

# RECORD, Volume 27, No. 2\*

---

Toronto Spring Meeting  
June 20–22, 2001

## Session 44PD Investment Structures for Life Insurance

Track: Investment  
Moderator: VICTOR MODUGNO  
Panelist: ROBERT W. HARLESS†  
Recorder: VICTOR MODUGNO

*Summary: Collateralized Bond Obligations (CBOs) and Collateralized Loan Obligations (CLOs) are well-known structures that package junk bonds or loans into investment grade bonds with an equity and/or subordinate tranche. This session looks at a number of other structures that can be used to package more exotic investments. These structures affect the investments' accounting, tax and risk-based capital treatment. Comparisons are made between CBOs/CLOs and these more exotic trust structures and special purpose vehicles.*

MR. VICTOR MODUGNO: I'm a consulting actuary in Los Angeles. Prior to that I was at AEGON/Transamerica, where I worked on a lot of investment structures. Prior to that, I was with Executive Life, Pacific Mutual, and Metropolitan Life. One of our speakers, Randy Clyde, was unable to attend. The other speaker is Robert Harless. Bob has a master of science degree in managerial economics. He also has a chartered financial analyst designation. He is a senior vice president at Huntington National Bank in the capital markets area. Prior to Huntington, he was with Bank One, Lotsoff Capital Management, and Transamerica, where we worked together. He was our first derivatives person at Transamerica and has been doing derivatives for over 20 years now. Prior to that, he was with First Interstate.

As the session coordinator, I'll give you some background as to why we put this session on the program. A year ago, we had a session in San Diego, during which we discussed CBO and CLO structures. I recalled seeing quite a few investment bankers coming through with other structures that were similar to the CLO/CBO, which re-characterize the nature of an investment for accounting or tax purposes. I thought we'd do a session where we would compare some of these more exotic structures to CBO/CLOs and to carry high RBC-type investments. In preparing for this session, I found that FASB had been busy changing the accounting rules. Of course, I was aware of FAS 133. I had investment and financial people complaining about the hedging issues. FAS 133 and associated amendments and materials and, to a lesser degree, FAS 140 has significantly impacted these structures. In my

---

\* Copyright © 2001, Society of Actuaries

† Mr. Robert W. Harless, not a member of the sponsoring organizations, is Senior Vice President with Huntington National Bank in Columbus, OH.

presentation, I'm going to go through structures, some of which have been effectively nullified by *FAS 133*. If you have a structured note, *FAS 133* forces you to carve out the derivative and mark that to market and put it through earnings. It effectively eliminates the advantage of doing a protective equity note or something like that. In that case, you're trying to get an equity return into a book value, bond-type instrument. You have to bifurcate that, and mark the equity piece through market.

I think I'd give a subtitle to this session, after doing this research: "Is there life after FASB?" What Bob Harless will address during his presentation is how to look at these structures after FASB.

The first structure is the bull/bear note. This is a structure that survives FASB. *FAS 133* does not require bifurcation of normal options in bonds. For example, a call option on a bond doesn't have to be taken out. For a step note, like the bull/bear note, as long as the interest rate is between 0 (i.e. you can't lose principal) and twice the market rate, you can keep the book-value accounting. I believe this structure would survive *FAS 133*.

The bull/bear note allows you to convert realized capital gain into operating income and defer taxes. Why would you want to do this? First of all, if we take a typical stock company, stock analysts like operating income and they don't like capital gains. Operating income is assigned very high value in the stock price. If you're part of the management of a company, and you want to maximize the stock price for your stock options, you want to have maximum operating income. Realized capital gains just don't get the same weight as operating income. Second is an economic advantage in that you're deferring the federal income tax on the realized capital gain. We had a portfolio of high yielding callable bonds that were invested sometime in the past backing a structured settlement block. We wanted to trade them into bullet type bonds so they could be better immunized for risk of falling interest rates. Normally, if you do this, you get hit twice. When you sell the bonds, you have to pay capital gains tax, and you reinvest it at a lower interest rate. As such, your operating income goes way down. This structure allows you to sell the bonds and defer the capital gains into future income.

Here is how it works. You buy two structured notes. One pays if interest rates go up and the other pays if they go down or remain level. Some 60 days in the future you have a strike price. If London Interbank Offered Rate (LIBOR) is above 5%, one note goes to zero income, and the other note goes to double income. You sell the losing note; realize the capital loss, offsetting taxable capital gain elsewhere in the portfolio. You hold the winning note, and you realize the higher future income.

