

**1998 VALUATION ACTUARY  
SYMPOSIUM PROCEEDINGS**

**SESSION 20PD**

**REVISED GAAP ACCOUNTING FOR DERIVATIVES**

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## REVISED GAAP ACCOUNTING FOR DERIVATIVES

**MR. DAVID Y. ROGERS:** I'm with Pricewaterhouse Coopers and I'm the moderator for this panel. One of the panelists is Mr. Kevin Guckian, who is a senior manager with Ernst and Young in its New York practice office. His responsibilities entail responding to individuals with questions about how to account for particular matters and how to structure certain deals. He's heavily involved in derivatives as well as the various discussions going on in accounting circles relative to nontraditional products. He will be giving us an overview of *Financial Accounting Standard (FAS 133)*, "Accounting for Derivatives." He'll discuss the impact that it might have on insurance companies' financial statements.

In addition, we have Michael Cairns who is a director with Transamerica in San Francisco. Among Michael's responsibilities is managing the project to understand the impacts that *FAS 133* will have on the financial statements of Transamerica. He will also be setting up the project management associated with the implementation of this standard.

I'm going to finish up with a brief discussion of some of the more significant implications, particularly those from a valuation actuary's perspective.

**MR. KEVIN P. GUCKIAN:** I don't have a crystal ball, but I can pretty much predict the future with some degree of certainty. This financial accounting statement will have a lot of impact on most insurance companies that are currently using derivatives, that will use them in the future, and even those that are not using derivatives. So this statement is fairly encompassing, and it will bring within its scope financial instruments that previously were not considered derivatives.

Why are we here? Why did the FASB take on this big 11-year project? It believed there were some problems with existing guidance. First, existing guidance was limited and narrow in scope. There are a couple of FASB statements that deal with futures contracts and foreign exchange contracts. There is a 10-year-old AICPA issues paper, that was never finalized that deals with options. Never-

## 1998 VALUATION ACTUARY SYMPOSIUM

theless, it became the authoritative guidance being used for accounting for options. The Emerging Issues Task Force (EITF) addressed some derivatives, but there is no consistent model used, and there is no FASB statement on the largest group of derivatives being used.

What did exist was often contradictory. In fact, the treatment differs, depending on the kind of derivative used. The lack of a comprehensive accounting standard often results in the development of numerous analogies, and this adds to the complexity and leads to a lot of confusion. In addition, the effects are not always transparent. Different approaches result in different measurements. Some derivatives are on the balance sheet, some are off the balance sheet, and users find it difficult to figure out the related effects of a company's use of derivatives.

As David said, the standard was issued in June. Companies can early adopt if they would like. The first date companies could adopt it was July 1. However, it is required to be adopted for all years beginning after June 15, 1999. So that means for companies with a June 30th year-end, the latest adoption date would be July 1, 1999. Because we insurance companies are on a calendar year, the latest adoption date would be January 1, 2000.

The FASB made some key decisions at the outset, which really stuck through the process. There was a comment period during which hundreds of comment letters were received. The model was changed, but four key decisions remained through to the end of the process. First, FASB believes that derivatives create rights and obligations and, therefore, they should be reflected in the balance sheet as assets or liabilities. Second, it believes that fair value is the best measurement for financial instruments and the only measurement for derivatives. Third, FASB believes, and its concept statements say, that only assets and liabilities should be reported on the balance sheet. The bottom line is that the FASB doesn't believe that deferral accounting is appropriate for derivatives. Deferring a loss in the balance sheet really violates its conceptual framework even though the loss was part of a hedging strategy. Finally, it did believe that special hedge accounting should be permitted, but because that type of accounting would delay the recognition of gains and losses, it felt that the criteria for that should be fairly onerous.

## REVISED GAAP ACCOUNTING FOR DERIVATIVES

What is a derivative? We all kind of have an idea of what a derivative is, but the FASB has come up with its own definition, and this was one of the most difficult aspects of the process. Initially, they tried to come up with an approach that would list out the derivatives such as the case in *FAS 119*. It figured that the list would become obsolete very quickly, so it tried to come up with a definition that would identify instruments that have distinguishing characteristics of a derivative.

First, a derivative has one or more underlying and one or more notional amounts. An underlying is an interest rate, a specific security price, a commodity price, or other type of index. A notional amount is the number of currency units, shares, bushels, pounds, or other units. The settlement usually results in some interplay between the notional amount and the underlying amount.

FASB believes a derivative does not require an initial investment or an initial investment that is smaller than what would be required for other types of instruments that tend to be similar. Finally, the terms of a derivative require net settlements, a market mechanism exists that facilitates net settlements, or it requires delivery of an asset that is readily convertible to cash. So any of these features would make an instrument a derivative. They apply to freestanding contracts or other contracts that may contain embedded derivatives. We'll get into the embedded derivative discussion in a few minutes.

**FROM THE FLOOR:** Kevin, did you say *any*? Do you mean *any* or *all*?

**MR. GUCKIAN:** Actually, it's all. The basic definition was initially about a half of a page. In the final statement, it's four-and-a-half pages. After laying out the definition of what is a derivative, the FASB then stated some exception to the definition. For example, contracts that are for normal sales and purchases of securities. If you enter into a contract to buy securities that may settle a few days later, those securities could change in value during the time you entered into the contract to buy them and the time you settled. Nevertheless, those contracts are specifically excluded from the scope of the statement. As long as the contracts are settled in a time frame that's generally established by

## 1998 VALUATION ACTUARY SYMPOSIUM

regulations or market conditions then they meet the exception. In the U.S., I think it usually takes three days for a security to settle. If you had a contract where the delivery would be a week, that would not meet the exception.

Normal purchases and sales. This one relates to things that are not financial instruments, such as inventory where you may enter into an agreement to buy grain or whatever. Those contracts would not be derivatives as long as the quantity being purchased was used in the normal course of business, within a normal time frame. If you enter into a contract to buy a year's worth of quantity with the delivery a year from now (you typically would only use half of that in your normal course of business), that would not meet the exception.

Certain traditional insurance contracts are not derivatives. This is one that's most interesting to us here. Any contract that requires payment based on an insurable event would not be considered a derivative. This scopes out traditional life and traditional property and casualty insurance contracts.

Finally, contracts that settle in an entity's own stock that are classified in stockholder's equity are also not derivatives. For example, a company might issue stock options to employees, but those would not be considered derivatives. They may also issue call options that are indexed to their own stock. If those options are classified in the equity section, they would not be derivatives to the issuing company.

