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Session 7PD
Pension Plan Terminations

Track: Investment/Pension

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Summary: This session provides attendees with an in-depth description of the process of terminating a defined benefit pension plan in the U.S. Discussion topics include required filings, selection of annuity provider and asset immunization prior to annuity purchase.

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MR. THOMAS VEAL: I'm not going to talk about the entire range of plan terminations. In fact, I'm going to talk about only a small minority of terminations. This group happens to be the minority that is most likely to be of interest to actuaries. Most terminations are terminations of plans that are not subject to Title 4 of ERISA. They include defined contribution plans, plans covering only substantial owners, governmental plans, church plans, non-qualifying plans, and other plans that do not involve the Pension Benefit Guarantee Corporation. Within the area of terminations subject to Title 4 of ERISA, I'm going to omit some topics because we're going to talk only about standard terminations. Now, as it happens, standard terminations are between 98-99% of all Title 4 terminations.

There are also distress terminations and involuntary terminations under Section 4042. Distress terminations, while fascinating, ultimately come down to negotiating everything with the PBGC. There are an average of a couple of dozen of them every year. Involuntary terminations are much scarcer. They may have averaged one a year throughout the history of the PBGC. They are threatened very frequently by the PBGC as a bargaining chip in corporate reorganizations, but that is a threat that the PBGC has no great desire to carry through on and doesn't need to carry through because it seems to spook plan sponsors quite nicely. Whether it is a real threat remains to be tested.

We are left with standard terminations of defined benefit plans subject to Title 4 of ERISA. Those are the great majority of your plain, ordinary, defined benefit pension plans that are not maintained by governmental agencies or by churches that have not elected ERISA coverage. These plans can be terminated only in one of three ways. The first way is through a standard termination, which has only minimal PGBC involvement and is available to plans that have sufficient assets to satisfy all their benefit liabilities. Distress termination, the second way, is available only in very limited circumstances, principally in bankruptcy, for plans that do not have sufficient assets to satisfy their benefit liabilities. The third way is through involuntary termination. Involuntary termination is a process that the PBGC has the authority to initiate under Section 4042 of ERISA. There would normally be no point in the PBGC initiating it, except in the case of a plan that was under-funded, since there is no particular threat in cases where the plan is not under-funded. The one exception to that, which is of no interest here, is abandoned plans where the plan sponsor can't be found.

A standard termination, as I said, is one in which all of the benefit liabilities can be satisfied from the assets of the plan. That leads to one of the most intellectually interesting questions in the area, what is a benefit liability for this purpose? Now, benefit liabilities in the broad sense, of course, are aspects that a plan might pay, ranging from the regular pensions that people get to exotic things like medical benefits under Section 401(h) accounts, various sorts of death benefits, disability benefits, to shut-down benefits, et cetera. Only portions of all of the benefits are liabilities for purposes of Title 4 of ERISA and for purposes of the standard termination process.

Much of the time you don't have to worry very much about what the benefit liabilities are. If participants receive lump sum distributions, and in the last statistic I saw as of a few years ago, in 80% of standard terminations no annuity contracts were purchased at all, every participant received a lump sum cash-out. In those cases the lump sum cash-out only needs to equal the actuarial equivalent of the normal retirement benefit in normal form at normal retirement age, period. You don't have to worry about subsidies, ancillary benefits, early retirement benefits, optional forms of benefit, et cetera. That makes life fairly simple. There occasionally is confusion about what the normal form means. This is the form of payment in which the benefit is expressed in the plan's benefit formula, which is typically a life annuity. It doesn't mean the default form of benefit, which is typically a qualified joint and survivor annuity.

This takes care of 80% or more of the situations. Unfortunately, there are still the remaining 20% of plans in which annuities are purchased for at least a few participants. David Greene is going to talk about the very substantial exercise involved in getting those annuities purchased. Part of that exercise is identifying the plan's benefit liabilities. You can consider the benefit liabilities to be all of the vested and unvested accrued benefits. That's pretty easy. The less easy part is whether Section 204(g) of ERISA and Section 411(d) (6) of the Internal Revenue Code protect the benefits from cutback. Those provide that the plan cannot be amended so as to remove early retirement subsidies and optional forms of benefit with respect to benefits that have already been accrued.

The practical meaning of that for a plan that is closing out is that, when annuities are purchased, those protected benefits have to be provided for in the annuity contract. That means, for example, if the plan has 11 different optional forms of benefit, and if an annuity contract is purchased for somebody who's, say, 45 years old and isn't going to actually elect his benefit option for another 20 years, the annuity contract distributed to him has to make provision for the possibility that he might elect any one of those 11 forms, and to some extent providing those forms is an unpopular idea with insurance companies. No one wants to be on the hook to pay a lump sum based on factors 20 years from now. This is a complication to the process.

