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Minimum Funding Under General Agreement
on Tariffs & Trade

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Summary: The panel features a well-organized visual presentation of General Agreement on Tariffs & Trade minimum funding rules.

Mr. Bruce Anthony. Cadenhead: I am a principal at William M. Mercer, Inc. I have been involved with this legislation since it came out in late 1994, and I have been very involved in developing Mercer's understanding of the funding aspects of (GATT). Before I start, I must say that I really like this law. I know I shouldn't; but there are just so many nooks and crannies; it's like a really good puzzle.

Anyway, I don't expect that after this session you're going to love this law as much as I do. I hope to at least give you a better understanding of how the pieces of the puzzle fit together—how the funding rules work.

What I'm going to do is go through the funding rules, pausing from time to time to go through examples and discuss, when appropriate, strategies for dealing with these rules.

Retirement Protection Act (RPA), as the funding rules of GATT are otherwise known, encompasses six main areas that I'm going to discuss.

The main one, of course, is the 412(l) additional funding requirement. RPA also changed the full funding limitation—the new 90% floor. There's also the change to the quarterly contribution requirement—some plans no longer have to make them,

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for some plans the requirement increases. Also, collectively bargained plans now have to anticipate bargaining benefit increases. For Pension Benefit Guarantee Corporation (PBGC) premiums the premium cap has been removed. Also, there are restrictions on assumption changes for certain underfunded plans where those changes would significantly reduce the current liability.

I'm going to talk about each of these areas. But, before I go into that, I really have to stop and talk about current liability. Current liability is everywhere in this law. Omnibus Budget Reconciliation Act (OBRA) 1987 gave us the concept. RPA multiplies that tenfold. There are a number of different current liability measures. Sometimes you combine them with assets reduced by the credit balance. Sometimes assets are not reduced by the credit balance.

The main current liability measure, the RPA current liability, is based on a new interest rate range. The maximum interest rate has been lowered, and now the mortality table has been prescribed. Until the year 2000, it's going to be the Group Annuity Mortality Table (GAM) 83 table. After that, the secretary will prescribe a new table based on insurance group annuity reserves. Plus, beginning in 1996 (to make it a little more complicated), you have to use a different table for disabled lives.

Table 1 shows the maximum permissible interest rates. We still have to calculate our OBRA 1987 current liability for a couple of purposes. For that, you can still use the old interest rate range—up to 110% of the four-year weighted average of 30-year Treasuries. The new RPA rate phases down to 105%.

TABLE 1
MAXIMUM PERMISSIBLE INTEREST RATES

Year	Percentage	
	OBRA 1987	**RPA 1994**
1995	110%	109%
1996	110	108
1997	110	107
1998	110	106
1999 & Later	110	105

In reference to the additional funding requirement, I'm first going to talk about the plans that are potentially affected by this rule. I'll then talk about how you calculate

the additional funding requirement. I'm also going to talk about the transition rules, and then the revenue rulings that came out in 1996 that help us to interpret this law.

A plan is potentially affected if it is a single employer plan with at least 100 participants (that's for the entire controlled group) and is poorly funded. Under the old law, poorly funded meant the funded percentage was less than 100%. Under the new law, that condition has been relaxed in some circumstances. You're poorly funded only if you fail the so-called gateway test. You pass the gateway test if your gateway percentage is at least 90%, or if it's at least 80% and you pass the volatility rule.

Gateway percentage is based on current liability at the maximum end of the new RPA interest rate range (no discretion there) and the required mortality table. For the purpose of calculating the funded percentage, you do not reduce assets by the credit balance.

The volatility rule—for those plans that are above 80% but less than 90%—is passed if your gateway percentage was at least 90% for any two consecutive years of the three prior years. Another way of looking at it is that your gateway percentage had to be 90% exactly two years ago, and either the year before or the year after. But you must have had that crucial 90% two years ago.

Of course there are special transition rules for 1995. It can be at least 90% for any two of the three years from 1992–94, although 1996 gets the best of both worlds— you get to satisfy either condition. So you get 1992 or 1993, 1992 or 1994, 1993 or 1994, or 1994 or 1995. But not 1992 or 1993 and 1995. For whatever reason, those are just no good.

And, of course, it can't be that simple. For the years 1992–94 we don't actually look to see if the plan's funded percentage was 90%. Instead, your funded percentage is deemed to be 90% if you pass one of these three conditions. The first condition is that your full-funding limit is zero. The second condition is that your additional funding requirement is less than 0.5% of current liability, or $5 million if less. The third condition is that your additional funding requirement would have been zero if you had used the highest allowable current liability interest rate in that year, and you had not reduced assets by the credit balance in calculating the additional funding requirement.

So it looks like for some plans you're actually going to have to go back and recalculate your additional funding requirement for those earlier years. I think in most cases, hopefully in almost all cases, you won't actually have to take that step. I think you will be able to look at your valuation results, make some reasonable

adjustments to liabilities, adjust your assets, and redo the calculation without actually having to rerun your runs.

The additional contribution itself is the deficit reduction contribution (DRC) (a concept from OBRA 1987), minus all funding standard account charges, plus all FSA credits (that's normal cost and any amortization charges and credits), plus the unpredictable contingent-event amount. It's limited to the amount that would bring you up to 100% funded on the basis of current liability.

The DRC has a couple of new things added. It now has the current liability normal cost, plus the unfunded old liability amount, plus the unfunded new liability amount, plus the unfunded mortality increase amount. The first and last items are new. The current liability normal cost has been added, but you get an offset for your regular 412(b) normal cost.

The unfunded old liability amount has been changed a little bit. You start off with your OBRA 1987, unfunded old liability, and then you add in the additional unfunded old liability. The additional unfunded old liability is the excess, if any, of your RPA 1994 current liability over the so-called 1993 assumption current liability. (It doesn't actually have a name, but I had to call it something.)

You calculate the current liability based on your 1993 valuation mortality and an interest rate that is the same place in the permissible range now as it was then. So, for example, if you used the maximum interest rate of 8.88% at January 1, 1993, in calculating current liability, you would use 110% of the January 1, 1995, four-year weighted average, or 8%.

The unfunded new liability amount has also been changed. The formula for calculating the applicable percentage—that's the percentage we multiply the unfunded new liability by to get the unfunded new liability amount—has generally been increased. It has been increased for any plan that is better than 35% funded. For plans that are 35% funded the percentage is still the same 30%.

With the new law, the applicable percentage is the same until we get to a 35% funding level and then the old amount drops off. The new law amount stays up there until it gets to 60% before it starts dropping off.

So we see that plans that are 60% funded are most severely impacted by this change. The more poorly funded plans and the better funded plans are not affected as much. The new line ends at 90% because if you're above 90% funded there is no additional funding requirement.

For this purpose the funded current liability percentage is based on the RPA 1994 current liability—that's anywhere within the RPA interest rate range—and assets are reduced by the credit balance.

The last piece of the DRC is the unfunded mortality increase amount. Sometime in the year 2000 or later a new mortality table will be prescribed for calculating current liability. When that happens the increase in current liability due to that change is separately carved out and is amortized over ten years, instead of being treated as new liability and amortized more rapidly.

The last piece of the additional funding requirement is the unpredictable contingent event amount. It's basically the same two conditions from the prior law (the seven-year amortization and the one based on actual benefit payments) plus a new condition. You amortize it at least as rapidly as you would if it were to be included in unfunded new liability, instead of separately carved out and treated differently.