In addition, some late changes in the process were added to the final statement. Certain nonexchange-traded contracts that are based on certain indexes such as climatic or geological indexes would not be considered derivatives. This late edition had the effect of removing contracts such as weather derivatives from being considered derivatives. Contracts considered weather derivatives would not be derivatives under this accounting standard.

In addition, in a nonexchange-traded contract, the underlying is based on the price of a nonfinancial asset of one of the parties that is not readily convertible to cash. This is designed to exclude you from an option contract on assets such as real estate. If you hold an option to buy a building, that

## REVISED GAAP ACCOUNTING FOR DERIVATIVES

would not be considered a derivative as long as the building is not readily convertible to cash (and it is highly unlikely that it would be).

Finally, contracts based on sales or service revenues of one of the parties is a third example of nonexchange-traded contracts. This is designed to exclude contracts for royalty payments. FASB does not believe that they should be within the scope of the statement.

I mentioned before that some contracts are not derivatives on a stand-alone basis; nevertheless, they may have features that look like derivatives. FASB has decided that any contracts that have implicit or explicit terms that affect the settlement amount similar to a derivative contract should be accounted for as a derivative. The accounting is required. You're required to bifurcate the contract and account for the derivative separately. Examples of contracts with embedded derivatives are structured notes (such as an equity-linked note) and certain convertible securities.

There's a three-prong test to determine whether you have an embedded derivative. The first question is, would the feature that looks like a derivative—if that were a stand-alone instrument—meet the definition of a derivative. If it's yes, then you continue on down the path. Are the economic characteristics in the risk of the embedded derivative clearly and closely related to the host contract? If they are not clearly and closely related, then you go one step further and ask, is the contract already carried at fair value with changes in fair value reported in earnings? If the answer to that is no, then you need to apply the statement. If any one of these are met, they're not considered to be an embedded derivative and you do not bifurcate the contract.

What are the implications of this for insurers? I'll touch on this briefly, because I know David is going to talk about what this means for insurance companies. There are implications for certain convertible debentures and convertible bonds that permit the holder to convert the bond to common stock. The notion of being able to convert a bond to equity is sort of an embedded call option and that's not considered to be clearly and closely related to a bond; therefore, that would need to be bifurcated. Certain structured notes such as an equity-linked note where the return on the note is tied to the Standard and Poor's 500 (S&P), is not clearly and closely related to the whole notion of a

## 1998 VALUATION ACTUARY SYMPOSIUM

bond. That would have to be bifurcated. Insurance products or investment products, such as equity-indexed annuities, variable products, market-value-adjusted (MVA) annuities, and synthetic GICs all need to be analyzed to determine whether they contain embedded derivatives.

Once we determine that we do have an embedded derivative, what do we do? If the embedded derivative can be reliably identified and measured, then the derivative is accounted for in accordance with *FAS 133*. The host contract is accounted for in accordance with existing guidance for that contract. So if you have an equity-linked bond, the embedded derivatives would be accounted for under *FAS 133*. The host contract (i.e. the remaining bond) would be accounted for under *FAS 115*, which is what you're doing currently. The embedded derivative that you're carving out and accounting for under *FAS 133* is eligible for hedge accounting treatment if it qualifies.

I've received a lot of questions from people who say they can't identify the embedded derivative easily. The FASB believes that you should be able to do that under the current guidance. The FASB made a pretty onerous rule. If you can't carve out, then the whole contract becomes mark-to-market through earnings; and that contract is not eligible for hedge accounting.

The accounting model is simple: all derivatives are required to be on the balance sheet at fair value. Depending on how you're treating the derivative, it will let you know where the mark-to-market changes should go. If it's not used as a hedge anywhere, the mark-to-market changes simply go through the income statement. If you want to designate it as a hedge, then the mark-to-markets will go elsewhere on the income statement or balance sheet.

There are three types of hedge relationships within *FAS 133*: fair-value hedges, cash-flow hedges, and foreign currency hedges. I'm not going to spend time on foreign currency. Insurance companies are usually not involved much in foreign currency hedges. I'll talk about fair value and cash-flow hedges.

First, let's discuss hedge criteria. No longer will you be able to consider something a hedge just through a wink of the eye. The FASB has made a requirement that companies will need to formally

## REVISED GAAP ACCOUNTING FOR DERIVATIVES

document their hedge relationships, the risk management objectives, the nature of the risk being hedged, and how effectiveness will be assessed. In other words, if you have an option, will the time value change in the overall market value of that option and will it be included in your assessment of hedge effectiveness? Or, you may only want to consider just using the intrinsic value. Your auditors will definitely look at this documentation to determine whether you're in compliance with *FAS 133*.

The hedge relationship will also need to be highly effective in offsetting changes in either fair value or cash-flows of the hedged item. The FASB didn't give any guidance on what highly effective is, but *FAS 80* always had this notion of 80% correlation, which we believe still will be used as practice. There are certain items that the hedged items must meet as well as certain qualifying characteristics that the hedged item must have in order to qualify for hedge accounting. Any ineffective portion of the hedge must impact earnings.

What's the difference between a fair-value hedge and a cash-flow hedge? A fair-value hedge is when you have an on-balance sheet where the company has exposure to changes in that item's fair value and those changes will ultimately affect earnings. In this case, you have something that's sort of locked in such as an interest rate or a bond. What you're trying to do by hedging is unlock some feature of that so that you're not exposed to fair value changes anymore. For cash-flow hedges, you are locking in something that you have an exposure to. For cash-flow hedges you might have an exposure to a variable interest rate instrument, and you might try to reduce your exposure by locking in a fixed rate. Those type of exposures are considered to be cash-flow hedges. If you have a fixed instrument, you're always going to be fair-value hedging. If you have a variable instrument, you're always going to be cash-flow hedging.

Let's just go through an example of what a fair-value hedge does. Assume you have a fixed-rate debt instrument that you want to hedge. Because of the fixed rate, I have exposure to fair-value changes in that debt instrument. Therefore, I enter into a swap agreement to pay variable and receive fixed. Assume interest rates go down. Now my swap becomes more valuable to me. In a fair-value hedge, the first thing to do is to put the derivatives on the balance sheet at fair value. Where does

## 1998 VALUATION ACTUARY SYMPOSIUM

the mark-to-market change for a fair-value hedge go? For fair-value hedges, the mark-to-market on the derivative always goes to the income statement, so in this example you're going to credit income. To offset that income statement effect, you're required to mark-to-market the hedged item for the risk being hedged. In this case, we're hedging our exposure to fair value change due to interest rate movements on the debt instrument. Because interest rates went down, the loan would, in theory, require more money to settle; therefore, the value of the liability has gone up. We will credit the liability and debit the income statement. Assuming you have a good effective hedge, those two amounts should offset through earnings.