The problem with the structure is the tax issues. In the late 1990s, corporations were realizing increasing profits while corporate tax receipts were actually decreasing. This was not just happening in the insurance industry, but everywhere. The growing use of tax shelters by corporations has caused a crack down, so there is a significant amount of tax risk. When you do this structure, there are different names on the notes. There might be several issues of notes on different dates with

different names, so there is some economic risk involved. It's not a pure tax play. However, I think the IRS would probably view this as an abusive tax shelter. Other companies have done it. I saw an accounting memorandum where the auditors felt this would pass under *FAS 133* for book value accounting. The tax risk is significant in this structure.

The next structure is the RBC trust. This is a really simple structure and can be done very cheaply. It doesn't have the accounting and tax issues. The reason is that the insurance group will own all the structure, so GAAP and tax accounting is consolidated, and there are no other accounting issues. What you do is take high risk-based capital (RBC) assets, such as junk bonds, and combine them with a zero coupon bond to guarantee the principal. If it was a 10-year bond, you'd buy a 10-year zero coupon bond. You could use a zero coupon Treasury. That's probably the simplest thing to do. An A-rated zero coupon bond would be one variation or a floating rate portfolio that's swapped into a zero coupon investment is another.

The trust is 100% owned by the insurance company. It's simple and inexpensive. However, there are some problems. Number one, this is not as effective as a CBO/CLO. Let me just go back to the CBO/CLO structure. In that structure, you take a group of junk bonds in CBO or bank loans in a CLO, and cut them into tranches. Credit enhancement comes through subordination. The CBOs sponsored by investment managers will have several tranches -- AAA, A, BBB, BB and equity. Typical insurance company CBOs have just two tranches -- NAIC 1 (A) tranche and an equity tranche, because you don't really need to waste time with anything else.

CBOs have a lot of expenses. There are rating agency fees and structuring fees, plus you have to sell the equity piece to a third party. It's usually sold at a very disadvantageous price to the issuer, or advantageous price to the buyer, which is usually the investment bank. Given all that, the CBO structure produces a much better return than the RBC trust when you factor in the loss of yield from having the zero coupon bond. Another advantage of the CBO is that it's rated. Most companies doing this are trying to maintain AA ratings from Standard and Poor's (S&P) and Moodys. If the rating agencies were aware of the RBC trust they would ignore the RBC reducing effect. These are relatively small structures that fly under the rating agency radar. A CBO, on the other hand, could be very large since the rating agencies are actually rating it. It's totally out in the open, and you can typically do almost any size as long as you satisfy the rating agencies by showing that you've transferred the equity piece out to a third party. The first loss risk goes to a third party. So the credit enhancement within the insurance group is real.

The next structure is the Accounting Trust. This cites the Emerging Issues Task Force (EITF) 96-12, on structured note income. This particular EITF allows you to use a methodology of computing interest based on the beginning and ending values of the structured note. One of the original uses before *FAS 133* partially nullified this EITF, was to put appreciated stock, plus a zero coupon investment in a bankruptcy remote trust, and get a third party to buy a piece of the trust for GAAP deconsolidation. At maturity, the trust distributes the stock plus the cash from zero coupon investment. The unrealized capital gain in the stock is amortized into GAAP

income, but since the stock is not sold, there is no tax.

Let's say you have stock that has appreciated tremendously. You are carrying that at book value. You want to hold the stock and you don't want to sell it. If you sell it and realize capital gain, you'd have a capital gain tax. You'd have increased comprehensive income but would not have a big effect on the operating income. If you reinvest in bonds, you would have some increase. In this structure you can take that appreciation and amortize it into GAAP income without paying any tax, while continuing to hold the stock. This doesn't work under *FAS 133*, because you'd have to break out the stock piece and mark that to market through income.

Structure is quite similar to this, with the same effect. Once again, you use the EITF to recharacterize income. Here it's a managed stock fund and a zero or guarantee from a third party. *FAS 133* also nullifies this.

Next is perpetuials. These are notes issued by European banks. They have no maturity date. In Europe, they're treated as part of the bank's capital. At the time they have very high yield relative to their credit quality. The problem is, having no maturity date, you can't treat them as a bond, and so we convert them to an NAIC 1 bond using a trust structure with a zero coupon investment. Or a financial guarantor guarantees the price at maturity. If you bought the note now, took the interest for 10 years and sold it, your risk at the end of the ten years is that the market value is below the book value. The financial guarantee would simply focus on the market value at the maturity date.

