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FULL FUNDING WHIPLASH

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This session will be a discussion of ways that we can use the volatility of the full funding limitation as a consulting opportunity.

- Smoothing cash flow in the current regulatory environment
- *Cash-flow forecasting in a volatile market*

MS. HELEN I. MILDENHALL: I am from the Chicago office of William M. Mercer, Inc. The speakers are Kathy Fitzpatrick from the Wyatt Company in Chicago; Matt Sloan from Davis, Conder, Enderly and Sloan based in Chicago; and Dave Ready who is with Towers Perrin in Chicago.

Full funding whiplash is defined as significant and unexpected changes in required pension contributions from one year to another. We want to discuss the following questions: First, what causes full funding whiplash? Second, what types of clients are likely to be vulnerable to full funding whiplash? Finally, and most practically, how can we work with clients to help them minimize the whiplash effect?

MS. KATHLEEN A. FITZPATRICK: Pre-ERISA, the IRS position on plan funding was pretty specific: it really did not care about the actuarial soundness of plans. The extent of the protection of employee benefits was that the benefits could not discriminate in favor of shareholders. The only real concern was excessive tax deductions. Prior to 1974 there were no minimum contribution requirements. The maximum contribution was equal to the normal cost plus 10% of the unfunded actuarial accrued liability, but employers also had more or less a full funding credit. Employers, whatever their funded position, could always contribute 5% of pay. This is why some plans were so overfunded at the time. There was no protection against fiduciary misconduct except for general trust laws. But in 1962 a rule was finally passed that made it illegal to embezzle, to provide false reporting, to bribe or to offer kickbacks.

On September 2, 1974, ERISA changed the IRS direction on plan funding. Employee rights to benefits were protected with Title I and Title IV; tax deductible contributions were limited; and the 5% of pay allowance was removed under Title II. There was a minimum required contribution equal to the normal cost, plus amortization of the unfunded actuarial accrued liability over different amortization periods, which they provided. The maximum contribution was the normal cost plus the ten-year amortization of the unfunded actuarial accrued liability.

Believe it or not, between 1974 and 1987, there were no changes in the minimum required contribution or the maximum deductible contribution. The changes that we are familiar with today came in the Omnibus Budget Reconciliation Act (OBRA 87) or the Pension Protection Act (PPA). The IRS position significantly changed because of

Congress' concerns with the obligations being incurred by the Pension Benefit Guaranty Corporation (PBGC). The IRS wanted to limit the exposure to the PBGC as much as it could, but, on the other hand, the IRS also wanted to limit tax deductions.

Four basic rules were changed to protect the PBGC: the amortization periods were reduced for gains and losses (from fifteen years to five years) and for assumption changes (from thirty years to ten years); quarterly installments of the contributions were required; liens were imposed on very underfunded plans; and a new contribution requirement, the deficit reduction contribution, was added. The deficit reduction contribution and some of the maximum contribution limits are determined based on a new concept, current liability. Current liability is the present value of accrued benefits based on an interest rate that is bounded by law to be between 90-110% of the four-year weighted average of the 30-year Treasury bills.

In addition, the full funding limitation was changed. Instead of merely looking at the accrued liability less assets, the IRS now requires that you look at 150% of the current liability less assets. The full funding limitation has possibly been reduced, depending on the type of plan, for instance, a plan with a nonpay-related formula. However, if you hit the current liability full funding limit, the amortization bases are not wiped out; instead, a new base is set up for the Schedule B to make sure the Schedule B still balances. Although the 150% of current liability limit is a change to the full funding limit under IRC Section 412, it also limits the maximum deductible contribution. However, under IRC Section 404, the maximum deductible contribution has been increased by allowing a contribution of up to 100% of the unfunded current liability. The result is a collar around the maximum deductible contribution and a limit on the minimum required contribution. The effect on contributions depends on the kind of plan and how underfunded or overfunded it is.

Considering both the deficit reduction contribution and the changes made to the amortization periods, an underfunded plan (that is, underfunded based on current liability rather than on an accrued benefits basis) recognizes between 40-50% of the gains or losses each year in the required contributions. By comparison, 13% was recognized prior to 1987. This is the result of the deficit reduction contribution requiring recognition of up to 30% of the gain or loss in addition to the five-year amortization of the gain or loss. The deficit reduction contribution also changes the percentage of any plan amendment recognized. In the past, approximately 10% was recognized each year. That has increased to 15-25% each year.

