up with about three different camps on how you would approach liabilities. We were nowhere close to having five board members supporting anything, and they basically said, we can't make progress on the liability side, so let's focus on the asset side; that's how *FAS 115* was accomplished.

There are others who say it's totally inappropriate to decrease the carrying amount of the liability to reflect its decreased fair value, which has the corresponding impact of increasing shareholders' equity. Some say that's wrong. I was only trying to give you the rationale for why those on the other side of the fence say, "But isn't that reality?" Both the shareholders and the debtholders are suffering because the debtholders that bought this extended the credit. They're now holding an asset, and it's losing value, and so the debtholders are suffering as well.

**Mr. Doll:** I could be flippant and say, now that we have the valuation actuary, there are no more companies going down the tubes, but you raise a very good point. Another question could be, what happens if you have a holding company and life companies within the holding company? How do you determine the cost of capital for the life company? It's probably the holding company that may be going down the tubes.

You know, there is some evidence that companies with lower claims pay ratings on certain products, like SPDAs, have to credit higher interest rates in order to get business. There might be some offset there in that this lower rated company might be using a higher discount rate, but also crediting a higher rate, too. I think, in the end, it would seem like some objective standard, perhaps, for the cost of capital assuming some sort of minimum quality of the company would be needed. Then if the company goes down the tubes, you wouldn't go above that cost of capital.

**Mr. Vanderhoof:** Could I add one comment to that? These arguments, as they have been presented, view the company and the policyholder as being the only two participants in the transaction when, in fact, there is a third participant. Every state has a guaranty corporation. When the guaranty corporation backs up the major liabilities of the insurance companies, then essentially the guaranty corporation is suffering a loss in the amount that the company would actually be showing a gain in the case you presented.

It's not that there's simply a gain being shown in financial statements and things are blown up. There's a hidden financial statement, which is that of the guaranty corporation. As the company you described goes down the tube, the guaranty corporation has to make up the difference. If you look at the combination of the three, then the argument can be made that you should use a valuation rate for liabilities that takes into account the guarantee of the guaranty corporation. That would be something much closer to Treasuries, and would not depend upon the condition of the company because the worse off the company is, the more liability the guaranty corporation has.

**Mr. Joseph H. Tan:** I'd like to make a comment about the bank demand deposit issue, and then try to relate that to insurance liabilities that we actuaries are accustomed to. Is an account value of \$1,000, or liabilities of \$950 appropriate or not? I guess we actuaries are familiar with that when we factor in the probability of withdrawal.

You know, it's clear in our mind that if the credited rate is less than the discount rate, you factor in the surrender rates and end up with a value of \$950 or \$900. That would mean, based on our insurance background, that the cash surrender value would be the floor for the net GAAP liability, that is, benefit reserve less DAC. That would run contrary to the existing GAAP framework we're familiar with because, for some products out there, the benefit reserve less DAC would be less than cash surrender value. In fact, for the early years, there would be products where the benefit reserve less DAC is less than zero.

**Mr. Vanderhoof:** The trouble is that you can make the other argument. That is, suppose somebody offered to sell you a block of business where the cash surrender value was \$950, and they were going to give you \$940. Would you take it? It would depend on the quality of the business; you might be willing to take it. That's a fair market value.

**Mr. Qing D. Wang:** I have a short comment on your question. Once a company gets downgraded by rating agencies, that may increase your discount value. But in my mind, there are three pieces to the value of a company: the value of existing business, the franchise value, and the put option.

If you get downgraded, that will increase the value of the put option. The franchise value will go down. In most cases, I think this decline will more than offset the increase of the put option. It also will have reduced the value of the present business. If you consider all those three pieces, you will not get an increase in surplus with a downgrade. Your surplus will actually go down with a downgrade of your rating.

**Mr. Bruce R. Darling:** My company, Booke Seminars, teaches courses on GAAP, financial analysis, and other things. One of the problems we always have to deal with is this mismatch of valuation of assets and liabilities for GAAP, especially if you're looking at return on equity measures because it causes problems.

The temporary expedient we use right now is to back out the *FAS 115* effect because that's disclosed and you can tell what that is, and then you'll get something that's reasonably consistent from period to period. The question is, Where do we stop as we go forward with fair valuing things in the balance sheet? We're talking about fair valuing some of the liabilities. *FAS 115* just fair valued some of the assets. We still have real estate that's at depreciated cost. We have mortgage loans that are at amortized value, so not everything we invest in is being market valued.