There are some tax strategies where you split the perpetuity into the first 30 years of payments, and the remaining payments. The cost basis goes into the remaining payments, and you can sell the remaining payments and realize a capital loss. Our tax people didn't like it.

Another structure is the index separate account. This is one that survives, since it is a market value structure to start with. There are no accounting or tax issues here. Once again, high RBC assets can be used. The problem with this particular structure is that you'd have to replicate some index. For example, use an index arbitrage strategy to generate LIBOR-based returns for an index separate account. You can replicate LIBOR, or if you can replicate an S&P 500 index using a futures overlay that would take the LIBOR and convert it into S&P 500. This is a structure that still can be used, that's not really affected by the accounting issues.

BBB credit wraps are where a bond insurer insures a portfolio of BBB bonds converting them into AAA bonds, lowering the capital requirements. The BBB credit wrap is an arbitrage on the regulatory and rating agency capital -- if the charge to insure the portfolio is less than the cost of the required capital.

Another possible structure is an off-balance-sheet conduit, using a synthetic funding agreement. There is third party ownership. The conduit would buy assets and investment grade bonds in addition to a synthetic funding agreement that would act as a back-up liquidity. You would probably have a bank as first provider of liquidity

and a funding agreement as a back-up liquidity provider to the bank. Then, the conduit would issue commercial paper and earn a spread from the assets in the conduit. The problem with this particular structure has to do with *FAS 140*. *FAS 140* changed the rules for these special purpose entities (SPEs). It raised the bar for GAAP deconsolidation. You now have to sell 10% as opposed to as low as 1% in the past. You cannot have a managed fund. You have to have preset rules. You buy a portfolio and everything is preset, such as when you sell a particular asset. So the credit card structures would work, but if you want to be able to manage the assets, you can't do it under *FAS 140* anymore.

MR. ROBERT W. HARLESS: I've got about 20 years of experience in derivatives. My first job out of college was studying financial futures and commodity futures and how they're priced and how to trade them. Since then, it seems like I've never been able to break clear of derivatives.

I'm not a *FAS 133* or *FAS 140* expert. I think it's new territory. We're still trying to feel our way through here. Life used to be fun until *FAS 133* and *FAS 140* came along and changed the rules. I'm going to focus on taking a step back and saying, "When we look at these different types of investment structures, and structured notes, what was going on here?" We saw the early 1990s as being a heyday for these unique types of structures. What were they doing?

They were just trying to import into an investment structure some value-added from another type of asset class and get it into an accounting friendly format. You might be a portfolio manager saying, "What can I do to enhance the return on my portfolio and to minimize my risk?" A key in terms of minimizing risk is diversification. Many times we only think of diversifying a portfolio as buying a lot of the same thing, but from different names and different issuers.

In the early 1990s, we proved that you could diversify your portfolio by having different sources of return. I hope I minimized my risk in some way.

If we look at different sources of return, we see equity. We get a highly leveraged company. You'll see the Internet HeyDay.com type of stock, up 40%. You have leverage. You get additional return by taking some leverage. Long Term Capital Markets is a good example of that. That company took too much leverage and blew up. I would also say Orange County took too much leverage and blew up. That's how you create value-added return. Essentially, a stock is a leveraged investment.

You can take credit risks and get additional returns. Depending on the quality, you can get a whole bunch of return or a little bit of return. You can get currency risk into your portfolio. It's a risk, and all these are risks. You should have some incremental return from taking currency risk.

In the structured note market, a lot of people were taking risk on how the market prices options. When you price an option, you have volatility risk. Because you have that risk, over time, you should get a return. What is that return going to be?

It depends on whether you look at convertible bond arbitrage, or foreign currency arbitrage. It could be up to 4%. I'm assuming my risk-free rate is LIBOR.

Next is a duration or interest rate risk. You can make some additional return from taking duration risk. This has been a problem for some institutions in that they sometimes confuse duration risks -- taking interest rate risks -- with liquidity risks. They buy a long-term portfolio, and they fund it with short-term money instead of with long-term money that is indexed or has a floating rate. If you take duration risk, there might be 1-3% additional return. There was a study in 1994 done by Solomon Brothers. They looked at duration risk over a 20-year cycle, and they tried to balance the interest rate cycles in there. You started it off at the same point that you ended up. Over that time period, there's about a 200-basis point return over short-term rates for taking duration risks.