An overfunded plan (overfunded based on a present value of accrued benefits basis), recognizes between 13-25% of the gains and losses each year. Again, that is up from just 13% on the old basis. That is because of the full funding limitation.

Now Matt and Dave will talk about the effect the deficit reduction contribution and the new full funding limitation have on contributions. Matt is going to look at particular plans to show the impact that each one of the changes will have on contributions.

MR. MATTHEW T. SLOAN: What we have been talking about is volatility in contributions, and as Kathy described, there are three main drivers that are going to cause greater volatility going forward. Number one is the shorter amortization periods

that she described. The others are the two limits on the current liability that Kathy talked about. The bottom limit affects the plans that are funded below 100% of the current liability. They are allowed extra contributions up to the 100% funding level. On the top side, if the plan is funded over 150% of current liability, the plan sponsor is limited from making contributions whether or not the plan is fully funded on an actuarial accrued liability basis. These last two limits create a collar, which we are calling the current liability collar.

This current liability collar causes whiplash, or more volatility, when one side of the boundary, one side of the collar, is close to the actuarial accrued liability. Let us first consider the kinds of plans that might be affected by being at the top of the current liability collar: new plans starting with no liability, terminated and restarted plans that settled the past service liability and are starting with very low or no liability, or those plans that have had a settlement for FAS 88 accounting purposes, which lowered the current liability, could be affected. In addition, any plan with a young work force or few retirees has the potential to be affected, especially a final pay plan using an entry age, projected unit credit or some other funding method that front loads the accrued liability relative to the current liability measurement.

The key to whether or not this limit comes into play is the size of the current liability relative to the actuarial accrued liability. Consider a plan where 150% of current liability is smaller than the actuarial accrued liability. In this case, even though the plan may not be fully funded (the assets could be either above or below the actuarial liability), the plan may be affected by the full funding limitation. This is likely to occur if future salary increases have a high impact, such as in a very young plan or a plan with a very young population. Typically there would be a different attribution approach if the actuarial accrued liability is determined under an entry age or projected unit credit method. Maybe the best way to understand this type of whiplash is to look at an example.

Consider a pension plan that has an actuarial accrued liability on a projected unit credit method equal to its Projected Benefit Obligation (PBO) of $100 million. The plan is funded right at that liability amount so that the assets are equal to the liability. The current liability, which is equal to the Accumulated Benefit Obligation (ABO), is $70 million. Assume this company decides to buy annuities for all past service, in effect, settling its obligations under FAS 88. The company is going to pay $70 million to buy annuities for the current liability or ABO. This is something that some companies have actually done. Many of the banks in the late 1980s purchased annuities, even though the plans were not terminated, so that they could use the settlement accounting. There are some regulatory reasons why that was advantageous for them, but you would get the same kind of effect if you terminated the plan, recaptured the surplus and then restarted the plan. Finally, assume this plan made ongoing contributions of about $10 million, which is the normal cost. The settlement has removed the current liability from the plan. The $70 million current liability is now the obligation of the insurance company through the annuities, and so the current liability and the ABO of the plan are zero. Since $70 million was paid to the insurance company, the assets are now $30 million instead of $100 million.

Now consider the impact on the contributions. In the first year following the settlement, the contributions are limited by the 150% of current liability limit. Prior to the

settlement we needed to fund the normal cost of $10 million. Now the current liability has been taken to zero, and the 150% limit applies. In the second year, the normal cost is added to the actuarial accrued liability, and in fact, there is an unfunded accrued liability because the assets have not grown, since there have been no contributions. In fact, the contributions may be limited for another year because the current liability is just beginning to grow. So there may be a number of years of zero contributions while an unfunded actuarial liability begins to grow.

If we assume these liabilities are as of the beginning of the year, the current liability is going to grow another $10-20 million, and the limit would be up to $30 million. We are at the edge since the $30 million is equal to the assets, so it is close whether there will be a contribution in the second year if this is a beginning of year valuation and we are considering end of year numbers.

Now that was an example of a plan that is at the top of the collar, but the bottom is important as well. The reason that it is important is that the 100% of the current liability is the trigger for the deficit reduction contribution. In addition, there is a change in the maximum, since plans are always allowed to fund up to 100% of the current liability. The result is forced extra contributions and allowed extra contributions.