RPA also added a limit. Basically, once you've finished amortizing your unpredictable contingent event or liability, you can stop amortizing it. That condition wasn't in the old law; they just neglected to put that in. This change makes things a little clearer. The quarterly contribution requirements were modified to reflect these changes.

The following examples* show how these parts of the calculation work. The heading in Table 2 says, "No Optional Rule, No Transition Rule." I'll talk about those a little bit later. This is just the basic calculation of the additional funding requirement.

The first example is a plan that's being funded using fairly aggressive assumptions of a 9% interest rate and GAM 71 mortality. Table 2 shows the four different current liability measures that we need to calculate. We've got the OBRA 1987 current liability, which is based on valuation mortality (in this case GAM 71).

Here we're using the highest allowable interest rate—110% of the four-year average, which is 8% at January 1, 1995. The gateway current liability, of course, has to be at GAM 83 and the top RPA rate, which is 7.93% at January 1, 1995. For the RPA 1994 current liability we're going to use the same assumptions. The fourth measure is our 1993 assumption current liability. For this example, assume that in 1993 we used 8.88% interest in calculating the current liability in 1993, so now we have to use 8%.

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* *Tables 2–16 are the example scenarios and are not available online. Please contact Linda Blatchford at lblatchford@soa.org or call 847/706-3564 for a hard copy.

Our four measures in this example collapse to just two measures. The rest of the table shows some additional input items that are used in calculating the minimum funding requirement. I'll calculate the additional funding requirement and then show the effect on the total minimum contribution.

The first part of Table 3 is the gateway test. We look at our actuarial value of assets. There is no reduction for the credit balance; in this case the credit balance is zero anyway. We find that the plan is 75% funded for purposes of this test, so it fails the gateway test. We don't get to perform the volatility test, so it moves right into the additional funding requirement.

You'll notice that in Table 4 I'm starting again with A, B, and C that I used in Table 3. This is not the same A, B, and C. I guess I must have been concerned about running out of letters. Anything that follows is going to be based on the second A, B, and C. The gateway test is kind of an end in and of itself. None of the subsequent calculations will make use of the gateway test results.

In Table 4, the plan under the RPA basis (and I'm showing the OBRA basis side by side for comparison) has a higher unfunded current liability. We go to calculate our unfunded old liability (for this example I'm assuming the plan had no unfunded old liability prior to RPA) so we look now at the excess of our RPA current liability over our 1993 assumption current liability. That excess is our old liability, which we amortize over 12 years.

The remaining unfunded current liability is our new liability. In this example we see that the old law and the new law and new liabilities are the same. The reason for this is that we used the same assumptions in calculating our OBRA current liability that we did in calculating our 1993 assumption current liability, and any excess over the 1993 assumption current liability gets added into the old liability. That's not always going to happen, but in this example it has.

Our unfunded new liability amount under the new law is higher than under the old law because our applicable percentage has increased. In Table 5 we add in the current liability normal cost in calculating the DRC, so our DRC is much higher under the new law. But we also get a much bigger offset because we offset not only for our plan amendment and plan inception bases, but we also offset for any other amortization bases plus our 412(b) normal cost. When we do that offset we find there is still a difference, but it's not quite as substantial. In Table 6, by adding the additional funding charge back to our regular 412(b) charges, we get our minimum funding requirement for the year which, under the new law, has gone up.

In Table 7 we'll look at that same plan with a few changes. Let's say that the actuary decided on January 1, 1995 to change assumptions, to use something slightly less aggressive. For mortality we're going to use GAM 83 and for interest we're going to use 8%. Our OBRA 1987 current liability has changed—it has increased due to the new mortality table. All the other current liability measures stay the same, and our 412(b) amortization charges and the normal costs have gone up.

In Table 8, the gateway test is still the same—the plan still fails. In Table 9, when we go to calculate the additional funding requirement, we find that under the old law the plan is less well-funded and has a higher unfunded current liability. Our unfunded old liability is still the same because the RPA and 1993 current liabilities didn't change. As a matter of fact, that entire RPA column up to this point is the same. In the OBRA column we see that the unfunded new liability, and therefore the unfunded new liability amount, has increased.

In Table 10, therefore, the DRC in that column has increased. The RPA amount is still the same. For RPA purposes we now have a much bigger offset. We can offset for the higher normal cost plus the additional amortization charges. Those additional offsets are not reflected under the old law. In fact, in Table 11, the additional funding requirement is much lower under the new law for this plan than under the old law. Therefore, our final contribution is much lower.

This is a good example of the OBRA 1987 double-counting problem. We changed the mortality table and that increased our OBRA current liability. It also increased our 412(b) amortization bases, so we're paying for it twice. There's no coordination between the laws. RPA largely fixed that problem. In a sense we now take our DRC and our regular 412(b) calculation, and the contribution is the higher of the two.

That would be true except for the transition rules that we have. There are two main rules that I'm going to discuss: the optional rule and the transition rule, which is also known as the phase-in rule.The optional rule is a one-time election to treat the entire January 1, 1995 unfunded current liability as old liability and amortize it over 12 years. It sounds like a great thing. There's only one catch—if you make this election, you have to continue calculating your old-law additional funding requirement. Your new-law additional funding charge can never be less than that amount through the year 2001. As we just saw in the last example, that could be bad for a plan that is double counting under the old law.

This third example is the same as the first example, but now we take advantage of the optional rule just to see how things change. Tables 12 and 13 are the same as Tables 2 and 3. It's not until we get to Table 14, when we calculate the unfunded

old liability amount, that anything changes. In this case, our unfunded old liability is the entire unfunded current liability. Therefore, we have nothing left over for new liability. In Table 15, we find our DRC has gone down. Table 16 shows that when we apply our 412(b) offsets, our additional funding requirement is actually lower than it was under the old law. That cannot be, because if you make this election, you have to use your old-law additional funding requirement as a minimum. So in this case we wind up with the same additional funding requirement and, therefore, the same minimum contribution.

That's an example where the optional rule is going to help out. I'm not going to go through the second example, but we saw in that example that the old-law additional funding requirement was higher than the new-law requirement. So if we actually made this election to use the options rule, we would actually increase our additional funding requirement.

The transition rule, unlike the optional rule, is a year-by-year election. You can decide each year whether or not you want to apply it. The transition rule limits your additional funding requirement to the greater of the amount required to reach the so-called "target percentage" or the OBRA 1987 amount. There's no downside to making this election. It's just a potential cap on your additional funding requirement. If the cap happens to be higher than the additional funding requirement, then you simply have the additional funding requirement. If it's lower, then it brings it down.

This rule was designed largely to delay the impact of RPA beyond the year 1999. This happened because RPA got stuck onto GATT because it's a revenue raiser. It's a revenue raiser largely because of the increase in PBGC premiums and a couple of other provisions. Accelerating minimum funding requirements does not raise revenue; in fact, it loses revenue because it accelerates tax deductions. So they had to come up with a way of delaying the effect of the funding rules so that the effect would be beyond the period that Congress looks in rating a bill for its budget effect. That's how they came up with the transition rule.