Let's summarize the fair-value hedge. The change in the fair value of the derivative runs through earnings. You recognize the change in the fair value of the hedged item attributable only to the risk being hedged through earnings; therefore, any ineffective portion of that derivative will run through earnings just by marking to market both the derivative and the hedged item through the income statement. For fair hedges the ineffective portion is pretty easy. Since both are going to the income statement, the ineffective portion just falls out.

In a cash-flow hedge, assume a company has a variable rate debt instrument. The change in the interest rates really doesn't affect the fair value of that debt instrument because the interest rate on the debt instrument adjusts such that the fair value remains the same. However, I have exposure to the variable cash-flows, so I enter into a swap where there is pay fixed and receive floating. This will lock-in receipts. Since the debt instrument does adjust in fair value, it would be inappropriate to mark-to-market this swap through the income statement. The FASB says, in a cash-flow hedge you should still put a derivative on the balance sheet as fair value, but the gain or loss should be recorded in comprehensive income. Comprehensive income is another word for shareholder's equity, so those changes run through equity. If I have a swap and there is some ineffectiveness (maybe there's some basis risk), I need to measure that ineffectiveness separately and I must record that ineffective portion to earnings, not comprehensive income. So ineffectiveness is a little more difficult to measure in a cash-flow hedge.

## REVISED GAAP ACCOUNTING FOR DERIVATIVES

In a fair-value hedge, it simply falls out. In a cash-flow hedge, you need to identify where the ineffectiveness is and record that in the income statement currently. So the derivative gain or loss is included in the comprehensive income. If you leave those market-value adjustments in comprehensive income until hedged items affect earnings, then you move the gains or losses from comprehensive income into the income statement. So if the fair value of the derivative increases, we debit the derivative and credit other comprehensive income. When the hedged item affects earnings, we debit other comprehensive income and we credit the income statement. In our example, we have variable rate debt. Every time we make an interest payment on the debt, we're going to remove some of those markings to markets on the swap from other comprehensive income, and record them in the income statement. Therefore, what's coming through the income statement is sort of a fixed level of interest expense.

In summary, if you don't have a hedge, the gain or loss on the derivative runs through the current earnings. Hedges of changes in the fair value of a derivative hedging a recognized asset or liability, or a firm commitment—are run through the income statement together with the offsetting change in the fair value of the hedged item. This is for hedges of exposure to variability in cash-flows of a recognized asset or liability, or of a forecasted transaction.

We didn't talk about it, but in a hedge of net investments in foreign operations, the effective portion of the gain or loss on the derivative continues to run through the cumulative translation account. Those features of *FAS 133* have remained the same as they are under *FAS 52*.

No FASB statement would be complete without a list of disclosures and, actually, the final list of disclosures is much less than what was in the exposure draft. I think that's just because of a lot of the critical comments about disclosure overload. However, there are still quite a number of disclosures that need to be made. *FAS 133* is applicable for insurance companies for the year 2000. You can adopt it now. Upon adoption it's considered an adoption of a new principle and you need to account for it as a cumulative catch-up adjustment. When you put the derivatives on the balance sheet and when you initially mark-to-market your hedged items to conform to *FAS 133*, the differences between the current carrying values and the carrying values under *FAS 133* are

## 1998 VALUATION ACTUARY SYMPOSIUM

considered cumulative adjustments. Depending on how you designate the derivative, the cumulative catch-up adjustments go either to the income statement or other comprehensive income. I think Mike's going to talk about some implementation problems or issues.

**FROM THE FLOOR:** Is other comprehensive income the same as your unrealized gains recognized under *FAS 115*?

**MR. GUCKIAN:** Yes, *FAS 115* unrealized gains also go to other comprehensive income.

**MR. MICHAEL CAIRNS:** I'm going to talk about implementation issues and challenges. At Transamerica we basically started trying to adopt or implement this new standard about two months ago, and I'm going to talk about our experiences to date, where we've encountered problems and where you're likely to encounter problems.

I think the key message I'd like to relate is that if you haven't started implementing *FAS 133* yet, you should start now. You might ask yourself, why? Kevin just told us that we don't have to adopt this standard until January 1, 2000. Before you get there, there are a lot of things you probably want to evaluate and take into account. If you use derivatives to hedge any kind of risk on your books, you may find that you have to reposition some of your current derivatives reported because you may not qualify for hedge accounting under the new rules. You're going to have to, in certain instances, redefine your current hedging strategies because they may not qualify for hedge accounting under the new rules.

The biggest issue, as far as I'm concerned, is the fact you're going to have to value your embedded derivatives quarterly, and mark them to market through P&L. Some of your hedges may not qualify for hedge accounting. You are likely to introduce a level of volatility into your income statement that you may or may not be willing to tolerate. If you're not, then the time to find out about it is sooner rather than later so you can take steps to mitigate it. What we think we have to do is redesign certain products or perhaps reposition certain aspects of our investment portfolio. With that in mind, where do we begin?

## REVISED GAAP ACCOUNTING FOR DERIVATIVES

I'm basically going to talk about the project approach that we're taking at Transamerica and then talk about the issues, challenges, and problems that we've encountered. The first thing we did and that you will want to do, is understand the new derivative accounting's rules. Kevin gave us a good overview of what those are. The next thing to do is to develop the project approach, the steps you're going to need to take. I'm going to talk to you or tell you what we have done at Transamerica, and it may or may not be something that you want to do. You want to define your project leadership. You probably want to get everybody who's going to be involved in this project involved in the leadership of it. I'll go over what we did for our steering committee shortly. You want to identify key roles and responsibilities. Who's going to be responsible for making sure that the work done is complete, accurate, and meets your due dates? You need to agree with the people who are doing the work on completion dates, milestones, and so forth.

To address these first six issues, we basically held an all-day kickoff meeting back on July 22. We had one of Kevin's colleagues come out and talk to us for half a day and he gave us basically the same presentation as Kevin did, but in more detail, with more background because he had three hours instead of half an hour. During the rest of the day, we went through these issues on the project plan to make sure that people bought into what we thought was a reasonable time frame. The last issue in defining implementation objectives is understanding where the potential issues may arise. I'm going to talk to you a bit about what potential issues have arisen.