The whiplash is caused when a plan moves back and forth between the old full funding limit in one year and assets falling below 100% of current liability in the next year. It is possible to have a plan that is limited one year from making contributions because assets are equal to the actuarial accrued liability plus the normal cost, and have a large contribution in the next year because there is a loss and the plan ends up with a deficit reduction contribution. This can happen if the current liability is very close to the actuarial accrued liability. So the key here is how close these two liability measures are together.

The kinds of plans that can be affected by the bottom of the collar are dollar per month plans, career pay plans, and even a final pay plan if the funding standard account discount rate is quite a bit above the current liability rate. The best way to show this is through an example. Consider a dollar per month plan. The actuarial accrued liability is calculated using the unit credit method, so it is equal to the current liability. In this example we assume the actuarial accrued liability and the current liability are $90 million. The normal cost is $10 million, and at the beginning of this example the assets are $100 million. So the assets are equal to the accrued liability plus normal cost. In year one we have a contribution of zero because the plan is right at the full funding limit under the old full funding rules. Now assume in the next year there is a loss on assets of 20%. The actuarial accrued liability is growing because more benefits are being earned, but the assets are now only $80 million.

The plan is no longer fully funded, so there is no longer a limit on the contribution. In addition, the 20% loss on assets, or a $20 million dollar loss, causes a base to be set up. The base is amortized over five years. Furthermore, the assets are below the current liability, which is also $100 million, so there is going to be a deficit reduction contribution to make up for some of the underfunding. The net result is a contribution of $18 million. So we have a plan that has gone from no contribution to an $18 million contribution in one year because of an asset loss that could easily happen.

Note that the $8 million from the amortization and deficit reduction contribution is a direct result of the asset loss. Also note that $8 million is 40% of the loss, which is exactly what Kathy told us it would be. The plan has gone from a contribution of zero to $18 million in one year even though the long-term expectation is for a $10 million average annual contribution (the normal cost on an ongoing basis). This fluctuation around the $10 million expectation is quite substantial, and that is what we are talking about when we talk about whiplash that affects companies that are real close to the boundaries.

There have been a number of events in the 1980s that have caused plans to be fully funded. There have been bull markets in both equities and bonds, so assets have performed very well. In addition, there has been a trend among actuaries to liberalize assumptions a little bit going from the 3-5% assumptions to 7, 8 and 9%. As a result, assets have gone up, liabilities have come down, and many plans have been in a "contribution holiday" for a number of years. Many actuaries are seeing the plans they work on become very close to coming out of full funding. When they do come out, the surprise is not only going to be that the plan came out, but also that contributions are going to be less predictable from year to year. The volatility caused by the current liability limits and the other rules of OBRA 87 is significant to many of our clients in terms of costs and cash-flow management. Not only are the contributions more volatile, but also the cash-flow management that companies are doing today is much more rigorous and exact than it was before the plans became fully funded. Companies have leveraged in the 1980s and have tightened their management controls and targets. So not only do we have a cash-flow item that is more volatile, but we also have a management community that is more interested in controlling volatility than it was in the past.

Finally, the impact can be substantial. Sometimes we do not think of what we do as having a big impact on the overall operation of the company. But in the 1980s, pension costs for the Standard & Poor's 500 companies went from about 15% of payroll early in the 1980s to about 5% by the end of the decade. The decrease in pension costs was responsible for over one-third of the earnings growth during that period, having a greater impact than inflation or general productivity increases over the same period. The perception of many financial executives may be that they have a very low cost item. They may be surprised when they have to start making contributions again, and when they find out the magnitude of those contributions going forward. This creates a lot of consulting challenges and opportunities for actuaries. Dave is going to talk about what we as actuaries and consultants can do to help our clients through this management process.

MR. DAVID E. READY: I want to wrap up the session by covering where we are today and where things stand. But instead of just looking at the past, I want to also shift gears a bit. I would like to take a proactive focus and look ahead at how we can help our clients before we deliver the valuation report with the bad news that the contributions have jumped and that they are going to be volatile in the future. What can we do ahead of time to educate our clients, provide some value for them, and perhaps also expand the scope of our consulting relationship? Perhaps there is a chance for a real win-win situation here.

First of all, we can make sure our clients are clear on the concepts that we have talked about: about not only the increased level of contributions they may be facing, but also the increased volatility. This gives us an excellent opportunity to discuss forecasting of some degree of complexity. We can talk about the value that forecasting would provide and hope our clients buy in to include forecasting in the work that we are doing.