There are, happily, some benefits that can be stripped away and that you do not have to provide in the annuity contracts. One that cannot be stripped away is your ordinary subsidized early retirement benefit. For example, if you have a rule of 75 benefit, fully subsidized benefit at age 55 with 20 years of service, the annuity contract has to provide for the possibility that the individual will eventually qualify for that subsidized benefit, even if he hasn't qualified for it yet. If the unreduced benefit requires age 55 with 20 years of service, and you have a participant who is currently age 40 with 10 years of service, it's possible that before he retires he will reach 55 and 20. If he does that, then he has to be provided an unreduced benefit. So, that possibility has to be provided for in the annuity contract.

On the other hand, Section 204(g) does not extend to everything that might happen. If the plan has an unreduced disability benefit, for instance, that can be disregarded, except of course for people who have already become disabled before plan termination. If the plan has shutdown benefits, according to what the statute says, they can also be disregarded.

There is case law that takes the position that shutdown benefits are or can be protected benefits that in principle would have to be provided for in the annuities that you purchase. Now, subject to correction by David, who has much more experience than I do with the nitty-gritty of actually buying annuities, I seriously doubt that any insurance company is willing to think seriously about including shutdown benefits on the annuities that it distributes. You can't buy them, so you may as well forget about that particular issue, but it's something for counsel to be worrying about at some point. That basically is what the benefit liabilities are. The hope is that the plan has enough assets to cover those liabilities.

There is a form for an enrolled actuary to sign to certify that the plan has sufficient assets to provide all benefit liabilities. That form is submitted to the PBGC. Whether a plan has sufficient assets to provide all benefit liabilities is purely a factual question.

If the plan is able to actually pay all the benefits, then it is sufficient. If it isn't able to, then it can't terminate. You will never be able to complete the termination process, because the process requires actually providing for all of the benefits through either the distribution of annuity contracts or through lump sum distributions. So, if the certification that the plan is sufficient is false, the plan will end up not terminating or, in reality, the employer will end up throwing in extra money to make sure that there is enough money for it to terminate.

Let me now quickly go over what it is that the plan sponsor has to do in the course of the termination process. There are a number of steps that will also involve some actuarial assistance. There's a whole series of notices, which I'll talk about in a moment, that have to be distributed to participants and given to the PBGC. Aside from that, the plan very frequently has to be amended. It has to be amended both to accommodate the termination and because there may be changes. For example, the sponsor may wish to make lump sum distributions, but the plan may not have previously had any provision for lump sum distributions other than involuntary cash-outs of benefits valued at $5,000 or less or something like that. There may be other benefit changes that are desired—benefit increases if the plan has surplus assets, or the elimination of forms of benefit that can be eliminated and that there's no desire to provide. Housekeeping of that sort may result in a plan change; there is also the very important housekeeping of bringing the plan up to date with the qualification requirements.

The IRS requires that a terminating plan be amended to reflect all qualification requirements that apply to it, including those for which there's a remedial amendment period that has not yet expired. This was an important matter during the GUST remedial amendment period that is finally creeping to an end. But of course we now have the new EGTRRA remedial amendment period, which will again require that, even though it doesn't end until 2005, a plan that is terminating this year has to be amended in all applicable respects to reflect 2005 qualification requirements.

The sponsor also—in addition to taking care of these housekeeping amendments—needs to select an annuity provider, which David is going to talk about. The sponsor needs to be concerned about what's going to happen to the plan assets between the date that this process is put into motion and the date when plan assets are finally distributed. That can easily be a period of up to a year or sometimes longer. It can play havoc with one's planning if the market moves—and I know some of you will be surprised to hear that there's such a thing as market volatility, but it does happen. If the market moves result in the plan assets suddenly plunging into insufficiency after looking quite comfortable at the time when the termination was planned, you could have a problem. Chris Barr is going to talk a bit about what to do during that interval.

So, the plan sponsor has a bit of work to do, and part of it involves distributing a whole bunch of notices. Now, I am not going to attempt to go through, nor do I have time to go through, the contents of each notice. I do want to go through what the notices are and hit a couple of high points, particularly high points that are sometimes overlooked. The first notice that sets everything in process is the notice of intent to terminate (NOIT). This notice has to be given at least 60, but not more than 90, days before the date of plan termination. We'll come in a minute to what the date of plan termination means, because it's not an intuitively obvious term. So you have that 60- to 90-day window.

The NOIT has to be given at least 60 days before the date of plan termination. It's a statutory deadline. The Pension Benefit Guarantee Corporation decided long ago that it had no authority to extend that deadline under any circumstances. The PBGC can, and once in a blue moon will waive most of the other deadlines that I'll be talking about, though they are not exactly generous about doing so. But that deadline has to be met. Once the NOIT is distributed, you can't have your Date of Plan Termination (DOPT) less than 60 days later. This will sometimes be an important point, especially when you're getting near to the end of a plan year and don't want to have the plan lap over into another year.