The target percentage is defined in the law using some very difficult-to-decipher language but, if you unravel it, it's a fairly straightforward concept. You start out with your prior year's target percentage and you add an annual increase. If your target percentage was less than 75%, the amount you add is 3%. If it's more than 85%, you add 2%. In between, you add a pro-rata amount. There's an additional 1% and 2% added in the years 2000 and 2001. This starts off at the initial 1995 funded current liability percentage, which again is based on the RPA 1994 current liability and assets reduced by the credit balance.

Table 17 shows how that progression would work for a plan that begins 71% funded. For the first two years you add 3% because the starting point is under 75%. Then that percentage slowly phases down until you get to the year 2000, when you add an additional 1%. In the year 2001, you add an additional 2%. After 2001 this rule is no longer available.

TABLE 17
1995 INITIAL FUNDED CURRENT LIABILITY PERCENTAGE: 71.00%

Year	Prior Year Target Percentage	Increase	Target Percentage
1995	71.00%	3.00%	74.00%
1996	74.00	3.00	77.00
1997	77.00	2.80	79.80
1998	79.80	2.52	82.32
1999	82.32	2.27	84.59
2000	84.59	3.04	87.63
2001	87.63	4.00	91.63

Before I go into an example of how this works, I'm going to talk about the Revenue Rulings that were issued this year. The last one, Revenue Ruling 96-21, actually tells us how to do the transition rule calculation.

Revenue Ruling 96-7 had to do with disabled mortality. For 1995, you could calculate your RPA current liability based on your valuation assumption for disabled participants. Beginning in 1996 you can't do that anymore. I guess they were concerned that you would somehow compensate for the RPA changes by using a really drastic disabled mortality assumption, so they've come out with tables that you have to use. There are two different sets of tables: one for people disabled before 1995 and another for people disabled after 1994. If you're disabled after 1994, you have to meet the Social Security disability criteria, which makes it very complicated from a data point of view and from a programming point of view.

Another option for all purposes when you're calculating your RPA current liability is to use the healthy GAM 83 tables. In order to use these disabled tables, the participant must be eligible for some kind of an enhanced benefit under the plan due to their disability.

This gives us a number of choices. Should we use the RPA tables just for calculating our RPA current liability and do everything else the way we had been doing it for valuation purposes? Or do we want to adopt the RPA tables for all purposes just to be consistent? Or to make it simple, do we want to use GAM 83?

The question that you have to ask is—is it worth the cost? For plans that are not affected by the additional funding requirement, you probably just want to do whatever is simplest. For plans that do have a substantial liability for disabled participants, you may want to use the 96-7 tables. This revenue ruling didn't cover what you do for future assumed disabled participants. Based on informal conversations with IRS representatives, we think that it's appropriate to continue to assume an incidence of disability and to apply these disabled tables to future disabled participants, as long as your incidence of disability is consistent with incidence of Social Security disability.

Tables 18 and 19 illustrate the different annuity factors using each of these mortality tables. Briefly, in Table 18 you can see that there is a substantial drop-off if you look at single life annuity premiums, particularly the deferred premiums if you have a deferred disability benefit. But you wouldn't just be looking at single life annuity premiums. If we increase our disabled mortality, we're also going to increase our death benefit. Table 19 shows 50% joint survivor annuity premiums. We see that there is still some drop-off, but it's not quite as substantial. You've got to weigh all of this and decide whether it is worth the trouble.

TABLE 18
COMPARISON OF SINGLE LIFE ANNUITY PREMIUMS AT 7.5% INTEREST
MORTALITY 96-7 TABLES

	Annuitant Age	Payment Age	GAM 83 (1)	Pre-'95 (2)	Post-'94 (3)	(2)/(1)	(3)/(1)
Male	50	50	11.55	9.27	7.75	80.26%	67.10%
	50	65	2.68	1.50	0.95	55.97%	35.45%
	65	65	8.94	7.29	6.59	81.54%	73.71%
Female	50	50	12.32	10.36	9.13	84.09%	74.11%
	50	65	3.28	2.15	1.51	65.55%	46.04%
	65	65	10.22	8.72	7.62	85.32%	74.56%

TABLE 19
COMPARISON OF 50% J&S ANNUITY PREMIUMS AT 7.5% INTEREST
BOTH ANNUITANTS SAME AGE
HEALTH MORTALITY FOR SECOND ANNUITANT

MORTALITY 96-7 TABLES

Primary Annuitant	Annuitant Age	Payment 50	GAM 83 (1)	Pre-'95 (2)	Post '94 (3)	(2)/(1)	(3)/(1)
Male	50	50	12.20	10.95	10.14	89.75%	83.11%
	50	65	3.18	2.49	2.17	78.30%	68.24%
	65	65	10.03	9.06	8.66	90.33%	86.34%
Female	50	50	12.59	11.38	10.65	90.39%	84.59%
	50	65	3.48	2.72	2.29	78.16%	65.80%
	65	65	10.68	9.65	8.90	90.36%	83.33%

Revenue Ruling 96-20 has to do with DRC amortization bases, in particular, the unfunded old liability. There are also a few others, such as the unfunded mortality increase amount. Basically it tells us when to get rid of those bases or whether we need to set one up. If 412(l) doesn't apply because the plan is a multi-employer plan, or it has 100 or fewer participants in the controlled group, or the gateway percentage is at least 90%, then you don't set up any old liability and you get rid of any existing liability. If the plan passes the gateway test with a percentage of under 90% (because they pass the volatility rule), you do not get rid of your unfunded old liability. You keep it and use it in future years if you again have to calculate additional funding charges.

Revenue Ruling 96-21 deals with the coordination of interest rate assumption between OBRA and RPA. It also explains how the transition rule works. The OBRA and RPA rates have to be the same rate where possible. If your OBRA rate is less than the maximum RPA rate, then the RPA rate has to be the same. If your OBRA rate is higher than the maximum rate, then your RPA rate has to be equal to that maximum.

The transition rule is not available if 412(l) did not apply in 1995 for those same three conditions that I mentioned for getting rid of your DRC amortization bases (the plan is a multi-employer plan, has 100 or fewer participants, or the gateway percentage is at least 90%). If your gateway percentage in 1995 was only 85%, then goes up to, say 92% in 1996, and then drops back down below 90% in 1997, you can still use the transition rule in 1997.

Let's discuss some detail of the transition rule. The target amount (the cap on your additional funding requirement) is the adjusted projected year-end current liability multiplied by the target percentage, minus the adjusted projected year-end assets.

It's the amount that gets you up to that target percentage on a projected year-end basis.

For this purpose, current liability is projected using normal costs and expected benefit payments at the current liability interest rate. Assets are projected and reduced by the credit balance, increased by the amount that you would contribute anyway under the 412(b) rules, and reduced for expected benefit payments increased at the valuation rate.

Let's go back to the examples* now. Tables 20–22 show the first example again. Let's see what happens if we elect the transition rule and not the optional rule.

The first few tables of this example are the same. It's actually not until we get to Table 23 where anything changes. Now we see why everything had been scrunched up to the top of the table. There was a hidden part of this table that shows how you calculate the transition rule.

Our target percentage is, in this case, 3% higher than the beginning-of-year target percentage. It actually would be about 2.99 percent, but it rounds to 3%. So 78.03% is our target funding level. We take our projected current liability ($11.1 million), subtract our projected assets, and find that we are $146,000 short. And so we would cap our additional funding requirement at that amount. However, as in Table 24, the target amount is never less than your old law additional funding charge (in this case $267,000). So, in this case, the target amount is equal to the old-law charge of $267,000, the additional funding requirement is less than the target, the preliminary amount or the target amount. As was the case when we elected the optional rule, we wind up with the same contribution by using the transition rule.