We need to consider whether a short- or long-term forecast may be more appropriate for the client. The client may just want to look ahead a year or two, or they may wish to engage in a study that involves a longer-term outlook. Stochastic forecasts are necessary if you want to illustrate volatility. They have not been done for every client in the past, but more and more clients are requesting them. We will need to communicate volatility to clients in addition to forecasting the overall level of clients' contributions.

It is important to consider all sources of volatility. We need to look at everything that may make our numbers right or wrong, and include even those factors that are not being modeled: benefit increases for a union plan or pay increases if the client is in the health care sector, for example. There are other factors that are unique to each client, obviously.

We have been talking here about both volatility and the level of contributions. The plan design, the client's investment strategy, and the assumptions and methods that are used in calculating the minimum contribution are going to interact with each other to either increase or decrease volatility. If they are well-managed and properly coordinated, they can act together to help significantly reduce volatility; or if not, they can work the other way. If you have a client that changes its liability rate frequently and the client is invested in fixed-income securities that are going to move frequently also, then an asset smoothing method may not be appropriate. An asset smoothing method may actually increase the volatility. So it is important to look at how these things interact with each other to ensure the best results for the client.

If a client is worried about volatility, there is a very simple solution: make excess contributions in addition to the minimum. If you are working for a not-for-profit company or for a for-profit company that can deduct more than the minimum contribution, this may be one way to deal with the volatility. However, many clients prefer to manage volatility a different way.

The investment strategy is going to significantly affect volatility. When the client is looking at its investment strategy, it may be an excellent idea to involve the actuary in those discussions. The investment strategy will interact with the assumptions and methods to either hurt or help your client meet its objectives.

Just a side note, we have been talking about contributions, but obviously, many of the same concepts will apply to *FAS 87*. *FAS 87* has its own unique characteristics and additional volatility.

MR. SLOAN: Many of us deal with volatility when it hits. The client comes in and says it cannot afford a $5 million increase in its contribution. I am sure everyone has found ways to reduce contributions when necessary. One of the points about looking

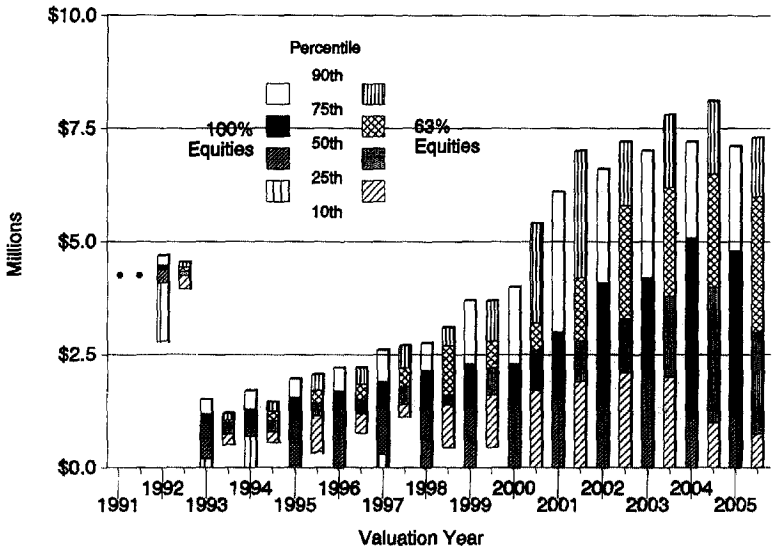
at investment policies is to undertake part of that process ahead of time. The worst cases of volatility occur when the actuarial accrued liability is close to 150% of the current liability. How close those are is largely a function of some of the policies that we set with clients, including their funding policy, which we have alluded to in terms of putting in excess contributions. But the funding policy is not just a matter of choosing minimum or maximum contributions. It also involves choosing funding methods, and the aggressiveness or conservatism of assumptions. The way those funding targets are set involves all of the things we do. So even setting things like the funding method, which positions those two liability measures relative to each other, has a big impact on cost volatility, or what you might expect in terms of cost volatility going forward. So whenever a client is looking at decisions that affect its investment policy, it is very important to review the actuarial policies so that both policies work together well.

MR. READY: Clients make investment strategy decisions by looking at the tradeoff of the excess return they can get from their asset decisions, versus the risk that they assume. The plan design is important there. A dollar per month plan may have severe whiplash potential; it can have a deficit reduction contribution one year and then go into full funding the next year. For this type of plan, a more aggressive investment strategy may not make sense; there would be too much volatility. An investment strategy that is smoother and more coordinated with the way the liabilities will move may make more sense. But a different strategy may be better for that same client if it has a final average pay plan. The actuary has the role of helping the client coordinate the investment strategy with the plan design.