To define the project leadership we set up a steering committee of interested parties, such as accounting experts. The corporate controller of the Transamerica Corporation sits on the committee. We also have the controller for our life insurance operation on the committee. There are also product experts on the committee. We have the chief actuary in charge of our life insurance division on our steering committee. In terms of investment experts, we have the person in charge of our fixed-income portfolio. We have our corporate treasurer on it who is a derivative expert. What we tried to do was identify the areas that are going to be affected by this new standard and make sure that we had representation from those areas on our steering committee. Then I was appointed the project leader, and I'm basically responsible for coordinating various steps and making sure that we're achieving our goals and contacting people when we're not achieving them.

## 1998 VALUATION ACTUARY SYMPOSIUM

Our approach to this project was one of identifying two discreet, but very much interrelated segments—one is a freestanding derivatives portfolio and one is embedded derivatives. As a bit of background, we have just over \$30 billion of investments on our books. We have insurance liabilities of something around \$25 billion and we have freestanding derivatives with a notional balance of about \$16 billion. So we figured it was a big deal and we wanted to get to it quickly.

*Freestanding derivatives* is the term that FASB uses and they are what you normally think of as derivatives, swaps, floors, caps, collars, options, swaptions, and so forth. We decided that we needed to first identify the universe. What is it we're trying to deal with? So we inventoried all our freestanding derivative contracts. We matched those up to the hedged items and the specific assets and liabilities that we're hedging. In terms of matching up, you kind of want to do a little bit more than just say we're hedging this bond with this cusip number. You want to identify notional amounts, interest rates, equity-indexes (where applicable), start dates, reset dates, maturity dates, and so forth.

The next thing to do would be define your hedges as either cash-flow or fair value and, as Kevin mentioned, there is different accounting for both of those.

The next step here is important because it saves the following step. If you can define any of your hedges as perfect, having the key criteria (the notional amount, interest rates, start dates, maturity dates, and reset dates offsetting exactly), then you have a perfect hedge by definition and you don't have to go forward to determine how to calculate effectiveness and further, you don't have to worry about the quarterly effectiveness testing.

We're going to do sensitivity analysis for our hedges that we decided aren't effective or not fully effective. For those that are interest sensitive, we're going to shock the yield curve, plus 300 basis points, minus 300 basis points, and see how both the hedged item and the hedge work and see how close they are.

## REVISED GAAP ACCOUNTING FOR DERIVATIVES

The next thing you want to do is match your contracts to your risk management strategy. In some of our documented strategies they won't quite work as they're written out. We're going to have to do some work to refine those. If your strategies don't work, there's basically three steps you can take: (1) you can redefine them to try to make them fit under the new rules; (2) you can close out the contract and be done with it; or (3) you can decide that maybe hedge accounting isn't that important in this scenario after all, and you're willing to live with the P&L effect.

The next step here is to determine the potential P&L impact and you'll want to do that in coordination with your work on the embedded derivatives. Finally, you want to summarize your findings and recommend whatever decisions you think or whatever action needs to be taken with senior management.

Kevin went over embedded derivatives slightly, and I'd like to just reiterate briefly what I think is one of the more confusing areas of the new rule because we haven't had to deal with them before. It takes a little bit of time to understand an embedded derivative.

Essentially, there are two types of embedded derivatives I've been able to identify: those that are subject to *FAS 133* and those that are not. The ones that are not subject to *FAS 133* are the easier ones to deal with. The rule is clearly and closely related. Callable bonds is the most common example. A callable bond derives its value from interest rates. The underlying bond also derives its value from interest rates. Those are considered to be closely and clearly related, and you don't have to breakout the call option separately.

Traditional life insurance contracts, as a general rule, as well as *FAS 60* and *FAS 97* products are generally excluded. *FAS 60* and *FAS 97* products are generally excluded because most of them tend to meet the clearly and closely related part of this rule.

Embedded derivatives subject to *FAS 133* are derivatives in which the index is not clearly and closely related, such as in the convertible bond example that Kevin gave us earlier. Another is any insurance product that has an equity-indexed and an interest rate component to it. Those two are not

## 1998 VALUATION ACTUARY SYMPOSIUM

considered clearly and closely related and you have to split out one or the other and account for it separately.

You want to inventory all your assets and products by type, identifying bonds, callable bonds, convertible bonds, and different types of insurance liabilities you might have on the books. Then you want to determine if those individual assets or products contain an embedded derivative.

We asked the people in our business lines, the people who actually do our product design, to tell us what was in there. Then we also gathered as much information as we could on product descriptions. You often have the minimum interest and the rate guarantee for insurance contracts. Fortunately for insurance contracts, you generally don't have to worry about it, but, as you're going to see shortly, we did. We didn't have to worry about it, but we chose to worry about it. I'll share that with you shortly.

You need to get the people who are involved with the products or the investments to help you identify what those are. It's going to be any feature within a contract or an investment that lets you do something differently than what the underlying contract or investment results in. It's a call option or a call/conversion option. You're crediting a certain rate on a policy now, but there is a floor to that which is a minimum interest rate guarantee that you're going to keep crediting if rates go lower, so that works out. That's how you get there.

Next, we documented the key features: notional amounts, interest rates, start dates, maturity dates, and so forth. You might ask yourself, why is he talking about identifying all the contracts whether or not they're applicable to *FAS 133*? What we concluded initially is that many of our freestanding derivatives are actually hedging risks embedded in either our asset portfolios or our liability portfolios. Identifying all our embedded derivatives up front helped us in the matching up process.

The next question you have to ask yourself is, is the derivative subject to *FAS 133*? If it is, you want to identify what type it is and then get to what I think is going to prove to be a nightmare for anybody who has to work with this—determining the valuation methodology and the approach. We don't

## REVISED GAAP ACCOUNTING FOR DERIVATIVES

currently value embedded derivatives. The other key part to this is we don't have to value the hedge risk either, but in the future we're going to have to do this. At Transamerica, we don't have systems in place that would allow us to do that relatively easily. I'm sure that many of you don't either. I don't know if you have the in-house expertise to be valuing options and all the other types of instruments that are out there. Many of us may find that we have to rely on getting quotes from banks or from the outside.

The next thing you want to do is mark-to-market the effect on your income statement, and decide if any additional action is necessary. Again, that additional action will probably depend on the P&L effect. What you may want to consider is whether you want to keep the convertible bonds in your portfolio now, or whether you want to keep those if they're going to result in large quarterly swings. You have to know the facts before you can get to the decision-making process. We're trying to pull together the facts so that we can decide what we have to do.