The last one is liquidity. If you have a bond that nobody likes, or some type of investment that nobody likes, how much additional return do you get from owning it? In the case of CBO and CLO types of structures, let's take some investments that are unfriendly to a certain class of investors. Let's see if we can put them more into a friendly investment structure. In the early 1990s, you had a lot of CBOs being issued because no one liked junk bonds. So there was an opportunity, because you could structure a portfolio, sell out on a very senior class and pay somebody LIBOR plus 100 or LIBOR plus 150 on an AA piece of paper. Then you would have mezzanine and equity pieces. It was a very good investment structure because no one liked the bonds. No one could hold the bonds, and the market saw an opportunity to structure this in a friendly way. That's all that's happening.

We're also seeing things happening on the real estate side for the conduits that make investing in that asset class easier. *FAS 133 and FAS 140* seem to have conveyed the message that Those types of structures are okay, but if you're trying to incorporate additional returns from these other asset classes, into your portfolio, then it's not okay. So you can take credit risk, and you can take some interest rate risk. However, if you take anything else, were going to make it mark to market and pass it through the income statement. That's what I see in terms of the bottom line of FASB and what they've said.

Accounting really drives this whole process. I'm not a CPA. I try to know as little as possible about the accounting side. It seems like I'm being dragged into knowing more. I've got this big book on FASB I'm trying to work through, but it really drives everything here. Because it's unequal, you have to figure out how to get that balance between your investment side and your liability side to report something to the marketplace so that they won't say this is just crazy. As a by-product of FASB, you saw some initial reports where a large company showed losses on its portfolio or income statement due to derivatives. I thought it was in the billions. Maybe the marketplace will look at that and say, "You know what? That's a funny number -- we don't believe it."

They're using derivatives to hedge themselves, and the problem in this case is that they fund with commercial paper. They hedge their interest rate risk with an

interest rate swap, and then they lend out. Since they don't have a perfect hedge, and they can't apply for shortcut accounting under *FAS 133*, FASB has set up a whole bunch of rules. If you are using a derivative to hedge, you have to say, is this derivative really hedging what you've got over here on this other side?

You have to do correlation tests. You have to mark to market, and you have to pass through your income statement, the mark to markets on both sides. So, any ineffectiveness or difference between the two has to be pushed into the income statement. If your hedge is 95% effective, you're going to have 5% volatility in your income statement that is due to that hedge ineffectiveness.

FASB has said if you're hedging certain types of things, it is going to let you do something easier. It will give you the shortcut method, which is, if you're hedging a liability that is indexed to LIBOR or indexed to a Treasury rate, it is going to let you use accrual accounting. You won't have any income statement volatility because of it.

Sometimes it's hard to find something that fits exactly, so FASB is forcing this issue and it's going to be interesting to see how the market and analysts interpret all this additional information coming out.

The CBOs and CLOs are basically structuring these different asset classes, and putting them into a friendly form. The structured note market in the early 1990s gave you other types of returns and risks in an accounting friendly format. We can't. We have even more unequal treatment in terms of accounting. If you were to buy a floating rate bond, your coupon is variable and dependent on interest rates. You have credit risk. Your accounting is book. If you buy a floating rate note that has an embedded cap, the interest rate can go no higher than X%. So once again, it's a variable coupon. You have this interest rate risk from the interest rate going up. You have credit risk. You have to mark to market the cap and book value the note. So you have to take out that interest rate cap and mark it to market and any change in mark to market value has to pass through the income statement.

Prior to *FAS 133*, we would treat these two the same. Now we have to take that out. The equity link note is the same. In the case of a variable coupon, you're dependent upon the equity market (in terms of how the interest rate on that coupon will go up or down) instead of the interest rate market. You can have the principal protected or whatever. It doesn't matter. Because your coupon is not linked to interest rates, and if it's linked to anything else but interest rates, that's a derivative you have to mark to market and pass through to your income statement.

This is my view about some of the imbalance going forward that you have to take into account. If the marketplace is overvaluing volatility in interest rates, everyone is nervous about interest rates. They think they're going to go up or down. They're just too nervous. I think it's a prudent decision to take that risk and to add it into my portfolio. In addition to the credit risks you might be taking, now is the prudent time to take some of this option risk.

The only way you can do it is try to set up some type of investment structure that lets you do that in an accounting friendly format. As Vic has mentioned, *FAS 140* has made it very difficult. So prior to *FAS 140*, the marketplace was in an ideal situation for a portfolio manager. What do you want to do? How do you want to manage your risk? How much return do you want to generate? Then you can do that in a derivative format. It was very easy. You had all those simple tools.