Consider this case study, an hourly union plan. The plan's actual 1991 funding policy has a contribution of about $4.2 million. We can show the client the sharp decrease in its contribution requirement when it finishes amortizing its initial ERISA base. There is a sharp drop of almost $2.5 million that the client probably wants to know about. The contribution is fairly level after that. This is a no gain or loss scenario involving some negotiated increases in benefit levels and an assumption for future benefit increases. The assets are assumed to earn the rate of return which in this case is 8.5%.

This was not shown to the client. Instead, we prepared a stochastic forecast for the client (Chart 1). We have the actual 1991 results of about a $4.2 million contribution. The right bar is the client's current asset policy. The center portion is the fiftieth percentile range for their contribution amounts. In other words, that is the range from 25–75% likelihood. The bottom part of the bar is another 15% probability range above or below the center most likely range. So overall, the model captured an 80% probability range in the right bands. The client's current asset strategy has invested fairly aggressively in equities 63%, with some fixed income also. Again, you see the precipitous drop that is expected in 1993. We show a small probability of hitting the full funding limit and having the contributions go to zero under the right bar scenario (63% equities). In our attempt to educate the client about these concepts and how they interact with each other, we have shown the client graphs with 100% equities in its portfolio (left bar scenario). I am not saying this scenario makes sense. In fact, I would say it does not make sense, I am just showing what would happen.

CHART 1
Case #1: Effect of Asset Allocation



We do not use a fixed discount rate assumption; it varies with the economic scenarios being modeled. Some scenarios involve a sharp drop in the discount rate, for example. We also are dropping the interest rate where that would make sense, to capture that aspect of the risk.

MR. SLOAN: If you do not try to capture some of the relationships on the liability side that are consistent with the asset side (for example, using a fixed liability but varying the assets), then you are probably not realistically stating the volatility or the risk. To control volatility, you do things like change assumptions, and if the interest rates go up and the stock market (which as we have been seeing this year, follows interest rates in an inverse way) and bond markets go down, that produces losses that cause contributions to increase. The first solution you are going to look to is to say that, since interest rates are higher, I can use a higher discount rate. This will drive the liabilities down and create some offsetting. If you are trying to portray a range of contributions to clients and accurately capture risks, you need to identify those economic risks that are consistent between the assets and the liabilities, and I think that is what Dave has done here, and one of the reasons why you would go from a deterministic model to a stochastic model.

MS. MILDENHALL: There is a difference between the kind of assumptions we are referring to. Some assumptions like the funding rate for the valuation may be considered long-term rates. We may not want to vary those with short-term asset gains or losses. However, a rate like the current liability interest rate is very much determined by what is going on with the Treasury rate. So it may be that some of the rates vary, but we decide that others are long-term rates that we are not going to change. There can be differences on how actuaries approach the different assumptions.

FROM THE FLOOR: I think you commented earlier that you would not necessarily recommend that your client go to a 100% equity allocation. How do you come to that opinion?

MR. SLOAN: I would not read too much into my comment. I was not portraying this as our recommendation to clients saying, "Here is a great idea, jump ahead and do this." I think the pros and cons must be considered. I have not personally heard of a client adopting that strategy. I do not know if you have. I have been assuming it is a little bit unrealistic.

FROM THE FLOOR: Plan sponsors are all over the board in terms of their equity allocations, and we frequently see that people who go through this type of analysis increase their equity exposure. But reacting to what you have portrayed here, it seems to argue for further increases in the equity allocation.

MR. READY: If you look at the far right-hand side of this projection, even in the bad outcomes, the equities are at least close. It looks like all equities are better even in the worst outcomes. If you really have that long-term perspective, you should be at 100% equities; that would be the argument for going to 100% equities. But when you get to the realities of implementing policies and strategies, you get back to the left-hand side. If you look at the left-hand side, there is a much bigger range of contributions in those first few years for a strategy of 100% equities.

FROM THE FLOOR: There is a bigger range, but most of it is on the positive side.

