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## SOLVENCY VERSUS TAX VALUATION

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- o A discussion of the approaches and philosophies used by Canada and the United States:
  - Purpose of solvency/current liability valuations
  - Benefits and assumptions underlying solvency/current liability
  - Conflicts between tax and security valuations
  - Effects of these valuations upon plan sponsors (and actuaries)

MR. LAWRENCE MITCHELL: This panel will discuss the different approaches taken by two countries in their concern about pension plan funding and solvency. The panel members are M. David R. Brown of Eckler Partners, Ltd. in Toronto, Paul Zeisler with Mercer-Meidinger-Hansen in Chicago, and from the IRS in Washington, D.C., Paulette Tino. I am with Mitchell & Hartmann, Inc. in Los Angeles.

David will discuss what appears to be a rational regulatory environment as found in Canada. The climate there is one which many of us can envy, especially after we hear Paul and Paulette try to explain how the US valuations are to be done.

MR. M. DAVID R. BROWN: I have just received a mandate which I had not anticipated. The following presentation may not fulfill your expectations. For those of you who came prepared with calculators and slide rules, there will be additional disappointments. I do not have any formulas to quote. Rather, I will spend a few minutes describing what is happening in Canada, starting with some background of the regulatory structure and framework.

### REGULATORY BACKGROUND

Pension plans in Canada are regulated by the provinces, except for plans in certain industries (such as banking, broadcasting and transportation) which come under federal jurisdiction. By "regulation" I mean the areas generally covered in the U.S. by ERISA: minimum funding requirements, plan design features like vesting, and in one of our provinces, guaranteeing unfunded benefits in terminated plans. We also have tax regulation, which is at the federal level and is concerned mainly with limiting tax-sheltered benefits and tax-deductible pre-funding of benefits.

Where a plan covers employees in more than one province, it only needs to be registered in the province where a plurality of plan members is employed. The pension laws of the provinces have historically been relatively uniform, which allowed the provinces to make reciprocal agreements which permitted this single-registration arrangement. Technically, the registering province is supposed to ensure compliance with the laws of all the provinces; but in practice, the law of the registering province is applied to the whole plan in such areas as minimum funding requirements.

Ontario is by far the dominant province in terms of the proportion of all plans registered in the country. About half of such plans are registered in Ontario, although only about 40% of plan members are employed there. Ontario was also the first province to enact pension legislation (in 1962), and its minimum funding standards have set the pattern followed by the other provinces and the federal regulators. In general terms, these standards required a minimum contribution of the current service cost on the unit credit or accrued benefit method with amortization of past service liabilities over not more than 15 years. Unfunded liabilities arising from changes in actuarial basis and from plan improvements could also be funded over a 15-year period but "experience deficiencies" (i.e., net losses from experience less favorable than the actuarial assumptions) had to be funded over not more than five years.

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The regulations in Ontario required that valuations be prepared "using assumptions that are appropriate for the plan and methods consistent with the sound principles established by precedents or common usage within the actuarial profession." This was interpreted in practice as requiring long-term assumptions for interest and salary projections. The Pension Commission of Ontario informally adopted a ceiling of 8% on assumed interest rates and, for final-pay plans, a sliding scale of differentials between interest and salary increase rates ranging from zero for an 8% interest assumption, to 1% for a 7% interest assumption, etc.

Most plans in Canada use the unit credit actuarial cost method. A recent survey by the Pension Commission of Ontario covering 172 large, single-employer, private sector plans showed 154 on the unit credit method with only 12 using entry-age normal and six using an aggregate funding method. The prevalence of unit credit funding stems partly from the definitions of both the minimum funding requirements of the provincial laws and the maximum tax-deductible contributions under the federal tax law. I suspect that the limitations on actuarial assumptions have also tended to result in a greater preference for unit credit funding. If you have to use stronger assumptions than you otherwise would, you may feel more comfortable using a weaker actuarial cost method.

### REASONS FOR CHANGE

Late in 1980, Ontario established the Pension Benefits Guarantee Fund. Its purpose is generally similar to the Pension Benefit Guarantee Corporation (PBGC) in the U.S. One difference is that the Guarantee Fund in Ontario has operated, so far at least, by providing supplemental funds for the purchase of annuities on the open market upon plan termination, rather than by taking over the administration of benefits for terminated plans as the PBGC does. As a result, there is no counterpart in Canada to the annuity premium rates used and published by the PBGC.