One of the issues and challenges that we've identified so far are macro hedges. One of the biggest challenges is identifying embedded derivatives. It's a time-consuming challenge that requires going through your investment portfolio, your liability portfolios, and figuring out what exactly is there. Valuing the embedded derivatives is difficult. Measuring the effectiveness of your hedge strategies is going to be difficult because that's where you're going to have to value the risk that you're hedging and value the actual hedge. We value the hedge contracts currently, but we do not value the hedged risks. Determining effectiveness quarterly and valuing the hedged items quarterly will be a huge administrative burden. Somehow we have to develop some kind of automated systems that are going to allow this to happen relatively quickly at the end of each quarter, but we currently don't have that in place.

Macro hedges. I mentioned that we have a \$16 billion notional amount of derivatives outstanding. Half of those are what you would call macro hedges. The new rules will require that we match up all our freestanding contracts to specific assets, liabilities, or portfolios with similar assets or liabilities. We had a lot of difficulty trying to figure out what to do with these guys. We've decided that we can use the callable bonds in our investment portfolio. The macro hedges that are in place

## 1998 VALUATION ACTUARY SYMPOSIUM

are effectively hedging us against low interest rate environments. Thus, by hedging or designating the callable option in the bond portfolios as part of our hedged risk, we're going to be able to match up our contracts to make them relatively effective. We also have identified that the minimum credit interest rate on many of our insurance products are effectively floors. We've created synthetic floors out of those, and we believe that we can get effective hedge treatment out of that.

The method we're using is apparently for people who are very knowledgeable about derivatives and hedging strategies. It's called a Delta Neutral Strategy. You calculate the delta of your options and match that up against the delta of the hedged item. To the extent that you match them up at the beginning of the quarter and at the end of each reporting period, you effectively recalibrate your portfolio that you've hedged.

Let's discuss financial statement impact. The balance sheet will be grossed up, which is not a big deal. We have a concern about volatility that's likely to show up in that income statement. In all instances, the ineffective portion of a hedge is going to be reflected through income. As Kevin mentioned, a hedge has to be at least 80% effective to qualify for hedge accounting. If it's only 80% effective, the other 20% still goes through income. Any derivative contract that doesn't qualify for a hedge will be marked through P&L, and that's both the embedded and the freestanding.

We must educate the responsible parties. In terms of project leadership (some people would think of it as project harassment), we schedule frequent short status meetings. Everybody is busy and has a million other things to do. They don't always see your project as being as important as other things they're working on. We schedule these weekly meetings. In the process of preparing for the meetings, some of the work actually gets done. We involve the people who are actually doing the work. I try to keep the steering committee up-to-date on where we are and the accomplishments we've made or where we're falling behind.

And one thing that has been very useful to me is working with a derivatives expert. I'm an accountant. I don't understand derivatives. I'm getting a much better understanding, but when we first started I didn't understand them that well. I've been fortunate in that I've been able to work

## REVISED GAAP ACCOUNTING FOR DERIVATIVES

with the derivatives trader at the corporation, and he has been helping me to understand derivatives. When you sit down with some of the real experts in these areas, they can blow you away with the technical stuff. You can sit there and say wait a minute, that's not right—whereas, I wouldn't know the difference.

Understanding *FAS 133* and its effects is a complex matter. We have given an overview of its complexities. If you're going to be involved in implementing it in your company, you probably need to learn a lot more about it. The identification of the hedged instruments, the documentation of those and the embedded derivatives is going to be quite time consuming, so this is really a long-term type of project. It's not something you can do in a matter of weeks. We anticipate being done by the end of December with everything. We've identified all our embedded and freestanding contracts. We've matched them all up, and the next step is to determine whether we go through the effectiveness testing.

Many of your strategies may need to be redefined. To have a successful implementation it is going to require a fair degree of organization and involve a lot of people throughout your businesses. You might be surprised. I found out a few weeks into our project that one of our subsidiaries actually had an active futures trading hedging program about which I had no idea. These things pop up. So my key message here is if you haven't started working on *FAS 133* and you have any degree of derivatives that you're going to have to deal with, start as soon as you can.

**MR. ROGERS:** I was asked to speak about the implications of *FAS 133* for life insurance companies. I thought that I should perhaps spend a little bit of time talking about what I saw as the implications as I sit in my ivory tower in New York City.

Before this presentation, I surveyed my clients, like most consultants do, to find out what they knew about *FAS 133* so I could repeat what they knew to this audience. I called a few clients and asked if they have heard about *FAS 133*, the new pronouncement related to derivatives. I'm happy to say that 100% of my clients responded that they had heard of *FAS 133*. I asked them what they did with respect to evaluating the implications of *FAS 133* on their business and their responsibilities within

## 1998 VALUATION ACTUARY SYMPOSIUM

their company. One hundred percent of the respondents to this informal survey indicated that they hadn't done anything with respect to evaluating the implications. I was left having to do that myself and I made a guess. I'm pleased to say that there's a fair amount of agreement between what I thought would be the more significant implications and what Michael and his experience has told us he believes will be the most significant implications as well.

I saw the significant implications as falling under three main areas. One is in the scope of *FAS 133*, because it will affect the way that certain products we are selling are accounted for under generally accepted accounting principles. The second area is embedded derivatives, and that's really a two-pronged challenge. One is finding the embedded derivatives, which isn't always easy. The second and perhaps more significant one is actually determining how to establish a value for not only the embedded derivative, but the host contract as well. The third area has to do with hedge accounting because I think that there's a lot of implicit hedging that goes on in the insurance company environment that may or may not qualify for hedge accounting. One contingency that would determine whether or not you would qualify would be the amount of work you're willing to do to support the accounting treatment you would get if you chose to apply to hedge accounting to that transaction.

The first thing I'm going to talk about is scope. I put Table 1 together. Instead of saying that traditional insurance contracts were excluded in *FAS 97* or equity-indexed contracts were included, I thought I would translate it into a few of the more common products that are around.

**TABLE 1**  
**Scope**

Product	Included	Not Included	Who Knows?
MVA Annuity			✓
Equity-Indexed Annuity	✓		
Equity-Indexed Life Insurance			✓
Variable Annuity with MDBG		✓	
Guaranteed Minimum Account Benefit	✓		
Guaranteed Minimum Income Benefit			✓

## REVISED GAAP ACCOUNTING FOR DERIVATIVES

I classified these various contracts into three categories. Either they're "included" within the scope of *FAS 133*, which means that there's a derivative in the contract or there's an embedded derivative in the contract that would be included within the scope of *FAS 133*. The second category is "not included." The third category is "don't know." At this point, there's a lot of speculation about some of the newer and most interesting contracts that insurance companies are selling today. If you survey the accounting folks who are trying to figure out where these contracts fall within the literature, they really aren't sure where these contracts would end up.