This leaves us with an open question. Does it make sense to elect the optional rule? In this case, by looking at 1995 valuation results, you really can't tell. For purposes of some of these examples, I put together a ten-year projection of contributions. This is not a real plan, but it's realistic plan data. The liability relationships are realistic. It has amortization bases that expire. For projection purposes, I'm assuming a 15% asset return for 1995, a smoothed asset method, 8.5% asset return thereafter, and no other gains or losses.

Before I get to that, I want to discuss what happens if I elected both rules. There's really no need to spend much time on this one. Tables 25–29 show that if we elect

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* Tables 2-16 and 20–24 are the example scenarios and are not available online. Please contact Linda Blatchford at lblatchford @soa.org or 847-706-3564 for a hard copy.

one and we get $800,000 and we elect the other and get $800,000, then when we elect them both we're going to get $800,000.

In looking at the projection shown in Chart 1, we see that, of course, in 1995 we got the same contribution whether or not we elected the optional rule. In 1996 our good asset return was smoothed out a little bit, but our current liability went up because our current liability interest rate went down. And we find that in this case the optional rule does help us out a little bit. It does bring the contribution down a little below what the transition rule alone would do. It's the same for 1997.

CHART 1
CASH FLOW PROJECTION FOR SCENARIOS 4 AND 5
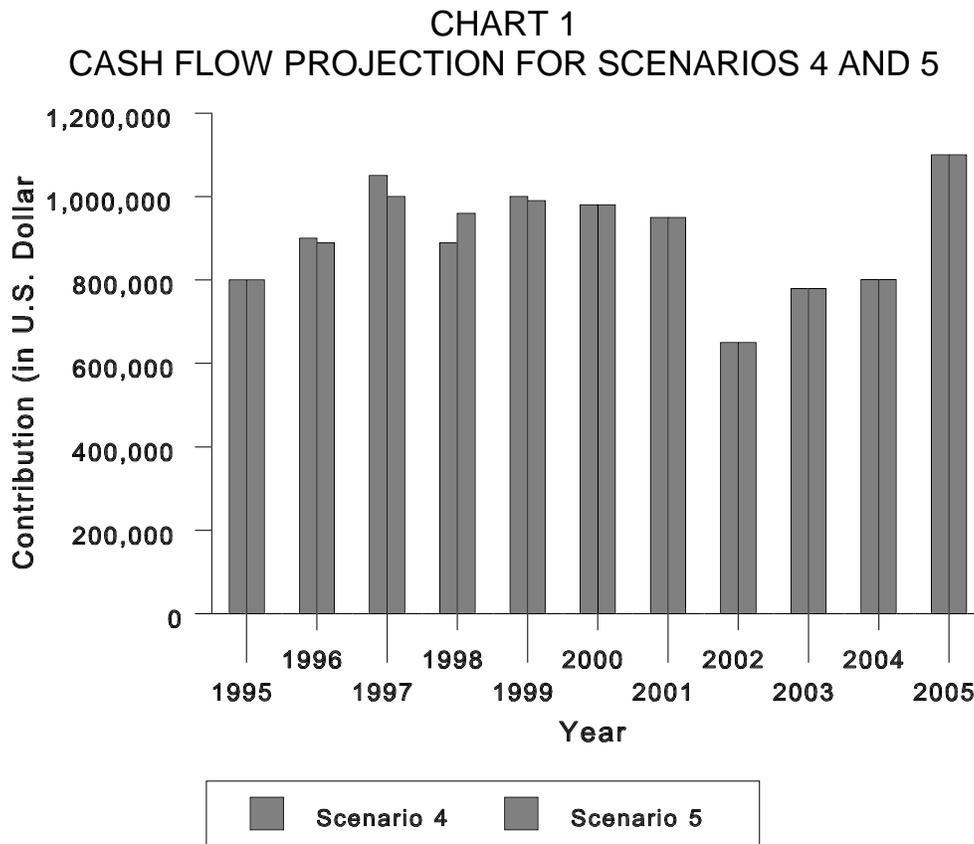
In 1998 the situation was reversed because, under scenario 4, we've made additional contributions in the plan and therefore it's better funded. Thereafter, the contribution level stays about the same under either scenario. Another way of looking at it is just to look at the projected funded percentage of the plan under either scenario. This still really doesn't tell us much. It seems that the optional rule is perhaps a bit helpful, but is it worth committing yourself to contributing that OBRA contribution as a minimum for all future years? It's going to be a different answer in each case.

In order to answer that question I'm going to look now at the second scenario (this is where we changed the assumptions to GAM 83 and 8% interest) and look at the

effect of the transition rule in that case. Again, nothing changes in Tables 30–32. The change occurs in Table 33. In this case, our adjusted year-end current liability is the same and our target percentage is the same, but our projected year-end assets are much higher because our regular 412(b) charges have increased. So our preliminary target amount is zero. Again the target amount will never be less than the OBRA 1987 charge, and in this case the OBRA 1987 charge is even higher. So here's an example where the transition rule doesn't help you.

Table 34 shows that we just wind up getting our same preliminary amount back as our final additional funding requirement. So we get the same bottom-line result as we did in scenario 2, with the new law better than the old law.

If we now throw the optional rule on top of this, of course, the additional funding requirement now has to be at least equal to the OBRA 1987 amount and so our contribution has increased. So here's a case where you probably don't want to elect the optional rule.

CHART 2
CASH FLOW PROJECTION FOR SCENARIOS 6 AND 7
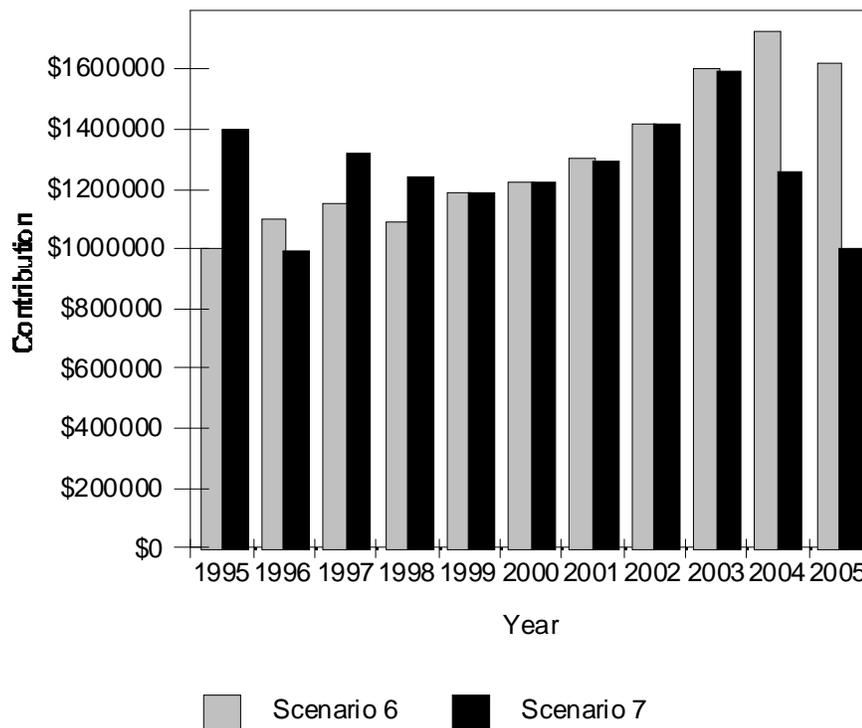
Looking at what happens for projection purposes, we see in Chart 4 that, of course, the 1995 contribution is much higher. In 1996 the situation actually reverses itself a little bit because the scenario 7 plan is much better funded than the scenario 6 plan. But then in 1997–98 that old-law contribution is still propping up the contribution

amount. It's not until much later on in the projection that the situation again starts to reverse itself.