Ontario is the only province with a Guarantee Fund. Ever since it was established, there has been a concern about the relatively weak funded status of negotiated flat-benefit plans, such as the "pattern" plans in the auto and steel industries. These concerns were compounded by further changes in the Ontario pension legislation which provided that where a plan terminated and the plan provided for unreduced early retirement pensions subject to specified age and/or service requirements, then the vested benefits of plan members who are active when the plan terminates will become payable on an unreduced basis on the date on which the employee would have met the age and/or service requirements if the plan and his employment had continued. This provision applied only to employees 45 or older with at least ten years of service for plan terminations before April 1, 1987. After that date, the qualifying rule was changed to a minimum age and service total of 55 years. Most of the "pattern" plans include liberal early retirement provisions, so that if such a plan terminated, it would trigger this "grow-in" provision in the law, and hence a substantial extra liability which, in turn, would mean a substantially larger claim against the Guarantee Fund.

A further consideration was the introduction in Ontario and some other provinces of a requirement for "portability" of vested benefits. This permits a terminated employee to require the plan sponsor to make a cash transfer of the commuted value of his or her vested pension either to a personal retirement savings plan or another employer-sponsored plan. It was seen that if the vested benefits were not fully funded, a transfer of the full commuted value would weaken the benefit security of the remaining plan members. The appropriate measure of funding for this purpose is a plan termination basis. It was considerations of this kind that caused the regulators in Ontario and elsewhere to begin to think about requiring a regular examination of a plan's ability to meet its obligations on plan termination.

The following description of solvency valuations is based on the requirements in Ontario, since the law there includes certain complexities which are not present in other jurisdictions. However, the regulations in Alberta and Nova Scotia and under the federal Pension Benefits Standards Act all include substantially similar requirements for solvency valuations and funding of solvency deficiencies. The laws in Saskatchewan, Manitoba, Quebec and Newfoundland do not include such requirements to date.

### HOW DO ONTARIO SOLVENCY VALUATIONS WORK?

The Ontario pension legislation was completely rewritten in 1987, and the regulations were similarly overhauled. The government took the opportunity to introduce a new secondary minimum funding standard on the basis of a solvency valuation. Essentially, a solvency valuation

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compares the market value of the plan assets plus certain other credits with the market or termination-of-plan value of the plan liabilities, including the cost of the legislated early retirement enhancements.

The market value of assets can be smoothed over a period of not more than five years. The other credits on the asset side are:

- (a) the present value of any remaining amortization payments from the plan's funding program which were established prior to January 1, 1988;
- (b) the unamortized balance of the liability for past service benefits in a plan established after January 1, 1988, or of the liability for the recognition of additional periods of past service; and,
- (c) the unamortized balance of the liability as at January 1, 1988 to fund the cost of a further early retirement enhancement which was imposed as of that date by the law. This is the "deemed consent" provision, which I will come back to later.

Because the solvency liabilities are to be valued on a plan-termination basis, most actuaries have adopted interest and mortality assumptions which reflect their best estimate of the pricing basis for single-premium immediate and deferred annuities as of the valuation date. If we had the equivalent of PBGC premium rates in Canada, we probably would use them to determine solvency liabilities.

The solvency valuation is, of course, on the unit credit method. No projection of salary increases is made for final-pay plans and no termination rates are used.

To accommodate the "grow-in" provisions, one must assume 100% early retirement on the earliest date at which an unreduced pension would be payable if the plan and the employee's employment were to continue. Moreover, the law provides that all accrued benefits are to be considered vested upon plan termination, whether or not the employee has met the plan vesting requirements.

Finally, the law now includes a provision stating that if a plan provides special early retirement benefits with certain age and/or service requirements, but only with employer consent, then upon plan termination, such consent will be given. This provision, together with the "grow-in" provision, results in a further substantial increase in solvency liabilities for many plans.

### HOW DOES THE SOLVENCY VALUATION AFFECT FUNDING?

Under the new requirements in Ontario, the actuary is required not only to provide a going-concern valuation and to develop the minimum funding requirements based on that valuation, but he or she must also either provide a solvency valuation or alternatively, certify that the plan has no solvency deficiency. This alternative can relieve you of the need to go through the solvency valuation procedure for well-funded final-pay plans with no provision for unreduced early retirement benefits. Incidentally, the minimum funding requirements generated by the going-concern valuation no longer require that experience deficiencies be funded over five years. They can now be funded over 15 years, just as with any other going-concern unfunded liability.