The first type of contract that I'd like to talk about is the equity-indexed annuity, which is the second one on this list. The equity-indexed annuity includes an embedded derivative. You have what is normally a deferred annuity contract, as Peter Duran spoke of at another session, that would normally be expected to earn an interest rate. You've layered onto that a derivative that gives a proportion of the S&P 500 or some other index return. I think it clearly qualifies as an investment contract, in this case, a deferred annuity with an embedded derivative.

The market-value-adjusted annuity is a little bit more interesting. A market-value-adjusted annuity, as I've looked at it here, is an annuity that provides for an adjustment in the surrender charge that is related to the current interest environment or the interest environment at the time of surrender of the contract.

Kevin talked about how to identify an embedded derivative. Michael went into it as well. There are three criteria. One is if this element were freestanding, would it be considered a derivative within the definition of *FAS 133*. Is it a derivative according to the way that we've defined derivatives? The second one was, is it clearly and closely related to the host contract? The third one: is the contract already carried at fair value in the balance sheet with the changes in the fair value running through the income statement?

By just looking at the market-value-adjusted annuity, I concluded that it would probably be excluded from the scope of *FAS 133*. The reason for that is that it does have an embedded derivative in there that relates to the adjustment of the surrender charge; however, that adjustment is measured relative

## 1998 VALUATION ACTUARY SYMPOSIUM

to interest rates. Because of that, it's determined to be clearly and closely related to the host contract, which is a standard deferred annuity contract and, therefore, an embedded derivative. It falls into the category of contracts that Michael referred to as embedded derivatives not within the scope of *FAS 133*. That has some good points and some bad points that we'll talk about a little bit later.

*Equity-indexed life insurance.* This is not variable life insurance. Variable life insurance is more than likely excluded from the scope of *FAS 133* because the contract is already measured at fair value with the changes running through the income statement. Rather, this is a life insurance contract where the cash surrender value is subject to the same adjustments as an equity-indexed annuity might be. Because the principal benefit is an insurable event, it's not really clear whether you have a contract that would be clearly within the scope or outside the scope of *FAS 133*.

A variable annuity with a minimum death benefit guarantee is probably not included because the variable annuity is accounted for at market value, so it fails one of the three tests. The minimum death benefit guarantee is an insurable event. It's a contingent insurable event related to mortality, so that contract would be excluded as the insurance contract.

A guaranteed minimum accumulation benefit is probably included in the scope of *FAS 133*. In this case, the guarantee relates to a contract where the contractholder can invest the money in a variety of funds, including the general account. The account balance is guaranteed to accumulate to a specified amount upon maturity. You have a mixture of an equity-based investment and a fixed interest-based benefit payout at the end. That would be classified as a derivative contract.

Then there are guaranteed minimum income benefits. These are relatively new and I think there's a fair amount of debate at this point over whether it would be included or not included. Because of the trade-off and the value of the income benefit that relates to the interest environment, we have a clearly and closely related sort of issue as well.

Bifurcation is what happens when you have an embedded derivative. Once you've identified that you have a contract with an embedded derivative. It's necessary for you to split the two elements

## REVISED GAAP ACCOUNTING FOR DERIVATIVES

apart and account for them separately. The derivative is accounted for at fair market value and the host contract is accounted for as it would have been under generally accepted accounting principles. It wasn't until I started thinking about this and asking a few questions that I realized the identification of an embedded derivative has implications for the value that you record and the accounting that you use for the host contract as well.

At issue, the derivative that's embedded in that equity-indexed annuity has some value, so you can value that at the market rate. The deposit is equal to the total value of the contract at issue because nothing has changed. The value of the host contract is equal to the value of the deposit minus the value of the derivative. If the derivative has some positive value, that means that the value of the host contract that you recorded in your financial statement is less than the account balance for the contract—which is a different answer than you would get under standard generally accepted accounting principles. You have to figure out some way to accrue from your starting point to the amount you need to end at, which is the full account balance, over I think the life of the contract. It's a question that I'm not sure that the FASB has addressed. I haven't read all of *FAS 133*, but I've looked at it somewhat closely, and I didn't see this issue mentioned in there, so I think this is an area where we'll see practice developing over time.

There is some good news related to bifurcation, and this has to do with deferred acquisition cost (DAC) amortization. Interestingly, if you split the embedded derivative out of an equity-indexed annuity contract, what you're left with is a fairly smooth pattern of the estimated gross profits associated with the host contract. If you can argue, and I think you can argue, that the DAC is entirely associated with the host contract or that there are no estimated gross profits in the embedded derivative, then you get a much smoother pattern of DAC amortization. This is because now you have a fixed interest deferred annuity contract against which to amortize DAC. That's the good news.

The bad news is that, of course, you have to do a scrub of your contracts to identify where the embedded derivatives are. I think you'll find that they could be places where you weren't expecting them to be.

## 1998 VALUATION ACTUARY SYMPOSIUM

If you've read *FAS 133*, you'll see that a great deal of it is devoted to talking about hedge accounting and what a hedge is and what you have to do to document a hedge. Assuming that you get through all of those rules, it will tell you how to account for a hedge. I chose to take a 20,000-foot view of this hedge accounting, and I bounced these thoughts off of some of our professional folks at the office. They said I was okay. The first rule that I learned is that derivatives themselves can't be hedged. They can only be used to hedge. If you have a contract with an embedded derivative in it, and you break the embedded derivative out, you're not hedging, and you can't hedge the embedded derivative. Therefore, you don't need to be concerned about any hedge strategies that you have related to embedded derivatives.

The second point is that if you have a hedge, it must be an effective hedge. The accounting rules are set up so that if it is an ineffective hedge, a fair-value hedge, or an ineffective fair-value hedge, the ineffective piece of it will naturally fall to the income statement, so that shouldn't really be an issue. However, if it's a cash-flow hedge, then you have to value the ineffectiveness of a cash-flow hedge and make sure that you run that piece through the income statement. Thus, the rest would get hung up in the balance sheet in this thing we call comprehensive income.

In general, the hedged item is going to be accounted for at fair value. The issue is whether the change in the fair value runs through the income statement or the balance sheet, much like the difference between a trading security and an available-for-sale security under *FAS 115*.