Looking at the projected funding levels of the plans under the two scenarios, we see a big difference because the much higher contributions under scenario 7 are not offset at any time during this ten-year projection period.

Let us consider our earlier question, should we have elected the optional rule under the earlier scenario? If you think, for example, that you might change your mortality assumption any time in the near future, the change is going to be double-counted under the old-law calculation and could potentially result in a higher additional funding requirement. You may not want to make that election. It's a complicated choice. I'm not suggesting that you actually have to do a ten-year projection to see if it makes sense, but you do need to look a bit into the future to see what might happen in order to assess whether or not it's worthwhile.

Having gone through the additional funding requirements, let's sum up what the differences are between what we were doing under OBRA versus what we now have to do under RPA.

Our current liability assumptions have been tightened a bit. We now reflect the current liability in normal cost and calculating the DRC, and we get an offset for our 412(b) normal costs. Our unfunded old liability potentially has been increased. Our unfunded new liability applicable percentage has increased. For offset purposes we now get to take all of our regular 412(b) charges into account, so we have better coordination with our regular funding calculations.

The maximum required amount has also changed. This is one thing that I hadn't mentioned before, but in the examples we still would cap the calculation at the amount that gets you up to 100% funded. In practical experience, that maximum never really applies. But when you do that calculation now under the new law, at least you get to take account of the contributions that you're already making under 412(b). Under the old law you didn't get to take account of those contributions. And, of course, we have the transition rules.

Moving forward now to the other aspects that I mentioned in the beginning, we also have the full-funding limitation. The full-funding limitation is the greater of the old-law calculation (the Employee Retirement Income Security Act of 1974--ERISA) full-funding limit or the 150% OBRA 1987 full-funding limit). A new-law calculation basically says that a full-funding limit will never limit your funded percentage to below 90%. And that's based on the RPA 1994 current liability and assets not reduced by the credit balance. I put that in for emphasis here because it's very

unusual in calculating a full-funding limit for minimum purposes that you don't reduce assets by the credit balance.

The IRS hasn't actually come out with guidance on this, but it specifically says in the law that you don't make this reduction. And what that means is that there is a possible two-for-one reduction in your required contribution. What do I mean by that? Say you've got a plan that's affected by this rule. Who might be affected? If you're using unit-credit funding and have a fairly high interest assumption, say 9%, and your current liability interest rate is somewhere around 7.5%, your current liability is going to be a lot higher than your regular ERISA-accrued liability, and this could come into play.

If you have a plan that's affected by this rule, make an additional contribution for the prior plan year. This will increase your credit balance and the assets and, therefore, lower this new full-funding limit because there is no offset for the credit balance.

By lowering this full-funding limit you increase your full-funding credit. When you calculate your funding requirement now for the current year, you've got both the credit balance and a full-funding credit, roughly the same amount, attributable to the same contribution.

Table 35 and 36 show how that works. Table 35 is for a plan without making this additional contribution. Table 36 is with the additional contribution. I'm not going to spend any time on this right now, but Table 36 shows that in this case a $275,000 contribution for the 1995 plan year eliminates a 1996 contribution of more than twice that amount.

The quarterly contribution rules have also changed. For plans that were 100% funded on a current-liability basis, they are no longer required; that is, plans that were 100% funded on current liability. You look at the prior year's plan valuation date for doing this calculation, not the current valuation date. And for this purpose, the RPA 1994 current liability and assets are not reduced by the credit balance.

That was the positive aspect of this change. The other aspect, of course, is the liquidity requirement. For certain plans that are very underfunded, technically it applies to all plans that are less than 100% funded as of the prior valuation date, the quarterly contribution requirement is increased to the amount of the liquidity shortfall. And if you make it late, not only is there a late-interest penalty, but there's an excise tax.

TABLE 35
RPA '94 FULL FUNDING LIMITATION

Valuation Results (1/1/96)	ERISA	RPA '94
Interest	9.00%	7.62%
Accrued Liability	10,000,000	11,837,180
Normal Cost	1,000,000	1,271,320
Expected Payments	200,000	200,000
Projected Liability	11,781,194	13,899,887
Adjustment Factor	100%	90%
Adjusted Liability	11,781,194	12,509,899
Interest	9.00%	9.00%
Actuarial Asset Value	11,150,000	11,150,000
Credit Balance	0	N/A
Expected Payments	200,000	200,000
Projected Assets*	11,944,694	11,944,694
Preliminary FFL	0	565,205=Adjusted Liability-Projected Assets
FFL		
Minimum Contribution		565,205=Greater of ERISA and RPA Limits
*Assumes mid-year benefit payments		565,205=Lesser of FFL and NC (w/int) reduced by the credit balance (w/int)

TABLE 36
RPA '94 FULL FUNDING LIMITATION—ADDITIONAL CONTRIBUTION MADE FOR 1995

Valuation Results (1/1/96)	ERISA	RPA '94
Interest	9.00%	7.62%
Accrued Liability	10,000,000	11,837,180
Normal Cost	1,000,000	1,271,320
Expected Payments	200,000	200,000
Projected Liability*	11,781,194	13,899,887
Adjustment Factor	100%	90%
Adjusted Liability	11,781,194	12,509,889
Interest	9.00%	9.00%
Actuarial Asset Value	11,425,000	11,425,000
Credit Balance	**275,000**	N/A = additional 1995 contribution
Expected Payments	200,000	200,000
Projected Assets*	11,944,694	12,244,444
Preliminary FFL	0	265,455=Adjusted Liability-Projected Assets
FFL		265,455=Greater of ERISA and RPA Limits
Minimum Contribution		0=Lesser of FFL and NC (w/int) reduced by the credit balance (w/int)
*Assumes mid-year benefit payments		

The liquidity shortfall is the excess of the base amount over the plan's liquid assets. The base amount is generally three years of benefit payments looking at the last year's payments. Liquid assets generally include marketable securities, but they can also include certain other items—if you have an insurance contract with a liquidation value, you can probably reflect at least the liquidation value when determining liquid assets.

I say "adjusted disbursements" rather than just "disbursements" because in calculating total disbursements you actually look at all payments—not just annual benefit payments—but lump-sum payments and anything paid out in the last year towards an annuity purchase. You get to exclude some of those lump sums and annuity purchase amounts. The percentage you get to exclude is your funded percentage. So the better funded you are, the more of these unusual amounts you get to exclude in calculating this requirement.

For a poorly funded plan that has just had an annuity purchase in the last year, which is probably not very frequent, you should pay careful attention to this requirement. In any case, it's always limited to the amount that would bring you up to 100% funded on a current-liability basis. And, in that case, you can take account of all assets, not just liquid assets.

I think we've defined different uses for current liability. I've tried to put them all together in a table to show the different current liability measures and what they're used for.