Where a plan does have a solvency deficiency, it must be amortized over not more than five years. This requirement takes precedence over the minimum funding requirements under the going-concern valuation. Once the funding payments for the solvency deficiency have been established, the actuary then recalculates the scheduled minimum funding requirements beyond the next five years on the going-concern basis.

The regulations include further provisions dealing with the application of experience gains and losses for plans which had a solvency deficiency at the last previous valuation. Following the basic concept of the dual valuation standard, two gain-and-loss analyses are required -- one measured against the going-concern valuation basis and the other measured against the solvency basis.

Only a solvency gain can be applied against the remaining balance of a previously established solvency deficiency. A solvency loss triggers a requirement for a new series of five-year

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amortization payments. A gain or loss resulting from a change in the solvency valuation actuarial assumptions is part of the solvency gain or loss for purposes of this analysis.

### PROPOSED REVISIONS IN SOLVENCY VALUATION REQUIREMENTS

On March 2, 1989, the Ontario Minister of Financial Institutions released a document called "Building on reform: Choices for tomorrow's pensions." The most widely-noticed proposal in this document was the detailed provisions of new legislative requirements for inflation-protection or indexing in defined benefit pension plans. However, the document includes a number of other proposed changes in Ontario's Pension Benefits Act, and among these are some proposals to give a degree of relief from the solvency funding requirements for certain plans which have been among those hardest hit when these requirements were introduced last year. The following changes are proposed, and are likely to be enacted later this year.

1. The "deemed consent" provision will apply only where the employee has, on the plan termination date, met the age and/or service requirements for the special early retirement. In other words, employees will no longer be able to "grow in" to enhancements which are subject to deemed consent.
2. Where a plan provides special benefits which are available only on a plant closing, these benefits will no longer have to be recognized and funded for in the solvency valuation.
3. Benefit improvements negotiated before January 1, 1988, but taking effect after that date, are to be included in the "grandfather" 15-year funding provision which applies to benefits which were in place before January 1, 1988.
4. An ambiguity in the regulations about whether it is permissible to pre-fund solvency deficiencies will be resolved to clarify that such pre-funding is indeed permitted.
5. Plans with solvency deficiencies of more than \$1 million or solvency funded ratios of less than 80% will be required to file annual valuation reports. Valuation reports are normally required every three years.

### LOOKING ACROSS THE BORDER

As I indicated, the principal reason for requiring solvency valuations in Canada is to bolster the minimum funding requirements for certain types of plans. I have said very little about the basis on which the federal tax authorities grant approval for the deductibility of funding contributions. Essentially, they will grant such approval on the basis of a going-concern valuation. They do require that this must be the same valuation as the going-concern valuation submitted to the provincial authorities for purposes of determining their minimum funding requirements and they are now stipulating that the assumed rate of future salary increase must be at least 1% less than the assumed interest rate. The new requirement in some provinces for solvency valuations will not in any way affect the determination of the employer's maximum tax reduction.

I'm sure you will observe a number of similarities between the solvency valuation in Canada and the "current liability" in the U.S. as described by my fellow panelists. What is intriguing to me is that these similar approaches are apparently being used for diametrically opposite purposes: the effect in the U.S. will be to limit or reduce the maximum deductible funding payments, while in Canada it will be to increase the legislated minimum funding requirements. Despite the complexity of our new requirements, I can understand the reasons for them and I think they make a certain amount of sense. I don't see any sense in what the U.S. appears to be doing.

**MR. MITCHELL:** Before Paul begins his commentary on the current, troublesome U.S. situation, I have a request to make. To those of you who must deal with the conflicting and illogical aspects of the Omnibus Budget Reconciliation Act of 1987 (OBRA), have you considered how we can revise, repeal, replace or rescind its onerous provisions?

At this time there is a huge groundswell of public opinion which has been raised in opposition to Section 89 of the Internal Revenue Code. This is a section which affects virtually every employer and employee in the United States. Although very few people understand all its aspects, everyone recognizes its complexities and huge administrative costs, and Congress is hearing the complaints.

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With OBRA 87, we have a slightly smaller number of employers who are affected and an even smaller number who appreciate its complexities -- at least until we have presented our bills to them for all the additional work.

Surely we can make our clients and legislators aware of this law which can be followed only by ignoring (or redefining) portions of it.