We have seen a lot of credit derivatives starting to hit the market and some of those structures look very interesting. I'm working for a bank right now, and I would say credit derivatives are going to be a very important piece of risk management for the bank in that we're originating credit risk with entities that we cannot sell off very easily in the marketplace. I work for Huntington Bank in Columbus, Ohio, which is a small bank. We have all these middle market credits. We just can't package them up and sell them off very easily. They're too small, and too unique. If we could do a credit derivative, and sell off some of our risks, then we open up our ability to do more business with our customer base.

*FAS 133* and *140* makes it harder. Somebody can say, "I'm just buying credit risk; can I buy something in a derivative format and get favorable book value accounting treatment?" No, you can't. You have to mark to market. What is the implication of that mark to market on your balance sheet?

Now I might have to shove everything into a special vehicle and then sell it off as debt. I have additional accounting and tax issues plus the additional cost of setting up that other unique structure. *FAS 133* has made the world a little bit harder to deal with in terms of transferring risk around. I really appreciated Mr. Greenspan coming out and talking against *FAS 133*, but he has had no influence. If you think he's the wonderful, all-powerful person, he isn't! You're going to have these investment structures, and they're going to have a senior class of investment. They're going to have some type of subordinated class. They're going to have some type of equity class of investment. To get the favorable accounting treatment, you're going to have to have enough of the equity and subordinated class so that whatever you buy, it walks and talks like debt.

How do you transfer returns from that senior class in terms of these different markets? How do you get equity types of returns and still get book-value accounting treatment?

I worked for a short time for a life insurance company. I was a traditional banker, and then I went into the life insurance world. It was very interesting because, all of a sudden, I saw my liabilities had stretched out 40 years. For a bank, they're three months, so how do you deal with this? How do you deal with finding an asset that can hedge you for 40 years? You don't want to buy Treasury bonds because they don't provide you with any added value. You get these other problems in terms of convexity risk and other things.

What can we do to provide these long-term types of returns in the marketplace? It's a big challenge. If you put together some type of special purpose vehicle,



whether it is a partnership or trust or you set up a corporate entity, you now have all this additional weight that you have to take a look at. What is the demand for these additional returns or these other sources of returns, given all this extra baggage that you have now in the marketplace? If I thought I could make a good play in some type of equity market or duration or bond market prior to *FAS 133*, I could very easily do it in a derivative. If I thought the Asian markets were prime for something, I could do it in a derivative. I didn't have to actually buy those physical investments. I could go to somebody else and rent their balance sheet. I see derivatives market as a mechanism where you rent somebody else's expertise and balance sheet. The banks provide an area in which you might have the ability to transfer some returns. Let's say I make a performance priced loan very common in banks. I'm going to loan you money at the prime rate. However, based on your financial condition and performance, I might be able to charge you prime plus one or prime minus one. FASB seems to be silent on that type of variable coupon. It says that if you have something like that, that's still book value and not a derivative. Can we use that type of mechanism inside a special purpose vehicle to transfer additional returns? Could we set up a special purpose vehicle that says, as your financial strength increases, the coupon of the bond is also going to increase? Is that going to be a mechanism we can use to transfer returns? Let's say I set up a stock portfolio. In the past, I could have an equity-linked note, and I could get book value treatment. I would get equity returns, but it would be a bond.

Can I set up a special purpose vehicle, put all my stocks in it, sell out my equity and my mezzanine debt, and then have a senior tranche with a variable coupon that's dependent upon the financial strength of that entity? Do I, in return, get some type of equity style of return transferred to me in that note? Because it's based on financial strength and not on an index, do we get the favorable accounting treatment going forward?

We might be able to structure something that would get the favorable tax, accounting, and other reporting issues. The disadvantage is the cost of setting up these types of structures.

It's as though FASB and the SEC is the lifeguard at the pool, and they blew the whistle and said, "Everyone out. We don't want this other stuff here." I think FASB has done a very good job of adding additional financial disclosure. I don't think it has been very good in terms of helping the investor in the marketplace really understand what's going on in that company. That's where I see the market going and that's some of the structures that we're working with, in terms of trying to see how we can engineer these structures with our investor base in creating these things.

MR. MODUGNO: I'll just make one comment. One of the things that we were considering was using equities to back long-tail liabilities. That could be something for which you use equities -- liabilities stretching out 100 years. Because of the accounting treatment, we really can't. Equities, like the S&P 500, produce very low current income. That's one of the reasons for a structure that can be used to convert that right now. It can work. So we're going to depend on some people in

the audience to represent Randy who didn't show up. Are there any people who are accounting experts? I would like to hear some perspective on FASB.