On the other hand, if you start to fair value all those things and liabilities, do we then start to have to fair value the DAC asset and make it more like present value of profits? If we've done that, aren't we at a value-added system which is going to change the emergence of earnings for insurance products to be front-ended rather than spread over the lifetime of the product? If we try to make it so that the earnings are spread, do we, all of a sudden, have many more adjustments below the line? One set of principles is for income and another set is to get to the bottom line of equity on the balance sheet.

This question is for Doug and Bob because I know that you probably had to address these issues. Do you see this process eventually getting to the point where we have some type of real fair value balance sheet? If we do, what happens to the income statement at that time? What happens to the emergence of earnings?

**Mr. Wilkins:** Let me just make a couple of comments. Another exposure draft that is being issued next month focuses on comprehensive income. Comprehensive income, effectively, is all the changes that take place to the enterprise exclusive of transactions with shareholders. For instance, in the *FAS 115* adjustment, we have available-for-sale securities and the unrealized holding gains and losses, and that would be included in other comprehensive income. In other words, it would be in comprehensive income, and we use the phrase *other comprehensive income* to mean *other than earnings*.

The FASB is proposing requiring a statement of comprehensive income as well as our typical earnings or income statement. It's quite possible that some of the changes in fair values would be reflected in other comprehensive income without disturbing the current income statement that we have. Obviously, as we look at each project, the FASB has to decide where to put things.

For instance, on my hedging project, if you're engaging in a cash-flow hedge, the change in the value of the derivative, while the derivative is at fair value in the balance sheet, doesn't go to earnings right away. It goes to other comprehensive income until the projected date of the cash flow that is being hedged. In other words, if you are hedging a very low-interest-rate asset or liability, and you're hedging the variability of the interest payment you have to make, say, with a swap, or a forward rate agreement for each of the interest payment dates, basically the change in value of the derivative is hung up in other comprehensive income and does not enter the income statement until the actual interest period for that particular interest payment whose variability you have hedged.

We are also exposing this notion of having the statement of comprehensive income. I'm mentioning this because we're going to hold public hearings on the two exposure drafts together. We won't necessarily be upsetting the income statement. I recognize though, for a variety of financial analyses, various ratios have traditionally been done in one way, so adjustments may need to be made to be able to have those reflect what they have been reflecting in the past.

The FASB members felt that while certainly *FAS 115* does require a change in what is in the balance sheet, the details are there that enable people to make the adjustments that are necessary for them to still compute whatever ratios they believe are appropriate. Our purview does not typically involve ratio analysis. The only ratio that we got involved in under GAAP is earnings per share and we're in the process of simplifying that to conform with international bodies. We don't get involved in other ratio analysis.

**Mr. Albert A. Riggieri, Jr.:** On the issue of a discounting rate for liability cash flows, it seems to me that rate should really be connected to the riskiness of the liability cash flows and nothing else. It should be just like assets. If you were discounting asset cash flows, you'd take into account the question of how safe are the cash flows that are coming to you. Similarly, with liabilities, you should have an interest rate that reflects some element of the risk related to the liability cash flows.

This whole subject seems to revolve around providing more information to shareholders on the riskiness within an insurance organization. It appears that there's a need for that. I'm wondering why there's no way for the actuarial profession to expand its role in cash-flow testing to expose these elements in public reporting.

**Mr. Doll:** The comment about having, if you will, the valuation actuary prepare a public report on the riskiness of a life insurance company is one that I don't want to touch.

**Mr. Vanderhoof:** I'll go back to a comment I made before in connection with the first question. If you were going to use a higher discount rate for the liabilities because it's risky in some sense, then I believe that you are taking into a balance sheet of that company a value that exists because of the guaranty corporation. The value to the policyholder is the value of the company, plus the guaranty corporation value. That should be the determinant.

**Mr. Doll:** Actually, I will respond to this comment about the public report on riskiness. The valuation actuary does have responsibility for management to know about the riskiness status of the company. The regulators have a responsibility to ask the companies to provide whatever information they have to assure that there's some minimum level of strength of that insurance company. Assuming these companies are at that minimum strength level, I think anything that you would put out to the public would probably be misused. I would not be in favor of that. Besides, we have rating agencies that do that.