MR. READY: Right, and that is fairly typical. But if you think about how pension committees operate, volatility makes them nervous. So there are some practical constraints. If you do have an increase in contributions and you are at 100% equities, there is likely to be a knee-jerk reaction that the equities caused it, and therefore, you are going to abandon that strategy. But the only way the strategy pays off in the long-term is if you stick to it. If you do not have the discipline to stick to it, then it is not going to pay off. Many companies want to water down their long-term perspective a little bit. I heard the analogy recently that the right answer is all equities if you really have the long-term view, but it is just like drinking whiskey. You know if you want to drink whiskey, you should drink it straight, but a lot of times you need to decide how much water to take with your whiskey so that you can make it through the evening. The issue is how much fixed income goes into the portfolio so that companies can make it through the short-term, so that they can get to the longer term.

FROM THE FLOOR: I agree 100% with all of your comments there, but I would add that in working with various types of committees I have seen their sensitivities. One of the sensitivities I have seen is to volatility, and it is typically volatility of investment returns. We as actuaries can sensitize them to some other types of volatility more effectively perhaps when we have a chance.

MR. READY: Absolutely. Your comment was right on the money when you said that, when companies go through some kind of analysis like this, clients should see a little more what the real risk is: more cash out of their pockets and not so much the deviations in the returns in the portfolio. You might arrive at some different decisions.

MR. DONALD S. GRUBBS, JR.: I find the difference varies a little with who is making the decision in the company. People whose responsibility is limited to running a pension fund tend to focus on that, whereas, people who are responsible for operating the company look at the company as a whole, and they are in a risk-taking business. Almost all companies are taking enormous risks if they introduce a new product or fail to far exceed this. One of our clients that is 100% in equities has an overfunded plan, and the pension costs are negative. The plans produced a gain of 1.3 cents per share last year and the company is happy.

MR. READY: Is it not the case that if the plan is fully funded now, a more aggressive investment portfolio will actually help the plan stay in full funding longer and could yield a somewhat lower volatility than a less aggressive investment portfolio, which would bring the plan out of full funding sooner?

MS. FITZPATRICK: Regarding funds that are 100% equity, do they use an averaging technique for determining their contributions?

MR. GRUBBS: I do not know of any general answer. I have a few clients that are so far overfunded it does not matter.

MS. FITZPATRICK: Me too. I just wondered whether, if you are going to go into 100% equity, would you either try to hedge a risk against too big a fluctuation in your contributions by doing an average, or whether if you are going to go all the way, you might as well not do any averaging.

MR. READY: The example in Chart 2 is a more typical final average pay plan. That company will be in full funding for a while. Somebody may say this is an academic discussion; since the company is in full funding the next couple of years, we should have this discussion in a few years.

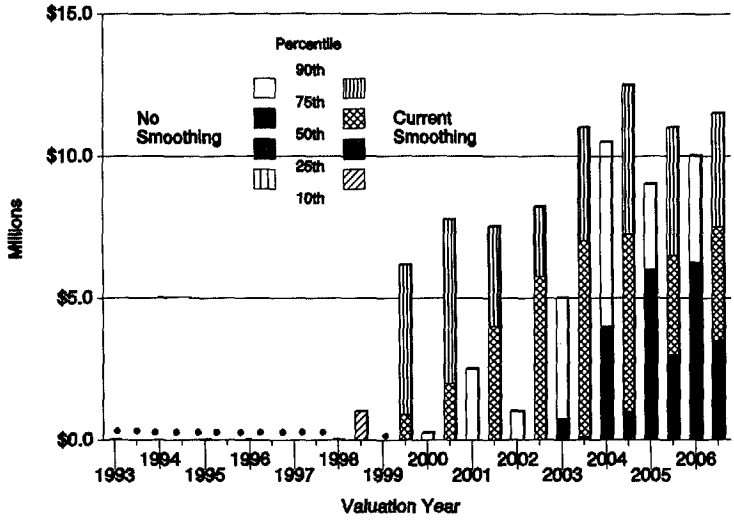
The right bars, again, are the current assumptions, current methods, current investment portfolio, the base case of where we think they are heading today. There is some substantial volatility for this company in future years. The left bars are exactly the same except we have taken out the current asset smoothing method and instead shifted to using market value to calculate the minimum required contribution. The asset smoothing method the company is using is one that lags the asset returns. Any positive returns are smoothed over five years, so as long as the portfolio is earning a positive return, the actuarial value of assets, under their current smoothing method, is going to significantly lag behind the market value of assets. That is why you see the effect that you see here. But even when the company comes out of full funding, the volatility is still somewhat less under the market value of assets scenario.