MR. THOMAS M. GRONDIN: I just wanted to ask a question on the bull/bear note. Both presentations had a lot of interesting ideas. How does the premium get taken into consideration in terms of the economics and the foregone investment income on that premium? What kind of margins could you expect for varying interest rate levels on terms of the payoff of your structured notes?

MR. MODUGNO: Remember that there's an investment banker on the other side. They find corporate credits that you like, for instance Ford and GM. Ford normally funds 10-year paper at LIBOR plus 100 basis points. They'll go to Ford and say, we can get your money at LIBOR plus 85, and they'll tell GM the same thing. You then buy one note from Ford and one note from GM. Ford and GM get funding at LIBOR plus 85. The investment banker is doing the swaps with both of them to get the bull/bear structure.

Now the cost to the insurance company is in buying these two notes. Some yield will be given up if you take out the swaps. Both of the credits are getting 15 basis points cheaper funding, and the investment banker is probably paying himself very well. You give up some yield to pay off everyone. I don't have an exact number, but it's probably 15-20 basis points. You are getting the tax advantage of deferring the income plus the accounting advantage of having operating income going forward as opposed to having realized capital gain.

MR. GRONDIN: So the cost buried in the spread?

MR. MODUGNO: Yes, the cost is buried in the spread, and you have to pay off everybody—the issuer as well as the investment banker. The cost is something that is negotiable. Presumably, it's a percentage of your tax savings.

MR. GRONDIN: I had one comment on long-term liabilities. You mentioned equities, but preferred stock might work where you can receive a dividend. So you would get operating income and, at the same time, the capital charge is really low.

MR. MODUGNO: If you're buying preferred stock, you're competing against corporate buyers who are getting an exclusion, which I don't think the insurance company will get. The yield on preferred stock is not as high as the bond yield.

MR. GRONDIN: I saw an article by Lehman maybe a year or so ago where they compared stocks and BBB bonds. There were times where fairly high quality, A-rated preferred stock was yielding more than Triple B bonds, at a lower capital charge.

MR. MODUGNO: Preferred stock is certainly an option. Of course, you have a steady yield, and no chance for increase, but it's probably better than a maturing bond. At least you don't have the maturity. You get the payments for 100 years, and then I guess you can sell the stock. I assume we're talking about preferred

stock without maturity dates.

MR. HARLESS: If you looked at what Vic talked about in terms of those perpetual notes that were issued in Europe in the late 1980s you would see a lot of issuance there. That's just preferred stock, except with a coupon linked to interest rates.

MR. GRONDIN: There's not much left of that out there.

MR. HARLESS: There's not much of that out there, and that's the challenge. There's nothing there because you have long-term liabilities when you look at pension funds. That's why they're in equity. It's going to provide the best return over time, and you can survive the ups and downs of the equity market. Since you have a long-term liability, a 40-year liability, an equity type investment makes it very good common sense. You're not allowed to use equities.

MR. MODUGNO: You're allowed to use equities, but the accounting effect makes it prohibitive.

MR. GRAHAM D. IRELAND: I have a couple of questions about the RBC trust. One of your comments was that variations include Treasury or A-rated zero coupon investments. How liquid is the market in corporate zero coupon bonds?

MR. MODUGNO: The answer is, not very liquid, but you'll be holding it to maturity anyway. You can go to an issuer like Ford and say I want a zero coupon and they'll do it, but there's going to be a charge for doing. Ford could always swap out the zero if they don't want that form of liability.

MR. IRELAND: Your fourth comment was that RBC Trust was less efficient than a CBO due to yield loss on the zero. Do you know approximately how much yield is given up?

MR. MODUGNO: I think it's significant. I can't give a number off the top of my head, but you can figure it out pretty easily. If you do a 10-year structure, you need about 60% of the money in the zero. You only have 40% in the investment. There's your yield give up. In the CBO/CLO the NAIC 1 tranche yields more than an A-rated zero coupon bond by 50 basis points or more. That's where you're going to see the difference if you do a comparison to see if it was more efficient in terms of what you want to maximize NAIC 1 yield. The advantage of the RBC trust is for partnerships, or something else that you can't put in the CBO/CLO.

MR. IRELAND: I have a question on your last slide about the BBB credit wrap. What does a bond insurer charge to wrap the portfolio of BBB?

MR. MODUGNO: Once again, off the top of my head, I think it could be done for 20 basis points. It's less than the capital charge, and I think that tells you that the S&P capital charges for BBBs are too high, at least for diversified well-managed portfolios. It may be accurate for an individual BBB bond, but we're not talking about that. We're talking about a diversified, well-managed portfolio of BBB bonds.