I'm not going to go through Table 37. I just would like to add one comment. You can make this more complicated by excluding pre-participation service for calculating current liability, or if the election has been made for your plan. For some purposes you exclude pre-participation service, and for some purposes you don't. Instead of four measures we could have six measures.

Collectively bargained plans now have to reflect the ultimate benefit schedule that has been agreed to rather than just reflecting it as it becomes effective. Before Revenue Procedure 95-51 came out, I think most, or at least many, actuaries assumed that we would treat that increase (the effect, as of 1995, reflecting those future increases) as a plan amendment. After all, in another year or two when we would have taken them into account in our valuation, we would have reflected them as plan amendments. And 95-51 comes along and says, actually this is a funding method change. It's one for which you get automatic approval. And, by the way, funding method changes are amortized over ten years. So the change is amortized more rapidly, plus you don't get to use it as an offset if you're calculating the OBRA 1987 additional funding charge.

TABLE 37
CURRENT LIABILITY MEASURES

	OBRA 87	Gateway	RPA '94	1993 Assumption
Interest	90–110% of the four-year weighted average of 30-year Treasuries	109% of the weighted average in 1995 (108% in 1996 107% in 1997 106% in 1998 105% thereafter) i.e. top of the new Interest rate range	90-109% of weighted average in 1995 (90-108% in 1996 90-107% in 1997 90-106% in 1998 90-105% thereafter) Should equal OBRA '87 rate or the top of the range if lower	(1993 current liability interest rate/1993 weighted average) x 1995 weighted average
Mortality	Valuation (412(b))	GA-83	GA-83	1993 Valuation
Uses	●Full funding limitation (412(c)(7)(A)(I)(I)); ●OBRA '87 additional funding charge (412(I)(3)(E))	●Gateway test (412(I)(9)(C))	●Unfunded current liability maximum (404(a)(1)(D)); ●RPA '94 additional funding charge (412(1)(7)); ●Minimum full funding limitation (412(c)(7)(E)); ●Quarterly contribution exemption (412(m)(1)); ●Liquidity payment limit (412(m)(5)(D))	●Additional unfunded old liability amount (412(1)(3)(D)(ii)(II))

Now this really doesn't make sense. Consider, as an example, a plan that just prior to January 1, 1995, adopted a new bargaining agreement. As of January 1, 1995, the plan is forced to change its funding method, and therefore the entire bargaining agreement, separate from the part that you would have already recognized if January 1, 1995 was treated as a funding method change based and amortized over ten years.

If instead you had delayed just a few months and the bargaining agreement had been agreed to in early 1995, you would have had, as of January 1, 1995, a funding method change, but one that has no effect because there were no future agreements in effect as of January 1, 1995. Then, a couple months later when you adopted the agreement, the entire amount gets treated as a plan amendment with a 30-year-to-year basis if you can use it as an offset in your OBRA calculation. So just by this quirk of timing we get very different treatment.

This has been pointed out to the IRS, and I know the question has been raised on a number of occasions. And, as far as I know, the IRS has refused to answer. They haven't said "Yes, follow Revenue Procedure 95-51." They haven't said, "You're right. Thirty years is the right answer." They just haven't answered. So I know some practitioners are saying, "Well, 30 years is really the only thing that makes sense, we're going to go ahead and do that." I think the more conservative approach probably is to treat this as a funding method change and amortize it over ten years. By the way, another drawback of treating it as a funding method change

is it starts the five-year clock on your automatic approval. But the more conservative approach would be to amortize it over the ten years and pay the additional amount. You may wind up with a credit balance if you find out later that you were wrong. The other way you wind up with a funding deficiency.

Another example that I'll go through quickly shows the before and after RPA multipliers you take into account for valuation purposes.

In Table 38, you'll notice that for current liability purposes we're still taking only the 1995 multiplier into account. Current liability is exempt from this change. As under the old law, you still recognize the changes as they become effective. It's very interesting that they did this because some of the most severely underfunded plans—plans that were, in large part, the impetus for RPA—are not going to be affected by this particular change. Their contribution, at least in the long run, is going to be driven by the DRC and not the regular 412(b) calculations. The DRC is based on current liability, which doesn't reflect increases.

<div align="center">

TABLE 38
COLLECTIVELY BARGAINED PLAN, 1/1/95 VALUATION

</div>

Date of Agreement 12/1/94

Date	Multiplier	
Preagreement	$20	
1/1/95	$21	
1/1/96	$22	
1/1/97	$23	

	ERISA Accrued Liability	Current Liability
Prior to RPA Multiplier	$21	$21
After RPA Multiplier	$23*	$21

Effect of increase from $20 to $21 is amortized as a plan amendment
Effect of increase from 421 to $23?

* Anticipated terminations during 1995 reflect a $21 multiplier
  Anticipated terminations during 1996 reflect a $22 multiplier

PBGC premiums changes are straightforward. The cap on premiums is phased out over a couple of years. What that means for a plan that is affected by the variable rate premium is that each dollar you contribute to the plan saves you nine cents per year in premiums.

Another way to look at it is if you're a plan sponsor and you have some money, you have two competing investments. You can put the money in your plan and the return that you would earn would be a tax-free pension fund return plus 0.9% that you save on the variable rate premium. Compare that with your company's after-tax internal rate of return or whatever other return that a competing investment would have.

The final item is assumption changes. This doesn't affect too many plans, but the plans that it affects are quite large. If you're severely underfunded—unfunded vested benefits of at least $50 million—and you have an assumption change that would reduce your current liability by $50 million, or by the greater of 5% of current liability or $5 million, then you must get IRS approval for the change in assumptions.

A year or two ago at the enrolled actuary meeting somebody submitted a Gray Book question that asked, What happens if I make an assumption change, I apply for approval, and I don't get it? That means I can't calculate the current liability based on these changed assumptions. Does that mean I have different assumptions—say different retirement-age assumptions—for purposes of current liability versus 412(b) calculations? And the answer was "no." You also can't use that assumption change for your 412(b) calculations. If we don't think it was good for current liability purposes, we also don't think it's good for your regular calculations.

This is effective for plan use beginning after October 28, 1993. Plus, there's some kind of a retroactive undoing of this calculation that you would have to do if you made such a change in a plan year beginning between January 1, 1993, and October 27, 1993.

I want to finish by talking a bit about strategies. I discussed the transition rules—in particular, whether it makes sense to adopt the optional rule. Another strategy that you might employ is to use a low, current liability interest rate for 1995. This will help certain plans.

The third strategy is accelerating contributions by a few months—or a few years— depending on your situation. This can have a few different, positive results. For example, if you have a plan that for 1996 is just failing the gateway test, it's very possible that you could contribute an additional amount, call it a 1995 contribution, pass the gateway test, eliminate your additional funding charge, and reduce your 1996 contribution by more than the amount of that additional 1995 contribution. The following example shows another type of acceleration strategy that might be beneficial.

In Tables 39–43*, we're back now with the same plan that we had in the first scenario. We've elected the transition rule. In this case, however, let's assume that the plan is more than 80% funded and passes the volatility test. Because we've got a little bit of a credit balance and some better asset performance, the plan passes the gateway test. We don't have to do the additional funding charge calculations. We should still look at some pieces of this calculation, though, because we may need this information in future years if we have to do the additional funding charge calculation.

For example, we still calculate our additional unfunded old liability, because the plan is not above 90% funded. So we might need this. We also calculate our initial funded current liability percentage, because we might need that to apply the transition rule in some future year.