MR. PAUL B. ZEISLER: Current liability is a concept established by the Omnibus Budget Reconciliation Act of 1987, also called OBRA 87. It is used both in the determination of maximum tax deductible contributions (for taxpaying defined benefit plan sponsors) and minimum funding requirements. Under OBRA 87, many plan sponsors are finding the range of allowable contributions has narrowed; in particular, the maximum is lower because of the application of the new full funding limitation. This is consistent with Congress' intent to raise revenue; however, a result is that in many cases plans will not be as well-funded as they used to be.

Enrolled actuaries have always really served two masters -- the security of plan participants on one hand and the integrity of the taxation process on the other. But OBRA 87 seems to emphasize the latter (at least for plans whose assets exceed termination liabilities). There has been, and will continue to be, a great deal of discussion about who is really served by this legislation.

Also on our panel is Paulette Tino of the IRS. Together, we'll discuss the benefits and assumptions underlying current liability and the ways in which it's used. I'll begin with a discussion of two key topics: first, an overview and description of the benefits required to be included in current liability, those benefits specifically excluded, and some areas where the situation is unclear; then, the assumptions practitioners must use when valuing these benefits, and one particular problem that arises as a result. I will, in the course of my presentation, address some other issues which are germane to the primary subject matter. Paulette will then discuss how current liability is used in funding calculations, and she'll review some examples which I'm sure will be of interest to everyone. At this point, let's discuss the benefits which are included under the heading of current liability.

Generally, current liability is defined as the liability for all benefits accrued to employees and their beneficiaries under the plan. All benefits are considered fully vested for purposes of this calculation; that is, there's no turnover discount for benefits for individuals who haven't satisfied the requirements for vesting. Current liability is intended to reflect all subsidized early retirement benefits, with proper consideration of the likelihood these benefits will be paid, along with optional benefit forms. This last point is an important one if, for example, the plan allows participants to receive lump sum payments, to the extent that the minimum basis for providing such lump sums under the Tax Reform Act of 1986 provides for greater benefits than would be implied by the plan's actuarial basis, and/or if the lump sum would be more valuable than the annuity valued under the current liability assumptions. As we'll see later on, the rules concerning the assumptions practitioners can use may create problems in this type of situation.

We might generally describe the benefits we are required to value as being those protected by Internal Revenue Code Section 411(d)(6). There is an exception to this, however. If the plan provides credit for pre-participation service, then part of the past service cost for individuals who become participants in plan years beginning after 1987 -- and have not accrued any other benefits under any defined benefit plan (whether or not terminated) of any member of the controlled group -- must be excluded in determining current liability for purposes of the new additional minimum contribution. The amount which is excluded is equal to 20% of the past service liability for each year of participation under five years. The net result of this provision is to decrease plans' current liability, and therefore to increase funded percentages. Paulette will discuss what this means to plan sponsors.

The benefits which are clearly not included in current liability are those which are contingent upon unpredictable events, unless those events have occurred. Generally, these are benefits which are contingent upon events other than those which are a function of age, service, compensation, death or disability, and those for which it is not possible to make a reliable estimate of the likelihood of occurrence. One example of such an unpredictable event is a plant closing. This may be a cause for some concern for those who remember a situation a few years ago where the PBGC filed suit against a consulting firm in a situation where a terminating plan resulted in large

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liabilities to the PBGC because the actuary had not valued a plant closing benefit when determining annual funding requirements. While the "old-law" minimum contribution might include a liability for such a benefit, the new law won't consider it.

Other "unpredictable" contingent events include work force reductions and the like; however, a planned early retirement window is not deemed unpredictable, and thus should be considered in current liability. Interestingly, the committee report specifically states that contingent events include plan contributions based on company profitability and the value of company stock falling below a certain level . . . with some important implications for floor/offset arrangements.

Now we come to a more difficult issue -- the benefits which are not clearly included or excluded. These include disability benefits, death benefits in excess of those mandated by law, and Social Security supplements. These are not calculated as part of the accrued benefit, nor are they subject to the anti-cutback rules of Code Section 411(d)(6). Many practitioners take the position that liabilities for these benefits should be included only when the events which trigger them have already occurred. Others include liabilities for them, appropriately weighted for the probability of occurrence.

Thus, a practitioner might elect to take one of the following approaches with respect to the benefits to be included in the current liability calculations: include only those benefits protected under Internal Revenue Code Section 411(d)(6); include the 411(d)(6) benefits, plus those benefits which are not protected where the contingencies have already occurred; or include all benefits provided under the plan, with the exception of those specifically excluded by the law.