Now, the NOIT goes out to all plan participants, beneficiaries of deceased participants, alternate payees, and your sponsors. It needs to go out within the prescribed timeframe to all those people. If through administrative error you miss a few people, that will be forgiven. If you miss a lot, then you don't have a valid termination, and you have to start the process all over again. The NOIT does not go to the PBGC in a standard termination, though in a distress termination it does. It goes to whatever labor union represents participants if you have a collectively bargained plan.

Let me say a word or two about just what the date of plan termination (DOPT) is. It is not the date when the plan distributes its assets in satisfaction of its liabilities. That is the closeout date. That's the date when everything really comes to an end. The date of plan termination is an intermediate stage. Several things stop at the date of plan termination. If it hasn't already stopped, benefit accrual ends at that point. There cannot be any forfeitures after the date of plan termination. Minimum funding requirements cease to apply to the plan, and that means that Form 5500s for years after the year in which the date of plan termination occurs do not have to be accompanied by a Schedule B. In fact, they cannot be accompanied by a Schedule B because there's nothing for the Schedule B to deal with. Also, any statutory or regulatory changes that occur after the date of plan termination can be ignored by the plan. The plan doesn't have to be amended to comply with it, nor does it have to comply with it in everyday operation.

On the other hand, a number of things continue after the date of plan termination until the closeout date. Form 5500s have to continue to be filed. So, if your date of plan termination is in 2002, but the plan does not actually close out until 2003, you have to file a year 2003 Form 5500 without a Schedule B, but otherwise a complete regular Form 5500. PBGC premiums have to continue to be paid, though in the years after the date of plan termination you pay only the flat rate premium, not the variable rate premium. In the year in which the plan actually does close out, the PBGC will give a refund for the portion of the year after the closeout. The qualification requirements of the Internal Revenue Code that applied up to the date of plan termination continue to apply and have to be operationally complied with. Also, of course, the fiduciary standards of ERISA continue to apply as long as the plan has assets.

Most important, the plan will still have people going into pay status, retiring, dying, et cetera. It also has the additional complication that it's going to have people electing the benefits that they're going to receive on plan termination. So, the DOPT is a very important date. It is not, however, the end of the plan. It is only the beginning of the end of the plan. One last point about the notice of intent to terminate is that it is important that either the notice itself or a separate notice comply with the requirements of Section 204(h) or ERISA and the new Section 4980(f) of the Internal Revenue Code for cessation of future benefit accruals. Section 204(h) has been around for a while. There are a number of changes to it, some of them liberalizing, some of them not. Most important was the imposition of an excise tax if the notice is not properly given. So it is important that that detail be taken care of. Even though the notice is simply a formality, it is a formality that has real consequences.

Other notices need to be given. There's a notice of annuity information, something more in David's realm, telling participants where their annuity contracts are going to be purchased. That needs to be given at least 45 days before the contracts are distributed. It doesn't need to be given, of course, to people who are receiving involuntary lump sum cash-outs of benefits of $5,000 or less. That notice can be combined with the notice of intent to terminate. More often it is given as a separate supplemental notice later.

The next big notice, and the one that is often the most work, is the notice of plan benefits. This notice can be given at any time after the notice of intent to terminate. It could, in theory, be combined with the notice of intent to terminate, though that would be a lot of work and make a big package. The principal purpose of this notice is to convey to participants the data that are being used to calculate their benefits. The theory is the plan is going away. This is the last chance to take care of errors in the data. So the basic thrust of this notice, though it is considerably more complicated than that, is to provide participants with information about what their final average pay is, what their years of credited service are, et cetera. It includes the information that goes into the benefit calculations. This notice has to be distributed no later than the next notice that we'll talk about, which is the PBGC Form 500. That deadline is another one that the PBGC cannot waive. If the notices of plan benefits have not yet been issued to participants, then the standard termination notice to the PBGC, the Form 500, cannot be sent in yet.

The standard termination notice can be given at any time on or before the 180th day after the proposed date of plan termination. It doesn't have to be given before the date of plan termination. It could, if one were really in a hurry, be sent to the PBGC simultaneously with the notice of intent to terminate and the notices of plan benefits, though again that would be really rushing things. This notice doesn't actually ask for a great deal of information. It does include the form for the enrolled actuary to sign certifying that the plan is sufficient. The importance of the notice is that it starts the clock running on the PBGC's period for reviewing the plan termination, which runs for 60 days from the date on which the PBGC receives the notice. The PBGC very rarely issues a notice of noncompliance. Normally, it would do so only because it was clear on the surface of things that the statutory or regulatory deadlines for notices to participants had not been met. Once that 60-day period has run, then it is possible to start distributing the assets of the plan. Until that point, the distribution of plan assets to close out the plan cannot begin.