What should the RBC charge be relative to NAIC 1? Cost that charge out. You might compare the RBC charge to the cost of the credit wrap. The credit wrap charge might be cheaper, if you have a third party willing to buy the risk. The rating agencies are setting their capital requirements too high.

MR. HARLESS: I think that type of structure is going to be interesting going forward because the credit derivatives market makes it much easier for entities to buy and sell that type of risk and to get a better price on it. I have heard of some insurers or reinsurers going offshore and issuing insurance policies that act just like a credit derivative.

MR. MODUGNO: We didn't have any discussion on the use of reinsurance and that's obviously another way to handle this type of risk. I thought Randy was going to talk about that. Are there any reinsurance people here?

MR. HARLESS: We're talking about some of the reinsurers doing things off-shore and issuing insurance policies that are really derivatives in terms of wrapping a bond portfolio or providing some type of put protection on something.

FROM THE FLOOR: The BBB credit wrap has been done by offshore reinsurers.

MR. MODUGNO: What I was talking about was a bond insurer that was issuing a financial guarantee. There are many ways to do some of these things with offshore reinsurance.

FROM THE FLOOR: Don't you need to post collateral for the credit wrap? Aren't you locked into the portfolio?

MR. MODUGNO: You can trade the assets in the portfolio. You can't distribute them. If you're planning to hold the BBB portfolio of X dollars, you can certainly do this wrap. If you want to sell and distribute, then you'll have a problem because you'd have to maintain the collateral.

MR. HARLESS: You might also want to take a look at the offshore reinsurance contracts that have started to spring up.

MR. MARK EDWARD AUSTIN: So much of this securitization and disintermediation of credit risk from banks to insurance companies or other investors and CBO/CLO structures is predicated on agency ratings. However, the industry is also calling a lot of these structures rating agency arbitrage because single A is not a single A. I'd be interested to know what insurance companies generally are doing to find or discover ratings that are a little more granular than an agency rating.

MR. MODUGNO: You're talking as buyer of a structure and as a buyer of a tranche.

MR. AUSTIN: Essentially do more fundamental analysis of the Ford or the GM risk

that you happen to be buying. There are some default technologies that are a little more granular than the historical default probability of a single A over the last five or ten years.

MR. MODUGNO: With CBOs, you are taking a portfolio of junk bonds and carving them into two pieces that are worth more than a whole. It just doesn't make sense. I think the rating agencies encourage this arbitrage. I was thinking about it from the point of view of the insurance company as the sponsor. Therefore, you're managing the assets and presumably your investment people believe themselves to be credit experts. They're picking the good junk and their junk should have lower RBC because they're outstanding credit managers. You've talked about purchasing third party CBOs. In other words, some investment manager out there with an insurance company or some other entity is managing the CBO, a true third party purchase of assets. The real evaluation is the investment manager. Despite a 100-basis-point yield over market for a given credit rating in these CBOs, you have to believe in the investment manager of that CBO, not just look at the portfolio.

You take a pile of junk bonds and you end up with lower RBC than you started out with when you add it all up. You have to sell out an equity piece. That's what happened to Executive Life in their CBOs. They held all the pieces. They sold the equity pieces to the parent. It was out of the insurance company, but the rating agency realized they hadn't done anything. If you sell out the equity piece, they're happy. You now have A bonds with a lower RBC. You have created something here. I think the real problem is the rating agency RBC on junk bonds. They might be appropriate for a single junk bond, but not when you have a managed portfolio with a good manager who is an expert on junk bonds. The RBC charges are too high for that case.

MR. AUSTIN: I guess my point is that we are generally buying a lot of tranches that are rated by rating agencies, and we're placing a large amount of responsibility on the asset manager to understand the idiosyncratic credit risk that is embedded within and ostensibly diversifies the rate of a structure. There are some sources that provide fairly forward-looking views on probability of default. Some other measures are similar. They provide some indication of when to get in and out of certain credits. These sources are generally available to investors and issuers. Actually, hedge funds are buying up the equity pieces of a large number of securitizations. This is done on the basis that there is actually some value left on the table, so they buy pieces of the equity tranche.

MR. MODUGNO: There's a real problem when the CBOs and CLOs are selling out subordinate pieces. Investment grade pieces are very easy to sell. The problem is the equity and subordinate tranches. Who will buy those? If you are the issuer, you're going to have to sell them at a very bad price to you. The expected return on an equity tranche could be 30% or 40%. That's the expected return based on the expected default. That means that they might get wiped out or they might get a return of 100% on that piece. That's what the hedge funds are finding in the secondary market and at very cheap prices.