Clearly, considerable variations in practice may occur from practitioner to practitioner, with corresponding differences in the funding results associated therewith.

Now, let's look at the assumptions we're required to use when we value the benefits included for current liability. The key assumption in determining current liability is the interest rate (that is, the rate specified under Code Section 412(i) for use in determining current liability and additional funding requirements -- not for other purposes). The law requires the rate to fall within a "permissible range," which is 90-110% of the four-year weighted average of 30-year treasury bonds. The four year period is the one which ends on the day before the beginning of the plan year for which we're doing the current liability calculation; the weighting is 40% for the most recent year, 30% for the previous year, etc.

The law says the Secretary of the Treasury may, if the lowest rate of interest in the permissible range is unreasonably high, prescribe a lower rate which should not be less than 80% of the four-year weighted average of 30-year treasuries. It also says, however, that the rate should be determined without taking into account the plan's experience and reasonable expectations, and should be consistent with current insurance company annuity purchase rates.

This last point raises a very important question: What happens if current annuity purchase rates are outside the permissible range? I've put together some interesting information about this, based on experiences of our firm's annuity placement group. In January 1988, the permissible range, based on 30-year treasuries, was 8.25-10.09%. However, our annuity purchase experience for that month was 8.35-10.50%. Though different, these results certainly overlap the permissible range corridor. For January 1989, the results are very different. The permissible range based on treasury bonds was 7.92-9.68%, but the annuity purchase rates we found were 9.75-10.00% -- no overlap! Admittedly, our results are based on a relatively small number of cases, and they are a function, at least in part, of size and other characteristics of provisions of the plans involved. That much notwithstanding, they're probably a reasonable indication of purchase rates overall. I think we'll need guidance from the IRS on how to proceed in situations like these, where the law appears to contradict itself.

There is one potentially difficult issue for practitioners, related to the current liability interest rate to which I alluded previously. Plans which offer lump sums calculated at a lower interest rate than the low end of the "permissible range" may not take that lower rate into account for current liability calculations. In extreme situations, this might give rise to something which approximates "pay-as-you-go" funding. One of the explanations for this odd provision is that the 150% factor in the new law full funding limit takes care of this problem; however, one can probably find a situation where the actual liability for a participant's lump sum benefit exceeds

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approximates "pay-as-you-go" funding. One of the explanations for this odd provision is that the 150% factor in the new law full funding limit takes care of this problem; however, one can probably find a situation where the actual liability for a participant's lump sum benefit exceeds 150% of the current liability, calculated in accordance with the rules governing the choice of interest rate.

Other actuarial assumptions to be used for current liability purposes are: economic assumptions -- salary scale, Social Security, etc.; and non-economic assumptions -- mortality, turnover, retirement, disability, etc.

Each assumption must be individually reasonable, taking into account past plan experience and future expectations. Alternatively, we have to use assumptions which, in the aggregate, would give us the same or similar results.

At this point, Paulette Tino of the IRS will discuss the various uses for current liability and will review some examples.

MS. PAULETTE TINO: I will start with an outline of the amount of benefit and timing for the development of the full funding limitation.

1. Amount of Benefit for Full Funding Limitation (FFL)
  - a. Use accrued benefit (AB) as of beginning of year plus expected accrued for the year.
  - b. Include expected accruals for year but not future years using actuarial assumptions.
  - c. Salary scale used for year (but not future years).
  - d. Other assumptions which would affect accrual for the year (such as service) are used.
  - e. Contingent or subsidized benefits that are contingent on future events -- the amount of the benefit will depend on assumptions regarding whether the subsidy is met.
  - f. Lump sums depend on what regulations say. Currently it appears as if the lump sum is valued using the current liability (CL) interest rate.
2. Timing
  - a. Calculated as of valuation date.
  - b. For full funding limitation, projected to end of plan year.
  - c. In projecting, expected accruals are taken into consideration.
  - d. Expected pension payment must also be taken into consideration.

Now I will compare the pre-198 FFL with the 150% of current liability full funding limitation (the 150% FFL).