So then I tried to do some thinking about this and I came to a conclusion. Anything that falls within the scope of *FAS 133* is a derivative or an embedded derivative. If it's a derivative or an embedded derivative, it can't be hedged. Therefore, insurance contracts are scoped out of *FAS 133*. They are not derivatives and, theoretically at least, they would be subject to hedging. However, if you are hedging something in the insurance contract, then wouldn't that, itself, be an embedded derivative because you're purchasing derivatives presumably to hedge this thing? If it is an embedded derivative, then you can't hedge it. Insurance contracts, themselves, can't be hedged.

## REVISED GAAP ACCOUNTING FOR DERIVATIVES

I put the question to my accounting advisor; I said, “What about hedging the cash-flow risk on a traditional insurance contract, the famous disintermediation risk, for example?” As we thought about it, we concluded that that would be a legitimate hedge that you could identify and for which you could gain hedge accounting treatment. The question was, why would we bother doing that? It struck us as extremely difficult to identify and isolate the portion of that traditional insurance contract that we were hedging from a cash-flow perspective, in order to identify the effectiveness of the hedge or the ineffectiveness of that hedge. This would allow one to run that piece of the hedge through the income statement. Wouldn’t we rather simply account for these contracts the way we’ve always been accounting for them; that is, we can account for the hedge in accordance with *FAS 133* if it happens to be a derivative, and let the results be what they may. We would do this knowing full well that if we had an effective hedge, the economic reality of the situation would be that we would be protected. It might not show up in our accounting results, but it probably would show up in our market risk disclosures.

That concludes the prepared remarks and, at this point, I’d like to take questions.

**MR. ARNOLD A. DICKE:** I was thinking that they shouldn’t let actuaries look at these accounting pronouncements. It struck me that if a thing can be hedged, it follows that under the instrument being hedged, there must be an embedded derivative in it of the opposite sort from the derivative used to hedge. There has to be some consideration about not hedging a derivative if you use the total. I think it would eliminate hedging altogether. My other observation is I don’t think there’s any unique way to break something up into a derivative and a host contract. For example, take an equity-indexed annuity. That could be looked at as a traditional annuity type of contract and some kind of funny options that provide the equity upside in support.

On the other hand, you could also look at it as an equity fund that produces a Standard and Poor’s index fund that has a minimum interest rate floor on it. It could be done either way. There’s an infinite number of ways you can do it, so you probably have an arbitrary choice as to how to break it apart. There probably needs to be more guidance on which way to do it, or you’re probably going to be able to manage your P&L fairly easily.

## 1998 VALUATION ACTUARY SYMPOSIUM

**MR. ROGERS:** Do you look at it as an equity-based contract with a minimum interest guarantee or is it the opposite? My conclusion is that it depends on where you have it. If it's in a separate account, then it's probably the variable contract with the minimum interest guarantee. If it's in the general account, it's probably the horrible embedded derivative.

**MR. GUCKIAN:** You can't hedge a stand-alone derivative, but I think you could hedge certain embedded derivatives. For example, a company issuing callable debt is, essentially, purchasing an option from the debtholder or creditor which gives that company the right to call the debt. I know that companies can write an option as long as the option was written contemporaneously with the issuance of the debt to offset the effects of that call option they've purchased. Having said that, I'm not sure it makes a difference whether you call it hedge accounting or not. Either way, it is marked-to-market through earnings. So, you can get hedge-like accounting from "hedging" or embedded derivatives. However, having a derivative and saying I'm hedging another derivative is wrong. I was on the phone with a couple of investment folks and they were arguing with me that they had two swaps. Neither are designated as a hedge, and they were trying to say that under today's rules, they were hedging each other and, therefore, they both should be off-balance sheet. You clearly can't do that. You can't say you have a second swap that's hedging the first swap and try to get hedge accounting. You can't do that. You couldn't do it today and you can't do it in the future.

**FROM THE FLOOR:** What about an option on a swap?

**MR. GUCKIAN:** A swaption?

**FROM THE FLOOR:** Yes.

**MR. GUCKIAN:** I guess you could. For example, if you have some sort of variable rate instrument. You may think today's interest rates are not going to move all that dramatically but, to be safe, you're going to enter into an option to buy a swap. That's probably one thing you could do. I'm not sure that would get hedge accounting because you may not meet the highly effective test.

## REVISED GAAP ACCOUNTING FOR DERIVATIVES

**FROM THE FLOOR:** This is a GAAP presentation and you're talking about insurance companies, many of which deal with statutory accounting. A recent NAIC meeting in New York, the chairman of the Accounting Practices and Procedures Task Force said that *FAS 133* was probably going to take up more time than any other GAAP pronouncement over the next year in their review for statutory accounting. The staff has said they've already started scheduling seminars so they can understand how it works and then make recommendations and write issue papers. Whether or not they accept it, they still have to write a justification for rejecting it under the new concept of NAIC codified accounting. I was just wondering if any of the presenters had thought about what the NAIC would be recommending. What do you think of this and the implications for statutory accounting if this were going to be accepted by the insurance departments or by the NAIC?

**MR. GUCKIAN:** It's interesting that while codification was being debated, *FAS 133* was being deliberated and the model that was emerging was certainly known, but the Codification Task Force decided to reject that model and continue on with the accounting for the derivatives that's currently in place. My view is the fewer the differences between statutory and GAAP, the better. I would like to see statutory accounting adopt *FAS 133*.

**MR. ROGERS:** It seemed to me that a number of the results from *FAS 133* and the rigor that it imposes on this aspect of accounting is very good. I think that some of the definitions might properly be broadened within *FAS 133* so that you would get the accounting result that makes the most sense from a solvency perspective. GAAP is still GAAP, which has always been an income statement analysis. Statutory accounting should continue to focus on solvency, and I think that any sort of GAAP pronouncement needs to be evaluated relative to solvency as compared to the income statement. I think that there are some good ideas in *FAS 133*. I'm not sure that if I were trying to make the decision about what to do for statutory that I would take the whole thing as it is, or whether I would want to expand it in some areas and limit it in others.

**MR. GUCKIAN:** *FAS 133* is probably more conservative than statutory because statutory still has this whole deferral notion, and swaps can still be off-balance sheet. *FAS 133* would require you to put all swaps in your balance sheet. There are many insurance companies that have swaps that are

## 1998 VALUATION ACTUARY SYMPOSIUM

probably under water that are just not on the balance sheet. Hedging is something that's not mark-to-market. They disclose those things, but is that really the true measure of the solvency of the company? *FAS 133* would more closely reflect solvency, at least with respect to derivatives anyway.