MS. MILDENHALL: We felt that this is an important example because you would expect that smoothing methods would give you less volatility, but in fact this method makes it worse. We need to look at our smoothing methods carefully if we are trying to reduce volatility. If they have built-in lags, smoothing methods can increase the volatility for our clients.

MR. READY: Financial people really like to see these graphs and to talk about them; they can spark some interesting discussions about assumptions and methods and

how they interact with the investment strategy. Clients also like to see these graphs and to be acquainted with some of the basic concepts. If they see these graphs, it may give them the confidence to make some decisions they would not make if they felt like they were flying blind or flying by the seat of their pants.

CHART 2
Case 2: Effect of Asset Smoothing



MS. FITZPATRICK: At the end of 1990, when the market went down quite a bit just before the Gulf War, I had a plan that I thought was going to be fully funded for maybe ten years. The plan had a lot of retirees and a small group of actives and was significantly well-funded considering that the actives were the only ones that were accruing benefits. With the market going down dramatically in November 1990, I became very concerned that a contribution would be required in 1991 if the market did not rebound. So going to 100% equities can cause a funding requirement if you are not very careful.

FROM THE FLOOR: I am not sure how the graphs demonstrate volatility. You have a limitation that saws off the bottom to everything. The total length of the bar is what is going to demonstrate the overall volatility of one approach versus another; that graph does not tell me anything.

MR. READY: That was an excellent point. What you are saying is that the bars also go down below zero and, in fact, the left bars may have a significant amount of volatility below the zero line that is not being captured in this graph.

MR. SLOAN: In this particular example, Dave described a method that is somewhat biased toward understating the actuarial value of assets. That is what is driving the difference. I talked about the funding target being on the liability side, but since you have control over the measurement of assets for funding purposes, you can also use

that as a tool. In this case, we have a lower actuarial value of assets, and maybe this is a utility company that wants to understate the assets so it can make contributions longer. The point is that there are a number of tools that you have that can control volatility.

We are using the term volatility here. Maybe the term variation is better because volatility sounds like it is uncontrollable. Frequently what you do, beyond trying to control the uncontrollable, is affect the timing of contributions or expense in a way that is advantageous to participants or to the company when there are some conscious decisions to be made. The decision to smooth or not to smooth might be made consciously in an attempt to pay more now for tax purposes. We are not saying that asset policies and asset smoothing give you tools. The reason for this kind of forecasting is to talk about all the tools that are available, including assumptions, the actuarial method, the discount rate and salary increases. It is to help promote companies' understanding of what might happen and what control they have over variation or volatility.

Kathy's example was good because situations like assets dropping can change the picture dramatically and can change your expectation in the near term, but so can major decisions in terms of compensation policy or benefit policy. An ad-hoc retiree benefit increase may change things substantially. I had a client with a CEO who had a policy against that kind of ad-hoc increase. He retired and the new CEO does not have that policy. The client will probably add ad-hoc inflation protection and that changes the picture. The challenge for the actuary is to anticipate and not get caught by surprise; otherwise your client will be caught by surprise. If you are catching these things, then you are really helping the client and adding value.

FROM THE FLOOR: You demonstrated a higher probability of zero contribution without smoothing, but that might, in fact, increase the volatility because that is one of the things that produces volatility: full funding. There might be less volatility under the smoothing since it has a higher probability of not being limited by full funding. In other words, I do not see how this analytical technique addresses the question of volatility if that is important to the client.

MR. SLOAN: If we had a different example where there were contributions immediately in the first year, it would demonstrate better what you are referring to. There are two things going on: There is year-to-year volatility caused by fluctuations, asset returns and interest rates, but there is also the 15-year forecast period. The year-to-year volatility dominates on the left-hand side. If you go back to the example that had positive contributions in the early years, going from 1991 to 1992 was primarily year-to-year volatility. When you look at the right-hand side, the range is much bigger. There is also the more important component, the trends that are driving things in different directions.

MR. READY: Again, this kind of switch in actuarial policy is an option for the client. This might be one of those, if you will, silver bullets that you might want to save for the time when you need it. In other words, there is no argument here for shifting your asset smoothing method right away. It may be one of the things to think about in future years when you come out of full funding. You currently have the option of switching the asset method when you want to (automatic approval), so it may not be

the switch you want to make right away. You might want to save that for when the time comes and see if, indeed, your model has borne out and it is the best thing to do. But it makes sense to change some other things like the investment policy now to more effectively reap the rewards in the future years.