1. The Pre-1988 FFL

The FFL is the contribution that brings the unfunded liability to zero at the end of the year. Calculate this amount in two steps: First, project the liabilities and the assets separately, thereby expressing the FFL at  $t + i$  as the excess, if any, of (i) the Expected Accrued Liability ( $EAL_{t+i}$ ) over (ii) the Expected Assets, disregarding the contribution for the year ( $EAssets_{t+i}$ ); in the second step we simplify the expression obtained in the first step to come to the usual formulation.

$$\begin{aligned} FFL_{t+i} &= EAL_{t+i} - EAssets_{t+i} \\ &= [(AL_t + NC_t)(1+i) - EPP^i] - [Assets_t(1+i) - EEP^i] \\ FFL_{t+i} &= (AL_t + NC_t - Assets_t)(1+i), \end{aligned}$$

Where  $EPP^i$  represents the expected pension payments with interest to the end of the plan year,  $AL_t$  is the accrued disability and  $NC_t$  is the normal cost.

2. The 150% FFL

The Current Liability (CL) is the present value of the benefits accrued at (t), the beginning of the plan year, including the pensioner liabilities. The normal cost (NC) is the present value of benefits expected to accrue during the plan year. All those items are calculated

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using the mandated interest rate  $i^{CL}=j$ . The assets, however, are assumed to grow at the valuation rate  $i$ .

$$\begin{aligned}
 150\% \text{ FFL}_{t+1} &= 1.5 \times \text{ECL}_{t+1} - \text{EAssets}_{t+1} \\
 &= [(\text{CL}_t + \text{NC}_t) (1+j) - \text{EPP}^j] \times 1.5 \\
 &\quad - [\text{Assets}(1+i) - \text{EPP}^i] \\
 &= 1.5 \times \text{ECL}_{t+1}^j - \text{EAssets}_{t+1}^i \\
 150\% \text{ FFL}_t &= (150\% \text{ FFL}_{t+1}) / (1+i)
 \end{aligned}$$

As you can see, the introduction of two different interest rates complicates the calculation.

Now that we have the basic structure, look at an example of a calculation of current liability involving an early retirement benefit. It is a simple example involving a career average plan.

Current Liability for FFL

1. Plan Provisions

- Benefit accrued each year of 1% of that year's salary.
- Normal retirement age: 65.
- Early retirement: Age 55 with ten years of service.
- Early retirement benefit (ERB): (1) Accrued Benefit (AB) actuarially reduced if service is less than 20 years; (2) AB unreduced if service is 20 years or more.
- Early retirement reduction factor: 5% per year for each year early retirement age precedes age 65.

2. Data

<u>Participant A</u>	<u>Data</u> <u>01/01/88</u>
Age	60
Service	18
Accrued Benefit	\$ 3,000
Salary (1987)	\$18,868

3. Assumptions

Retirement rates are used assuming exits will occur at the beginning of the year. It is assumed that one year of service will be earned in each future plan year. Salaries are assumed to increase at the rate of 6% per year.

4. Benefits for Current Liability

Age	60	61	62	63	64	65
Service-AB	18	19	19	19	19	19
Service-ER	18	19	20	21	22	23
AB	\$3,000	\$3,200*	\$3,200	\$3,200	\$3,200	\$3,200
ERB	\$2,250**	\$2,560***	\$3,200	\$3,200	\$3,200	\$3,200
*	\$3,000 + (.01) (\$18,868) (1.06)					
**	[1 - (.05 x 5)] (3,000)					
***	[1 - (.05 x 4)] (3,200)					

The next step involves the Funding Standard Account Calculations.



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Funding Standard Account Calculations

Basic Information

Entry Age Normal Method. Assets valued at market.  
 Valuation rate = 8%  
 CL interest rate = 9%  
 No expected pension payments during year.  
 No credit balance or contribution carryover.  
 Beginning of year valuation.

Valuation Results -- 1988

01/01/88

NC	50,000	
EAN AL	600,000	
Assets	<u>300,000</u>	
Unfunded Liability	300,000	(Single base)
Amortization Amount	28,292	
1.5 x CL	349,541	(including accruals for year)

Full Funding Limitation

FFL = lesser of: (1)  $(600,000 + 50,000 - 300,000) (1.08) = 378,000$ , and  
 (2)  $(349,541 \times 1.09) - (300,000 \times 1.08) = 57,000$

<u>Charges</u>	Funding Standard Account	
	NC	50,000
	Amortization Amount	28,292
	Interest	<u>6,263</u>
	Total	84,555
 <u>Credits</u>	CB	0
	Contribution	57,000
	FF Credit	<u>27,555</u>
		84,555

The difference between \$84,555 and the \$57,000 FFL is \$27,555 which is the current liability full funding credit.