There is one other step that can and should be interposed before the standard termination notice, but it doesn't involve the PBGC. That is an application for an IRS determination letter on Form 5310, which is a determination that the termination of the plan does not adversely affect its qualifying status. Now this is not mandatory. It is, however, highly prudent. There are only a very few problems that the IRS is likely to find with the terminating plan, but these are important problems, most typically failure to amend the plan sufficiently to reflect all qualification requirements, and also there could be problems with the benefit entitlements of former employees. That's become less of an issue now than it once was, but it is still an occasional issue.

Aside from its merits on the qualification side, the determination letter application has some benefits in delaying your deadline for having to close out the plan, and we'll get to that in just a second. The final form that ends the process is the post-distribution certification. That is simply a notice to the PBGC stating that the plan is closed out and telling where its records can be found so that the PBGC can conduct a post-termination audit if it's so inclined. Most of the time these days it is so inclined. That notice is due 30 days after the final distribution of benefits, though due is somewhat informal there. The real due date is 90 days after the deadline for distribution, because after that the PBGC can impose penalties for failure to file the notice.

The PBGC does keep track of these notices. It has been getting better about it. If it doesn't receive a post-distribution certification, Form 501, it will, after a while, start pestering the plan sponsor. Eventually if no notice shows up, it'll send a notice saying your plan hasn't terminated. Now that may be just fine because sometimes the plan really doesn't terminate. One should bear in mind that at every point in this process up until the moment when the assets are finally distributed, the plan sponsor can call the whole thing off. There's no requirement once you have set the termination process in motion that you ever complete the termination.

Let me mention a couple of other points. One is missing participants. There has been, for a few years now, a process by which if participants who are entitled to benefits cannot be located by the plan sponsor, the plan sponsor has to either buy annuities for those people anyway or turn over to the PBGC money essentially equal to the value of the benefit. Then if the person ever does show up, the PBGC can pay the benefit itself. Information about those missing participants has to be provided on a Schedule MP, which is sent to the PBGC no later than 30 days after the final distribution of assets.

Once the PBGC's review period has ended, then, unless you can get an extension from the PBGC, and those are extremely rare, the process of closing out the plan, distributing all of the assets and providing all the benefits, has to be completed within 180 days after the end of the PBGC's review period. If that isn't done, and the plan doesn't get an extension, then it hasn't terminated. You have to start the process over again, and it will be a lot of trouble to restart a termination after you have in fact already distributed the assets. So that is a deadline not to be missed. There is an alternative deadline of 120 days after the receipt of a favorable IRS determination letter, and this is another reason for applying for an IRS determination letter. If the application for the IRS determination letter is made no later than the filing of the standard termination notice with the PBGC, then you have until 120 days after the letter is received from the IRS, which is very often going to be later and sometimes substantially later than the close of the PBGC's review period.

Finally, to end on a happy note, there is the matter of payment of the expenses of the plan termination. Most of the expenses that would be incurred by an actuary in connection with a plan termination can be paid out of the assets of the plan. The Department of Labor has issued a couple of advisory opinions, notably 97-3(a) and 2001-1(a), that deal more specifically with the payment of expenses from plan assets. But essentially, any actuarial expenses that are going to be incurred in the course of terminating the plan are probably payable from plan assets.

MR. DAVID GREENE: If we can build just about anything atom by atom, I'm certain that actuaries can underwrite just about anything, including the shutdown of benefits in the future. Terminating a defined benefit plan is a complicated process with potentially over two dozen separate tasks. Many of these tasks are completed by actuaries, some by plan sponsors, some by attorneys, and some by specialists such as ourselves.

What can you expect from this session? A sense of the process that includes tasks you might not have thought of in the past and the level of detail and precision that is needed in the process versus ongoing actuarial work. As an actuary valuing a pension plan, you make assumptions and frequently deal with data that is only mostly complete. For a plan termination, all plan provisions must be spelled out, and all data must be 100% accurate.

I'm going to concentrate on a few of the tasks that we are almost always involved with. These are the up-front preparation work, searching for missing plan participants and deaths, drafting the request for a proposal to obtain a group annuity quote, conducting a due diligence meeting, holding a bid auction, reconciling the data after the purchase, and possibly a PBGC audit.

When considering a timeline, you need to ask, who is taking this responsibility? The plan sponsor? The plan's attorneys? Ourselves? The actuaries? Many times there are more than one person involved in the same process.