Let's move on to the next example, in Tables 44–48. What if, given this pattern, in 1995 we decided to use 6.55%, the lowest allowable interest rate for purposes of calculating current liability? What does that do? The gateway test is not affected because the gateway current liability is based on the highest interest rate. But those other two elements we just talked about are affected. The additional unfunded old liability, which is the excess of our RPA 1994 current liability over our 1993 assumption current liability, increases substantially. That's a much larger amount that we get to carve out of new liability in future years when we do the calculations. Plus, our initial funded percentage is also much lower so that, in applying the target calculation in future year, we have a much lower target percentage.

If we look graphically at these two plans, we see a very interesting contribution pattern. Chart 3 shows that if we don't use this lower interest rate and the additional funding charge resumes in 1996, we find we have much higher contributions for four years than if we did elect to use a lower interest rate. That situation finally reverses itself in the year 2000 because the scenario 8 plan is much better funded than the other plan. Looking at the funded percentage of the plan in the long run you get to the same place, but with a much different path.

*

CHART 3
CASH FLOW PROJECTION FOR SCENARIO 8 AND 9

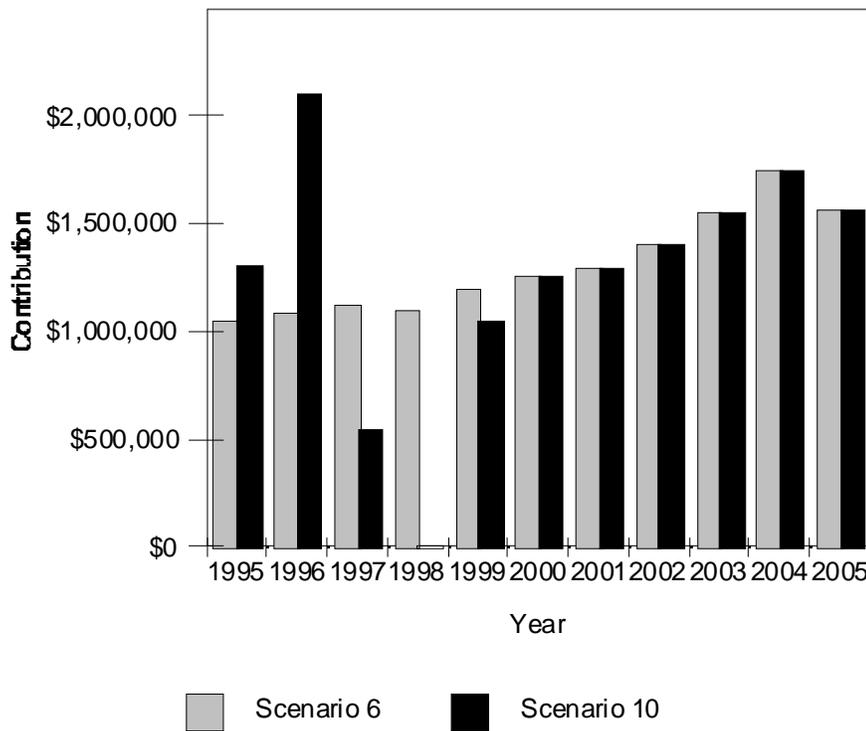

☐ Scenario 8   ■ Scenario 9
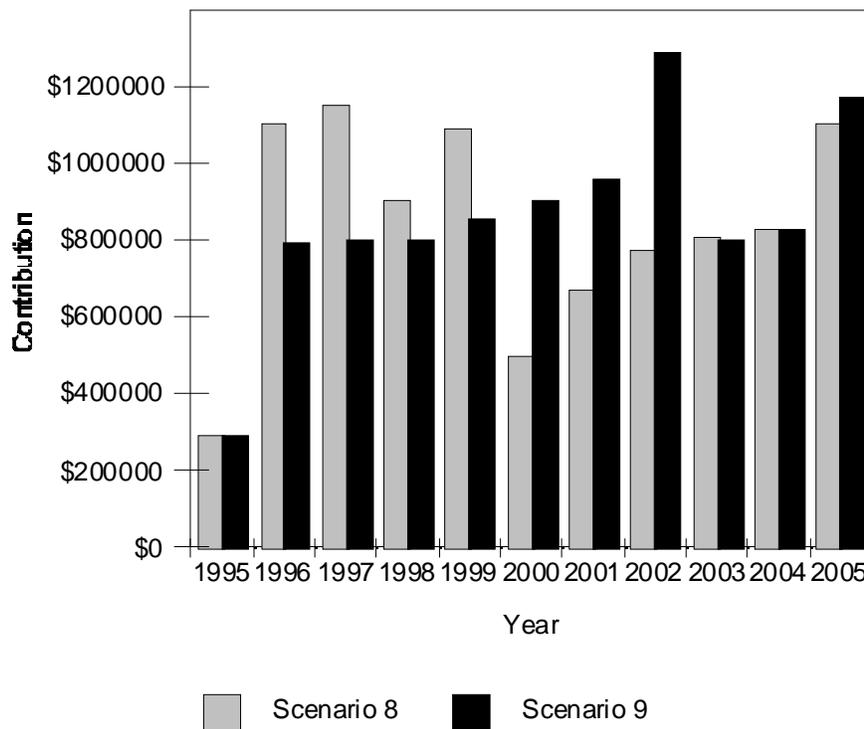
For this last projection I'll go back to scenario 6. Scenario 6 was the plan where we had changed the assumptions to 8% GAM 83, and we elected the transition rule going forward.

The bars in Chart 4 are the same as on the earlier graph. We're comparing that to a strategy where the sponsor elects to contribute enough each year to pass the gateway test. In 1995 the contribution is a bit higher because the sponsor has elected to contribute enough to get up to 80% funded for 1996. In 1996 the sponsor contributes enough to get up to 90% funded for 1997 because in 1997 the plan won't pass the volatility test. Apart from those high contributions in the first couple years, the contribution is lower thereafter for a few years and then winds up being the same amount.

There are two potential benefits that I can think of to a strategy like this. First, by passing the gateway test each year you can avoid the employee notice requirements. (You can actually avoid that by passing the gateway test every other year.) Second, if we make the additional contributions the plan starts off better funded. But then at some point down the road, once the plan is no longer subject to the additional funding requirement, the funding level is consistently lower. The

reason for that can be seen if we consider our regular 412(b) contribution. It's the normal cost plus an amortization of something.

CHART 4
CASH FLOW PROJECTION FOR SCENARIOS 6 AND 10

What do our amortization bases add up to? They add up to our unfunded liability plus our credit balance plus our reconciliation account balance. In scenario 6, where we did not avoid the additional funding charge, we built up a reconciliation account balance. In scenario 10 we avoided increasing our reconciliation account balance, so that our funding target is consistently lower every year thereafter. And that will persist until the plan hits the full-funding limit and all these bases and account balances are wiped out.

That's concludes our discussion of strategy. I've really just scratched the surface here. There are a number of other strategies that might be employed. We really only looked at one plan and a couple variations on that plan. There is a session that will go into more detail on effective ways of managing contributions if you're interested in going into this further.

I hope that this has helped to clarify clear how these rules work. And for those of you who have sponsors who are affected by these rules, I hope that it allows you to help serve your clients better.