MR. WILLIAM J. SCHREINER: Given that some of these structures seem to be designed to avoid mark to market accounting and insurers long investment horizons, should one be concerned about the FASB march towards fair-value accounting the entire balance sheet? Does this cause any concern?

MR. MODUGNO: Once you have fair-market value accounting, you don't need any of this. You solved all our problems.

MR. SCHREINER: Is there any potential that you'll be tied up in knots for things you did today?

MR. MODUGNO: That's a good point. Because 20 years from now, you'll have a 100-year structure that is now being mark to market. I don't know how they're going to calculate the fair value of those structures. There are going to be a whole bunch of transitional issues if you do move to fair value on the assets and liabilities. I hope that you move on both sides. That's always a problem with accounting. You have liabilities at book, and we're playing all these games with the assets. If both sides are mark to market, it's a different world. All these games exist because you had your liabilities at book and certain assets at market for operating income; that's where you have the accounting problem. If everything is marked consistently to market, you're living in a different world and the issues that we're dealing with today go away or change. You have a new set of issues, but that's a good point. I don't know what happens to the existing structures, if tomorrow we go to fair-market accounting on assets and liabilities for insurance companies. The rationale for doing that probably diminishes. You know if you want equities; you just buy them. If your equities go down in value, hopefully your liabilities will go down in value. If interest rates go up, your asset and liability prices go down.

MR. HARLESS: I think a by-product will be some income statement volatility because the nature of the liabilities won't match the nature of the assets. You're going to have some income statement volatility. Will the market like it? Will the market be able to understand it, and how long is the learning curve to go through that process, to figure out what is a good company versus a bad company. You might have to throw away your quarter-to-quarter income statements and take a different perspective.

MR. DENNIS RADLIFF: I just wondered if you had any knowledge of credit default or credit downgrade swaps, as a means of reducing credit risk for a company.

MR. HARLESS: You mean the credit derivative?

MR. RADLIFF: Yes, I mean the credit derivative, as opposed to some of the other credit default or credit structures that you were talking about. It would be just a swap type of agreement for credit default risk or downgrade risk?

MR. HARLESS: *FAS 133* will require you to mark that to market, and then you'll have that income statement volatility if you use those types of swaps. I think

they're out there. I think that they are good tools to manage credit risk. I think they're going to be very effective tools as the market grows and becomes more liquid. I think it's going to be a good tool to add into your portfolio credit risk. You normally couldn't get anywhere else in a much more liquid fashion. The problem is the accounting. That's where I think the reinsurers have started issuing the offshore insurance policies that are nothing more than credit default swaps. Now they're insurance contracts. You get much more favorable accounting treatment. The problem is it is more costly than just doing a credit derivative. The market has really deepened in liquidity in these credit default swaps since they were first introduced back in the early 1990s. I remember one structure where they had a portfolio of four bonds. Maybe somebody who has been around for a long time can help me. If one bond went bad, you took the loss. It was one out of four. I didn't like that because the larger probability is you're going to get tagged if you have one out of four instead of a portfolio effect. It seems like credit derivatives are moving more into the portfolio effect. I know Randy worked on some of those structures called Lie-Ins; they took default swaps in the marketplace, and there seems to be some pricing issues regarding these default swaps priced on an individual bond-by-bond basis. Put that into a portfolio and sell it off in a derivative format. That started to become a little bit more active. *FAS 133* might slow the development of that market however.

MR. MODUGNO: I can remember those credit derivatives where we had a basket of four names. If anyone defaults, you lose your money. You get LIBOR plus 200 basis points if nobody defaults. But if any one of those four names defaults, you can say goodbye to your premium. You picked a basket of names you and your investment people liked, and you're locked into the term for that particular structure.

MR. HARLESS: But you have to be confident that each name won't default.

MR. MODUGNO: Right. If anyone defaults, you lose.

MR. HARLESS: That was the old situation in the early 1990s. I would love to be able to take my commercial loan portfolio at the bank and sell it off as a credit derivative (20-25% of my first loss), and pay somebody for that. They can look at it and see that portfolio has a very low default rate; but from a capital perspective, I get tagged. It's hard to bundle up those loans because they're small, and they're not very long. It would be great. A new asset class to our investors would include small commercial loans. It's very cost prohibitive to try to do a CLO on those types of credits.