The most important part of the project is preparation. Plan amendments may need to be adopted in advance, as Tom mentioned. As an example, a plan sponsor that calculated voluntary contributions in terms of the current trustees' investment return needs to change to a fixed or indexed rate so that an insurance company can administer it effectively, something that's quite often just forgotten. For example, a sponsor had a disability provision in a pension plan and changed to provide this benefit through a long-term disability plan. Quite frequently when we do run across disability provisions in pension plans, if we read the language of their group long-term disability contract, there's generally a direct offset. So by removing the benefit, which is not protected under ERISA, one could easily make the case that there's no loss, there's no gain. If it is felt that we do need to maintain some form of disability, many times we need to examine the language and possibly amend it to conform with the Social Security qualification for disability. Certainly there are other issues that are involved that could include union negotiations or the corporate promise.

We need to determine whether a lump sum option should be offered to those not currently eligible. This would be especially relevant if interest rates were high at the beginning of the plan year but rates are dropping. If a plan sponsor wants to make a change, a plan amendment will be needed.

Chris is going to be talking about hedge strategy in a few moments. For most of the plans that we have been involved in, larger plans, there is no hedge strategy. Rather than comment any further again, I'll leave that to Chris, but it is quite important. We need to develop data requirements, receive and edit initial census data, and consider the type of annuity to be purchased. If it is a large plan termination, should we be using a separate account as opposed to putting the liability of the plan in the general account of an insurance company? Possibly it should be further guaranteed by the general account of the insurance company. Are variable annuities appropriate? There is approximately $3 billion of liability that we are aware of in variable benefits that some day may terminate. There are a few plans in the last few years that have terminated where they were required to use variable annuities. There are a lot of other issues surrounding variable annuities. I'm not going to go into them now. But it is something that needs to be planned for if it is going to be necessary.

Deceased and missing plan participants can create difficulties. Certainly most plans do periodically check retirees to determine whether or not they are surviving. It's quite simple to do a death search using various vehicles that we can either outsource or do internally. When a beneficiary of a retired participant dies, the plan sponsor is not usually notified. Why would we want to buy a benefit for somebody that is deceased? There are a lot of ways of approaching that, but as actuaries you should all keep that in mind. If a vested terminated participant is deceased, how is the surviving spouse located? How do you find the spouse of a long-deceased person? It is difficult to search for someone you don't even know exists. Usually there are a significant number of vested terminated participants who have left no forwarding address. If we're working with a plan that deals with a lot of retail-type employees, most of these employees work for the paycheck, not for the benefits. They may not even be aware that benefits exist.

Missing participant searches need to be addressed. Social Security does have a service that is quite effective, but so does the IRS. Would you rather get a letter from the IRS or from Social Security? There are other searches that can be used as well. Our office has individuals who do nothing but call neighbors of missing plan participants. Certainly if we're able to determine that somebody is deceased, that is a gain to the plan, and our office generally starts with the older plan participants with the larger benefits.

For requests for a proposal (RFPs), start with the plan document to develop detailed plan specifications, then cut out provisions that are irrelevant to an insurance company. For example, benefit service is irrelevant, but future vesting service is not. This also may require a plan amendment. Use examples such as specifics of how the lump sum option is calculated. Specify how future vested service is calculated, provide examples in the RFP for a particular complicated provision, and compare the plan document with the summary plan description (SPD) and plan provision section of the actuarial report. Has anyone ever dealt with a plan where the plan document differs from the SPD? The plan document says to reduce the pre-retirement death benefit, but the plan sponsor has not administered it this way. When we find discrepancies, we question and reach a consensus on how to write the specifications. Many times, this is not an easy task. We simplify based on actual data and plan amendments.

Let's consider this example. The plan sponsor had a complicated death provision, but it turned out to affect only three participants. It is rather complicated, and an insurance company request for a proposal may not realize when they get to this section of the RFP that it only affects a few people. So you probably would be better off leaving it out of the RFP. When you're about to make your selection as to who will provide the benefits for the liability in the future, put it into your acceptance agreement. You won't be turned down, especially when it only affects a few people, and it simplifies the process.

Consider the example where a plan sponsor had a special death benefit that had been grandfathered. No plan participants were in this category. So as we're reading the plan, it may seem complicated, but in this particular case just leave it out. It was not relevant. Another example would be where the plan sponsor had a very complicated early retirement provision that involved service with two predecessor employers. We simplified the wording of the RFP and compensated by providing more data that would and could be applied to the formula.

We want the plan sponsor, actuary, and attorney to review all RFPs. In an example of an early retirement provision that involves grandfathering of a predecessor plan, there is a lot of detail that is sometimes necessary . We try to use formulas whenever possible. The verbiage is wonderful, but if someone misses it, we want to make certain that there's no hedging on any of the quotations that come back.