From the Floor: I have a question on Revenue Ruling 96-7. The IRS says you can use the two 96-7 tables or GAM 83, but you can't use the lighter of the 96-7 tables for post-94 disabled. Is that correct?

Mr. Cadenhead: Right, you cannot use the lighter table. And it's interesting, of the two tables that they give you, the lighter table is the pre-1995 table because there they don't apply the Social Security criteria. If your plan had to meet the Social Security criteria as a condition of receiving these disability benefits, it would seem to make sense that you'd be allowed to use that later table throughout all of your calculations. But you can't do that.

From the Floor: The point I'm making is if you're going to use one table other than GAM 83, why not use the half-way-in-between table, which is the earlier disability table? Just to lock on to a single table would allow at least some disability. Is that just too logical for the IRS?

Mr. Cadenhead: That is too logical for the IRS. I agree that would be another option.

From the Floor: With regard to the approval for change in assumptions, if the change has almost, but not quite, the effect required, then I don't need approval?

Mr. Cadenhead: That is correct.

From the Floor: Then next year I can do it again?

Mr. Cadenhead: In theory you may be able to do that. I'm sure that when the IRS comes out with something that tells you how you actually go about requesting this approval and comes out with some guidance, they will probably want to close that loophole.

From the Floor: If you change assumptions and methods in the same year, the test only applies to changes in assumptions?

Mr. Cadenhead: Well, when you say changing your method, this change is just for current liability, so that shouldn't have any effect.

From the Floor: If you have a plan that has a lump-sum feature and you're valuing that assuming that lump sums are paid out at PBGC rates—which are currently much lower than the current liability rate—when you are measuring for current liability purposes, are you still required to use the current liability rate pre and post?

Mr. Cadenhead: I'm glad you asked that, because I had that in my presentation and removed it because of time constraints. But now I can answer that. Another interesting part of the Revenue Ruling 96-21 was what it had to say about lump sums. In particular, in projecting current liability to year-end, it said, "Use the expected reduction in current liability due to benefits paid during the year (including lump sums.)" Notice 97-11 earlier had given us some restrictions on calculating current liability. It said in calculating benefits paid under the plan, particularly in calculating lump-sum benefits, you had to use your current liability interest rate. A lot of actuaries assumed that meant that in doing current liability you would have to use an annuity assumption.

I think this makes clear that you don't have to use an annuity assumption, but I think Notice 90-11 still applies. In calculating lump sums for current liability purposes, you still have to use your current liability assumption and, probably, I'm guessing, extending the logic of Notice 97-11 to RPA 1994. Now that we have the required mortality table for calculating current liability, we probably also have to use that table in calculating lump sums as well.

From the Floor: The reference you are citing is Notice 97-11?

Mr. Cadenhead: Notice 90-11. Did I say 97? That one hasn't come out yet. In the example, in 96-21, it has different assumed benefit payment amounts for purposes of current liability versus for purposes of projecting your assets forward. I assume that due to the magnitude of the difference, it's probably attributable to the fact that there's a lump-sum assumption for current liability purposes based on the current liability rates and, therefore, results in lower expected benefit payments.

From the Floor: Will plans with fewer than 100 participants be included in this additional funding charge in future years?

Mr. Cadenhead: As far as I know, plans with fewer than 100 participants will probably not be included in this calculation. For 1996 and beyond they are subject to the employee notice requirement that they had been exempted from for 1995. But the 100-participant exclusion has been consistent from OBRA to RPA.

From the Floor: If you're using a smoothing method for asset fluctuations—some five-year method—and with the large run-up in assets that many plans have

experienced in calendar year 1995, have you looked at the effect of changing the asset valuation method and maybe grading it in, using the method in the revenue procedure that they allow you to do?

Mr. Cadenhead: Yes, we've done that in a few cases. And I don't like the methods that they give you automatic approval for, apart from market value. The other methods essentially defer all recognition of capital gains over five years. So it's been designed to lag your market value. But for a number of clients we have applied for funding method changes and we have gotten approval for a method that would reset to market and then smooth out the difference between actual and expected return on a five-year basis thereafter.

From the Floor: How does the 90% full funding limit override help you, because you can always deduct the unfunded current liability? How do those interact?

Mr. Cadenhead: It's not a matter of deduction. What the 90% full funding limit does is it increases your minimum full funding limit so that you can't avoid a funding requirement if your plan is less than 90% funded. It does not increase the maximum deductible contribution.

From the Floor: I don't practice in this area so I'm not that familiar with it.

Mr. Cadenhead: You're brave to come here.

From the Floor: I practice in the investment side. Going back to that strategy where you make the extra contribution if you're below 90% in order to reduce your contribution, I have the impression at our firm that we are advising our clients not to take advantage of that because it doesn't make sense to let the plan be less well-funded.

Mr. Cadenhead: Well, in the long run, it certainly doesn't change what you have to have in your plan. You have to have enough assets to pay benefits. It is a literal interpretation of what the law says. I think from that point of view it's permissible. But, really, all it does is defer the timing of contributions, and you'll have to make them up later. I think it's important to let clients know that's what is going to happen. If they really have a near-term cash crunch, it may be really important to them to delay the timing of contributions. In that case, they may want to take advantage of this. But it's not going to change things in the long run.

From the Floor: Would you advise clients against taking advantage of this?

Mr. Cadenhead: I wouldn't advise them against taking advantage of it as long as they're informed about the consequences.

From the Floor: Let me make sure that I've got the cite down correctly. For collectively bargained plans, was it Revenue Ruling 95-51?

Mr. Cadenhead: I am sorry, Revenue Procedure 95-51.

From the Floor: The gist of it is that you have the option, or you are required to recognize the ultimate benefit rate?

Mr. Cadenhead: RPA requires you to use the ultimate benefit rate. Before RPA you had the option, as part of your funding method for a collectively bargained plan, to reflect it. Now you have to. All that 95-51 tells you, which deals with automatic approval of funding methods, is that this is a change in funding method, and it's one for which you get automatic approval.

From the Floor: But RPA requires the ultimate rate in calculating regular actuarial liabilities, but you can't reflect it in current liability?

Mr. Cadenhead: That is correct.

From the Floor: When you say "reflect the ultimate," do you mean take the highest or do you mean take the rate in effect when the person is assumed to terminate?

Mr. Cadenhead: Right. For somebody who retires before that ultimate rate becomes effective you would use the prior rate.

From the Floor: What's your feeling on plan mergers and different optional rule elections?

Mr. Cadenhead: That can get very complicated. I would be happy to talk with you about that afterwards if you like based on your particular circumstances. I don't know that you can make some kind of general comment on that.

From the Floor: How do you get the target percentage in the first year?

Mr. Cadenhead: For the first-year target percentage you start off with your initial funded current liability percentage, which is based on your 1995 RPA current liability and assets, reduced by the credit balance. It's the same one that goes into your additional funding charge requirement calculation for 1995.

From the Floor: Do the funded current liability percentages you refer to always exclude the current year accrual?

Mr. Cadenhead: That's correct. The only exception to that is in calculating the maximum amount of liquidity shortfall. Liquidity contribution can be no more than the amount that gets you up to 100% funded. For purposes of doing that calculation you project to the end of the year including cost. You project your current liability to that date and compare the assets to that date.

I don't think the IRS has given any definitive guidance on that. That's how we've interpreted it. I think it's the only thing that makes sense. But that doesn't mean that's what the IRS ultimately says you can do.