What happens to this full funding credit? You keep your basis. This full funding credit works like a waiver. That is, it is something we tell you not to pay now, but you will pay it later. It is a debt we oblige you to contract.

The base, which you will establish on January 1, 1989, will be amortized at the valuation rate over a period of time, possibly ten years.

Check -- 01/01/89

Expected UL =  $(300,000 + 50,000)(1.08) - 57,000$   
 = 321,000

Outstanding Balance of: Prior Base  $(300,000 - 28,292) (1.08)$   
 = 293,445  
 New Base 27,555  
 Total 321,000

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The following example shows the interplay between the new and the old FFL.

### Example

At the beginning of the plan year tested for full funding limitation, there is no credit balance in the funding standard account, and there is no undeducted contributions.

The following symbols are used:

AFD = Accumulated funding deficiency  
 ALFFL = Full funding limitation based on accrued liability  
 CLFFL = Full funding limitation based on current liability  
 XS Amt = AFD - CLFFL, if positive  
 FSA = Funding Standard Account

1. <u>Date</u>	<u>Case 1</u>	<u>Case 2</u>	<u>Case 3</u>	<u>Case 4</u>
AFD	60	70	80	70
ALFFL	70	50	70	50
CLFFL	50	80	50	60
2. <u>Prevailing FFL</u>	CLFFL	ALFFL	CLFFL, but ALFFL is effective	ALFFL
3. <u>Special credit in current FSA</u>				
(i) Xs Amt	60-50=10	NA	70-50=20	NA
(ii) ALFFL Special Credit	NA	70-50=20	80-70=10	70-50=20
4. <u>Effect on following year's FSA</u>				
(i) Prior Bases	still maintained	fully amortized	fully amortized	fully amortized
(ii) Xs Amt Base	10	NA	20	NA
5. <u>Treatment of current year's ten-year amortization bases in the following year if amount in (6) or more is contributed</u>	still maintained	fully amortized	still maintained	fully amortized
6. <u>Contribution for the current year</u>	immaterial	50	50*	50

\* If an amount in excess of 50 is contributed, that excess is not deductible, and therefore, is not used to amortize the ten-year amortization bases.

The additional funding charge comes into play when we have a "deficit reduction contribution." There are many complexities involved here, and some are made more difficult by the inexplicable

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language in the law which says you must go back to January 1, 1988 to determine your unfunded old liability amount. We hope the regulations will provide some relief or accommodation.

The unfunded old liability amount is the unfunded old liability amortized over 18 years. It appears to require you to determine the January 1, 1989 amount by taking the amount at January 1, 1988 and increasing it with interest (using current liability interest rate) and subtracting valuation assets (increased at valuation interest rate) and amortizing the balance over 18 years at some interest rate which may be the current liability interest rate.

The following is a strict interpretation of the law, but there are many problems. The funding standard account may have other bases. You may have to change the funding method. Some methods, such as aggregate, have no bases.

### Additional Funding Charge

1. Additional Funding Charge = DRC - MFC + UCEA, where  
DRC = Deficit Reduction Contribution  
MFC = Minimum Funding Contribution  
UCEA = Unpredictable Contingent Event Amount

2. DRC = UOLA + UNLA, where

$$UOLA = (UOL_{1/1/89}) \div \ddot{a}_{\overline{18}|}$$

$$UOL_{1/1/89} = (CL_{1/1/88} - AVA_{1/1/88})(1+i) \\ = UCL_{1/1/88} (1+i), \text{ where}$$

AVA = Assets At Valuation

$$UNLA = (UNL_{1/1/88+n}) [30\% - 25\%(FCL\% - 35\%)]$$

$$UNL_{1/1/88+n} = UCL_{1/1/88+n} - O/S \text{ UOL}_{1/1/89} @ 1/1/88 = n,$$

disregarding UECL whether or not the event occurred.

O/S UOL = outstanding balance of  $UOL_{1/1/89}$

$$FCL\% = (AVA - CL) \times 100$$

3. MFC = (i) Sum of funding standard account charges for  
- initial unfunded liability  
- amendments  
- waivers  
- switch from ASA to FSA, minus  
(ii) Sum of credits for amendments.
4. UCEA = Greater of:  
(i) Adjusted Table % x UCEB, and  
(ii) UCEL  $\div \ddot{a}_{\overline{7}|}$ .