Due diligence meetings should be based on ERISA requirements. Department of Labor Bulletin 95-1 explained and clarified these rules primarily because of Executive Life's failure, and a few other insurance companies. It's quite lengthy. One thing that's important to realize when you read through it is that the rules haven't changed.

Plan sponsors have always had the fiduciary responsibility to choose the safest available annuity for their plan participants. The 95-1 just went into further detail as to what one needed to do. There were a number of areas specifically pointed out—the quality and diversification of the insurer's investment portfolio, the insurer's size relevant to the proposed contract and ability to administer the contract, the level of the insurer's capital and surplus, insurer's lines of business and exposure to the liabilities, and structure of the guarantee of the annuity contract, such as the use of separate accounts. I mentioned that a moment earlier. You're not going to find too many insurance companies that are going to be willing to underwrite a separate account group annuity contract unless it's a large amount or it's an insurance company that may have some financial problems and so they offer to write a separate account since separate account funds are not available to creditors in the event of bankruptcy.

In conducting a due diligence meeting, one needs to take into consideration conflicts of interest. The timing of the due diligence meeting should always be before the plan sponsor sees prices so the plan sponsor is not influenced by price. When we have worked with the Department of Labor in reviewing potential complaints, this is the first thing we look at. When were numbers seen? Details of topics need to be covered during the meeting. It should be stressed that state guarantee funds covers only those living in the United States and their territories, and it certainly does not include people living in Spain.

It would probably be recommended to break down all participants by residency and look at the guarantee association coverage in the various states of your plan participants. When sending out the 45-day notification that Tom spoke about earlier as to who you might select an annuity from—not that you're necessarily going to—you're also going to need to communicate about the guarantee association's coverage in that state. There are some generic forms that can be used. If you do know the actual state or states, you may choose to use that specific state.

In your due diligence meeting, there are key financial indicators for each company that should be separated and shown side by side so they can be analyzed. I could spend a lot of time going into what is involved in a due diligence meeting. Probably the shortest one we've ever conducted was about two-and-a-half hours. There is a lot of detail that's covered. We would generally recommend that the plan's attorney be present to make certain that the issues that the Department of Labor would be concerned about are all covered. They should be present as plan fiduciaries.

It's most important to create some form of a price model in advance. In the preliminary work, to try and determine whether or not a plan is sufficient, we're going to look at mortality. We're going to look at interest rates, subsidized benefits. Our price model certainly has to include all of these items. Frequently, early retirement is mispriced by actuaries. More time probably should be spent making certain that we are using correct assumptions.

Generally our auctions are on a pre-determined date, and an insurance company will e-mail or phone to give us their numbers. We tell them to continue to phone us, letting us get an update on where their numbers might be, provided they are willing to allow us to share their numbers with everyone else that might be bidding on the liability. Many times we will find insurers will come back 5-10 times during the morning. Certainly they always want to know when it's going to be over, and we will not tell anyone when it's going to be over.

I think probably most of you have been to nonprofit silent auctions where there'll be tables with a case of wine or a football, and there'll be a piece of paper sitting in front of it. You keep raising your own bid as the evening goes on. Well, smart players will wait until they know the paper is going to be picked up, and if it's 8:30 in the evening, you're going to be there at 8:29 to put down your final number. Well, an insurance company will generally do the same thing, and I know there are a number of people representing insurance companies in this session. They'd probably all like to know when we're going to pick up the piece of paper. We won't tell anyone when we're going to pick up the piece of paper. Only when we feel that it meets our expectations from our price model will we call it, and at that point we will look at the various insurance companies that have submitted numbers, and we will have one last run. We're going to tell whoever has the best number at that point to stand by. Everyone else is going to have one final shot. Whoever had the lowest number that was standing by will always have the last look and will always have the opportunity to take the business. It seems to work quite effectively. We've been using it for years.

Reconciliation issues, unfortunately as we can imagine, are greater on plans where plan sponsors may have financial problems. Do any of you have plan sponsor clients whose participant records are not quite exact? We would hope that the reconciliation had been handled prior to the annuity purchase. In many cases, unfortunately, that is not the case. For large complicated plans, there are always changes in the data. For example, retired participants are found to have died prior to the contract date, which you can expect on a large plan. You could also have new vested terminated participants who suddenly show up. There are also situations where participants' benefits were calculated incorrectly. In most cases, final reconciliation takes a few months on larger plans. In some cases, final reconciliation unfortunately can take up to a year. We need to track all debits and credits and reach an agreement with the insurance company on refunds and extra premium requirements. I've seen spreadsheets that are 20-30 pages for reconciliation on complicated plans.

The PBGC reserves the right to audit the plan termination. I have found in recent years on all plans where there are reversions of any size, the PBGC has always audited. Keep all documents for six years after filing Form 501.

Chris now will go into what is probably one of the most important issues.