MS. FITZPATRICK: Historically, whenever I took over a case, the asset smoothing method used a three- or five-year average of realized and unrealized gains and losses and spread them over three or five years. We have been switching that method recently to only spreading realized gains and losses in excess of expectations so that we are recognizing the true gains and losses, but we are amortizing unexpected gains and losses as opposed to the traditional method.

We wanted to make one other comment about the quarterly contributions. It seems that with the advent this year of the 25% contribution requirement, there has been some discussion toward recognizing seven months' worth of quarterly contributions in the current year to reduce the PBGC premiums and possibly reduce the deficit reduction contribution. The result is a credit balance that is used the next year. This is a very strange way of thinking about things. The quarterly contributions that are required can be, in essence, prior year contributions.

MR. READY: I think that is an important point because, with the change to the quarterly contributions, the timing of when the money has to go into plans has been changed. We talked about the importance of cash-flow management within corporations and the fact that the way you determine the overall contributions should reflect that concern over cash-flow management. The same is true with changing the timing. If you accelerate what is recognized, you can avoid some extra premiums, but you also can accelerate some deductions. That is an injection of cash into the company, in that it does not have to write as big a check to Uncle Sam. There are all kinds of opportunities and issues similar to which that can be brought up and can have a big impact on companies in helping them better manage their resources.

MS. MILDENHALL: I was working on a benefit increase study for a collectively bargained plan. It was an hourly plan that is currently in full funding. The increases in the study would make the plan come out of full funding. If you have been in full funding, the unfunded old liability for deficit reduction contribution purposes is wiped out at some point, or you never set one up. When the plan comes out of full funding, it ends up with a much bigger piece of the unfunded going into the minimum contribution. This factor really accentuated the cost of the benefit increase. In some ways, once the plan goes into full funding, there is more volatility in the future because there will be a deficit reduction contribution once the plan comes out of full funding. Another reason is that the old bases get wiped out if the plan is in old full funding. You do not have to do a full-blown projection to see those effects.

MR. READY: If your client is going in and out of full funding, quarterly contributions could be a real problem for the client, especially if it is going into full funding and has been making quarterly contributions all along. There is a problem getting the contribution back from the plan if it is not deductible. It is not an insurmountable problem, but it is a problem. Talk to clients in that situation, especially if it makes sense to move up the valuation processing in the year and get the data quicker to help avoid problems like that.

FROM THE FLOOR: Could you explain what is meant by using quarterly contributions and crediting them to last year for PBGC purposes?

MS. FITZPATRICK: There is no reason why the quarterly contributions that you make for 1992 cannot be considered part of the 1991 contribution. Assume the client is always putting in the minimum contribution, and the maximum is more than seven quarterly contributions. Assume that this year, instead of making the minimum, you make seven quarterly contributions. That way, at the end of 1991, for example, you would be able to show an asset that includes the contributions that you are going to be making.

MR. READY: The schedule of when you have to make contributions is fixed by statute now. Given that it is fixed, you cannot get the advantage of deferring contributions until September 15th. So given that the schedule is fixed, if you have room on your maximum deductible limit, then you can go ahead and call it a contribution receivable, creating a higher asset amount and a lower unfunded. It does not affect flexibility in terms of funding later because a credit balance is created, and you can always not fund, but it is a one-time bump.

MR. GRUBBS: The only thing I would add to the pre-ERISA discussion would be on the fiduciary side. There was an exclusive benefit requirement so that using plan assets that work for the exclusive benefit for participants could cause disqualification of a plan, but the IRS rarely actually enforced that.

In the past we have had three choices to control fluctuation: control over the actuarial cost method, the asset valuation method, and the assumptions. Clients are often less concerned with volatility in general than they are with volatility this year and what is going to happen to this year's contribution. In the past we have had considerable flexibility in changing any of three, within certain limits, because we did have the automatic approval route. The assumptions, of course, have always had flexibility.

There was mention of the deficit reduction contribution for plans with a funded current liability percentage of under 100% and a deduction of up to 100% of the current liability. I am sure everyone is aware that it is limited to plans with over 100 participants.

The most troublesome piece of this for those clients that are near the border is the quarterly contribution. I wrote a letter in early April 1992 to a client saying I think your first quarterly contribution is zero, but I could be wrong and it could be very substantial. What are people doing about that?

MS. FITZPATRICK: We are amending the plan document to allow the client to get back nondeductible quarterly contributions. In addition, the truth is that we have been rushing through our valuation process when we think it is a real issue.