**MR. DICKE:** Since statutory is still pretty book-value oriented with its asset treatment and the interest maintenance reserve (IMR), you'd have to be careful about the interaction there. Thus, you could imagine some very interesting things to play all kinds of games with statutory income.

As a general rule, it might be good to adopt it, but you'd at least have to make some special applications.

**MR. GUCKIAN:** I think *FAS 133* fits nicely into the existing GAAP guidance for accounting for investments and other things. If the statutory moves to a *FAS 133* model for derivatives, I think there's a lot of other things that are going to have to fall in place as well.

**MR. HANS J. WAGNER:** I want to make sure that I understand the significance of the fair-value hedge treatment and then ask a follow-up question. My impression is the significance that our freestanding derivative, the hedging instrument, is always going to be at market. If we qualify for hedge treatment, we then drag the hedged item into market value when it would be at book.

**MR. GUCKIAN:** That's right.

**MR. WAGNER:** With that being the case and with these qualifications for hedge accounting, in terms of documentation and the like, is there the potential that a company could gain a bit by qualifying certain contracts for hedging in one period, and then in some other period not meet the qualifications and fall out of it?

**MR. CAIRNS:** They could, but there would be a P&L hit when you determine that those contracts are no longer hedges. When you mark-to-market whatever the effect was in the prior period and go forward, those contracts wouldn't be hedged. Initially, to start the process, you have to take your

## REVISED GAAP ACCOUNTING FOR DERIVATIVES

freestanding derivative and match it up to the contract that you're hedging or to a whole group of contracts that you're hedging. At the end of the next quarter, it might be a good hedge. At the end of the following quarter it might not be such a good hedge anymore, for whatever reason. At that point, any ineffectiveness that has crept in gets recognized because you're marking them both to market. If at that point you decided you don't want to hedge certain liabilities anymore, and you want to hedge other liabilities, you recognize any ineffectiveness to that point. You then have a new relationship going forward when you do the same measurements, so it really won't help you. It actually shouldn't help you.

**MR. ROGERS:** It sounds like a zero sum game to me.

**MR. GUCKIAN:** You must evaluate hedge effectiveness every time you prepare a financial statement and at least quarterly, right?

**MR. CAIRNS:** Right.

**MR. GUCKIAN:** Theoretically, something could be 80% correlated in one period and 60% in the next period, so that would knock you out of hedge accounting.

**FROM THE FLOOR:** Could you expand a little bit on this question of effectiveness, because it's hotly debated right now within the NAIC? We've had members of the AICPA accounting firms come up and say that it's not something that's reviewed in the audits. Their audit opinion does not opine on the effectiveness of derivative transactions. Larry Gorski, who chairs the Invested Asset Working Group, said that he's not getting good reports on effectiveness from his initial review of Schedule DB. There was a recent presentation on replications, and how the Securities Valuation Office (SVO) was going to review effectiveness. It was suggested that the industry could present something that, in their view, was an appropriate way to evaluate effectiveness, and that approach could be adopted by the SVO.

## 1998 VALUATION ACTUARY SYMPOSIUM

This proposal has not yet been totally accepted by the NAIC. Somebody mentioned *FAS 80* and an 80% rule of effectiveness. But, to my knowledge, people aren't aware of it. I'm wondering why this hasn't entered into the debate at all in the last year. Is there already a measure of effectiveness that could be applied to hedging?

**MR. GUCKIAN:** In theory, that evaluation should be done by the company to determine whether they have an effective hedge. Auditors should be reviewing the company's controls to determine whether they are, in fact, making those tests and actually testing to make sure there is some correlation there. I wouldn't say that auditors do not test correlation; actually, they do. The documentation isn't where it should be and that's why the new standard is merely making companies formalize the documentation in order to get hedge accounting. If the company says it qualifies, give a wink of the eye to the auditors, and they will go on their way. There might be some of that going on because it hasn't been challenged as much as it probably should have been.

**FROM THE FLOOR:** The industry asked the Insurance Company Committee of the AICPA if they, as a way of getting past this, would give us any assurance that we could count on in the audit. We were looking for some statement that the hedges are effective. We were told no.

**MR. GUCKIAN:** I was at that meeting, and Larry was talking about replication transactions. I think it came up during our replication discussion because Larry wanted the auditors to be able to opine and say that these replication transactions, for example, this BBB, bond and swap are effective in replicating what a AAA bond might. Auditors can do that, but we opine on the fairness of financial statements as a whole. To ask auditors to say that all your replication transactions are effective is certainly beyond the scope of an audit. I think that was the point that the accountants were making. Just because we've given a clean opinion, does that clean opinion say that all your replication transactions are effective? No. It does not say that any that are material are accounted for correctly.

## REVISED GAAP ACCOUNTING FOR DERIVATIVES

**FROM THE FLOOR:** Under *FAS 133*, one of the conditions for it to be fairly presented is that it be highly effective. It used to be something you would hope to have; now it's a condition. So when you review that, if you're going to look at that, you're going to have to make a determination about whether it's highly effective or it's presented incorrectly.

**MR. ROGERS:** That's correct.

**FROM THE FLOOR:** I think it's new, but I'm not sure.

**MR. GUCKIAN:** That's true.

**FROM THE FLOOR:** This is a little different, and I'm not sure there's any standard for it. I don't know if 80% does it, but I suspect it doesn't.

**MR. GUCKIAN:** Auditors have always been doing that. They should have been always looking at effectiveness. But does that mean that we can give an opinion that says all your hedges are effective? We'll look at significant transactions, controls, and what the company does to judge effectiveness, but do we actually go in and look at every single hedge? How many hedges does Transamerica have and how many transactions do they enter into in a year? Your auditing is sampling to a large extent, and you're looking to evaluate controls. So I think that the level of comfort that the NAIC was looking for is beyond the scope of an audit. The answer to your question is auditors definitely should currently evaluate whether hedges are effective. Certainly they will be doing that in the future because the threshold is much higher now and it has really been brought into focus.

**MR. WAGNER:** Dave, you thought that variable annuities were clearly outside the scope, partially because they're marked to market. I'm not sure that an account balance on a variable annuity is what I consider this to be. While it reflects the market value of the underlying mutual funds, I'm not sure that it's a fair value of the actual variable annuity, regardless of the surrender charges. I'm just not sure how I'd look at that one.