MR. CHRISTOPHER BARR: Tom talked about a termination, and David talked about actually purchasing the annuity. In the context of history, those actions sort of happen in a vacuum. What happens in between didn't really have much impact. The question may be, as David had mentioned, why is it that people haven't been hedging? He said a lot of the terminations he sees have not been hedged. I think that Tom answered that in mentioning volatility. In the past, we have not seen the type of volatility that we've seen in the last few years. On the liability side, we have not seen anywhere near the sustained period of low rates that have affected liabilities that we've seen the last few years. This is headline news, and it's so much more interesting now because you have very poor asset values and asset performance. I'm going to talk about what happens in that period in between termination and annuity purchase.

You cannot expose yourself to market risk when you have a short-term liability, and we just haven't seen the type of volatility we've seen in the past with both interest rates and specifically, on the asset side, stocks. So, what I'm going to do is talk about the actual risk, which is the mismatch risk between assets and liabilities. That risk is really defined by duration and convexity. You probably know more about duration and convexity than I do, but we're going to talk about how it applies to the portfolios and the assets.

I'm not really going to go into a lot of detail about duration and convexity. I'll go in quickly to the mismatch issues and then the use of derivatives. I'm going to try and put this in a user-friendly context so you can actually see the steps that you would take.

First of all, the plan terminates. Tom mentioned the myriad of forms you have to fill out to get it going, it's finally done. The date is set. The plan stops. A certain number of months away, you're going to go to David and purchase an annuity. So what do you do in that meantime? Well, look at your plan assets. If you count international equity, typically pension plan asset allocation is about 75% stocks, a little bit bonds, and, more importantly, that little bit that's bonds has absolutely nothing to do with your liabilities. Most pension plan bond portfolios have about a 4.5-year duration. Why is that? Because that's what the Lehman Aggregate (Ag) is. The Lehman Ag is just an index, which mirrors the market weightings of all fixed income asset classes created under certain criteria. Most pensions have a 10- to 12-year duration. So, why do the assets not look like the liabilities? Because most of these asset allocations are arrived at through Markowitz mean variance return, efficient frontier space model. In other words, the liability of a pension is defined to be something very long, and, what's more, it's uncertain. That just makes it very complicated. So, the prevailing wisdom is go very long in duration, which arguably is equities, and try and get the highest returns in doing it.

So the plan terminates, and you're stuck with this portfolio that's mostly equities. Well, now what? In the first six months of this year, the Standard & Poor's (S&P), which is a fair proxy for your 75% assets in your portfolio, is down 15%. So let's say you terminated the plan at the beginning of the year, and you just kept it in 75% stocks. Well, that 75% stocks just lost 15% of its value. That's an enormous number. It's inconceivable how this could sit out there unhedged. Why has it sat out there unhedged for so long? We didn't have this kind of volatility, and we've been in a great bull market for the last 10 years.

Let's take a look at it from the other side of the telescope, the liabilities. Consider long bonds for the last six months of 2001. Now to put it in context, the rate goes down again, but again on the fixed income side when rates go down the price of the asset goes up. Well, for the liability it's no different. As the settlement rate goes down, the liability goes up. Now, we work with an awful lot of big plans, some of the biggest in the country, and we're talking about things like downturn consulting. We are not just looking at things on the asset side but the liability side.

Let's throw some numbers behind it. Consider an example with a $10 billion plan with a 10-year liability. Using an actuarial discount rate that mimics a AA 10-year corporate bond, the rate's down 100 basis points on a 10-year duration. It's going to cost them $1 billion. The S&P is moving off 15%. Do the math. Six months can absolutely destroy the asset/liability value if it is not hedged. So, the question then is what is our risk?

Asset/liability risk is much different when the plan terminates than the assumed asset/liability risk before it terminated. Now, the way I'd like to explain that is right now all of your pensions have a very long liability. That's when you're going to retire. There's going to be some ups. There's going to be some downs. Over time you're looking for the highest rate of return. Specifically, the bogie is a long-term asset rate such as 9.5%. That's effectively where many plans are right now. You may have been reading that a lot of those asset bogies have been dropping over the last couple years because asset returns don't expect to be so high going forward, but the long-term bogie for a plan sponsor is not the liability. It's hitting a long-term rate of 9-9.5%.

Once you terminate the plan, well, that's no longer the liability. The liability is your annuity that you might be buying in six months from David. What is that liability? That liability is the discounted present value cash flows of all your plan participants, and that is not a 9.5% return. That is something that's very real, very tangible. It has a duration and is something that you actually can track so you don't have this problem. Therefore, the risk then becomes changes in rates, because changes in rates effectively are the changes in liabilities. Unless you have a big change in the mortality tables or how you're going to be valuing those assets or evaluating them, it's going to be changes in rates. So, you should be managing assets for changes in rates, period.

Immunization is simply matching the duration of assets and liabilities. The value of the assets has to be equal to the value of the liabilities. The duration of the assets has to be equal to the duration of the liabilities, and the convexity either has to be the same or better than the convexity of the liabilities. What is duration? Duration is nothing more than the sensitivity of price to changes in rates. The convexity again, not to drill in too deep, is just the experience of a nonlinear change in price to changes in rates.

I just want to go real quickly through a couple of examples. As long as we calculate a value of duration for a liability, which is just like a bond, it's nothing more than a stream of cash flows. In the example, I have a 5-year bullet payment. Five years from now I own $14 million. I know what the yield on that 5-year is. I can come up with duration. Well, for a single payment in time in the future, the duration is whatever the maturity of that payment is.

On the asset side, it's a little more complicated. We have to discount all the cash flows. We have to weight those cash flows by the period. It has cash flows with the same duration of five years. So, we have the same present value for both assets and liabilities. We have the same duration it's immunized. So, the wisdom here is that the plan's terminated. We sell out of all the stocks, the real estate, the private equity, the commodities, even the existing bonds, and we match the duration, and rates go up. Well, what happens if rates go up? The value of the assets goes down. You would think I'm telling you to invest in something where the value of the assets could potentially go down? That's right, because ostensibly the value of your liabilities went down, too, and as long as they move in lockstep, you don't have that risk.

There are some problems with duration. One of them is nonparallel curve shifts, which are very important. The curve never moves in parallel fashion. Another problem is convexity, negatively convexed bonds, bonds that are callable and mortgages. Mortgages are a huge issue now. Rates have dropped so precipitously in the last couple years. It's been a major headache for Wall Street because, well, somebody goes out and buys a mortgage, and it's getting a couple hundred basis points over Treasuries, and they're thrilled. They expect to be getting this 8% forever. Then all of the sudden somebody pays it off and it comes back to him or her. Now they've got to reinvest it at 4-5%. So, are mortgages appropriate for duration matching? No.

For immunization, we assume parallel shifts, but we can get around that with partial durations and managing effectively through modern portfolio theory. You need small shifts. If the market moves 200 basis points, you have to rebalance a lot, but that just comes with active management. Immunization is a concept of targeting durations, and that's something that needs to be managed as well.

Finally, we come to derivatives. That used to be a big scary word, and in terms of hedging and immunizing it's probably your best friend. Derivatives are the reason it's so cheap to hedge now. For S&P 500 futures, you could practically do them on the Internet. They're that big, and they're that liquid, and they're that cheap. Exchange traded funds give you very close approximation of the markets you're investing in. So the point is if you did have this portfolio that you were terminating or this plan you were terminating, you could hedge out your sale of these asset classes very easily by actually selling futures or exchange traded funds into the market to immediately reduce your exposure and then unwinding those as you buy back the futures. The flip side of that is the fixed income. How do you get immediate exposure in a 10-year duration to a $1 billion fund? Treasury futures. For spread products, you use swaps and credit derivatives, again scary words. Credit derivatives, if used correctly, are your best friend. They are incredibly cheap and incredibly active. The market has evolved so much in the last five years that pension plans should be armed with at least how they work.

Once you decide you're terminating a pension plan, determine the risk characteristics of the liabilities. It could be an old stale number. It could come from things like the financials. We're working on one of the top ten corporate pensions in the country right now where literally I can look in their 2001 financials. I look at their actuarial loss, the lion's share of it owing to a change in their settlement rate, and I can back into a duration. In this plan, I can see every quarter percent move in their discount rate cost them $900 million. So they're incredibly sensitive to changes in rates right now. Design an optimal strategy around specific size, timing, liquidity, and cash-flow constraints. Planning is really the most important part of this. If you're not comfortable with this kind of language, there are people that are and know where all the land mines are and have done this. It is competitive, and it's very user friendly now. We've been doing it for a while and are very comfortable showing our models to clients.

When implementing the immunization in all markets, be sensitive to the question of whether to wait a week for better execution or go ahead and do it in futures. It is a simple cost benefit analysis. That's something we can do very easily. Monitor and rebalance until the annuity purchase is complete. Whether it is three months, six months, nine months, or even if it's next week, there is implicit risk. I think probably the most important thing to understand is over the past five years a lot of people have sobered up to the realities of assets and liabilities and the dynamics between them. We are back to pre-1998 levels in the stock market. It was such an incredible experience over the second half of the 1990s. Now we're sitting here with the S&P dipping below 1,000. That puts us back to where we were in 1998. The biggest issue with regard to immunization right now I think is plan assets being market valuated. Is that going to happen? Is it going to be smooth going forward? Who knows? The problem is the extreme volatility on earnings for corporations. There's a lot of resistance there.