UCEB = Unpredictable Contingent Event Benefit

UCEL = Unpredictable Contingent Event Liabilities

Adjusted Table % = (100% - FCL%) x (% from table for 1989-2001 phase-in period).

### Deduction of Contributions to Fund Current Liabilities: 404(a)(1)(D)

- (1) Deductible limit cannot be less than amount equal to the unfunded current liability.
- (2) In this calculation the assets are not reduced by the credit balance.
- (3) The plan must have more than 100 participants.
- (4) For the purpose of (3) all defined benefit (DB) plans maintained by the same employer (or member of the employer's controlled group) are treated as one plan.

It is very likely no regulations will be issued prior to the appearance of the 1989 Schedule B, which will have two additional pages to accommodate the additional calculations for the FFL. If we are fortunate, there may be some notices on the issue.

## PANEL DISCUSSION

MR. MITCHELL: How do you amortize bases when you are using an aggregate method which, by definition, has no bases?

MS. TINO: In an aggregate method there are no bases. The only charge is a normal cost. But we have to amortize an unfunded old liability over an 18-year period. So you have to pay your normal costs and you have to pay your 18-year amortization which cannot exist in an aggregate method. This is a problem.

MR. PATRICK LANDRY: David, you went into a brief explanation about growing into early retirement benefits. If an early retirement benefit is not based upon employer consent, can you still grow into it?

MR. BROWN: Yes, the employer consent and deemed consent rule is the only part of the solvency valuation procedure that has changed as far as growing in is concerned. The "grow" in feature (30 and out is the classic case) will still be there and will still impose a fairly hefty funding requirement on those plans with that feature.

MR. LANDRY: With regard to the mandatory inflation protection, do these benefits have to be included in the solvency valuation calculations?

MR. BROWN: You're getting into new territory Pat. My answer, without any authority per se, is that because the solvency valuation is being done on a windup basis, any inflation protection adjustments that have been granted up to the date of the valuation would have to be included. But, in the same way you do not project any future salary increases, you would not project future inflation protection adjustments.

MR. MITCHELL: Earlier I asked the audience to consider working on a repeal of some of the obnoxious features of the U.S. OBRA. I assume many of us, and even the IRS people, would be delighted to have it simplified and rational. But what chance is there of getting those Congressional staff people convinced a change is needed?

FROM THE FLOOR: I do not know how you can succeed. You must be constructive and persuasive. The trouble may be that those senators and representatives who were active in ERISA's early stages have gone on to other things or fields. Furthermore, the pension area is the target to help reduce the deficit in the United States, and no one seems able to defend the other point of view.

MR. MITCHELL: We have now is an anomalous situation now. When economic times are good and an employer is able to and wants to make a large contribution, he cannot. When times are bad and the plan sponsor does not have the money to make a contribution, he must -- a most peculiar state of affairs.

David, you mentioned that the Pension Commission in Ontario set an informal limit of 8% as a ceiling on interest rates. Eight percent seems to be a magic number for governments (in the United States, it is used as a floor.) I wondered if you could explain how it developed.

MR. BROWN: Well, the way in which it's been operated is that the staff of the Commission, when they're reviewing valuation reports, can give automatic approval to anything that uses a rate of 8% or lower. If you want to use a higher rate, you have to make a case for it being a closed group, something special about the investments or some other justification for going higher than 8%. And there have been a few cases approved.

The rate was 7% for a while. Then a number of cases came along in the early 1980s where it was obviously way too low, and the Commission agreed. The word got around that they were agreeing to 8%, so that became the new ceiling; it's been there for quite a while.

The Commission now has an actuary on its staff for the first time. As a result, the whole operation of the guidelines and these ceilings is, I think, under review right now. The situation I'm describing goes back a few years and we're really not sure at the moment what might be approved and not approved. With the introduction of the solvency valuation requirement, they might be, perhaps, less rigid as to what they'll approve on the going-concern valuation.

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MR. STEPHEN L. BUSSEWITZ: I have a question about the 20% phase-in on the current liability. If we reduce the current liability for new participants by 20% for each year before they have five years of service, how do we make a contribution in the first year of the new plan? It seems to me that the current liability would be zero no matter what happens.

MR. ZEISLER: No. That phase-in only applies to the additional minimum, not to the current liability for determining the maximum.

MR. JOSEPH E. MORROW: Paulette, if your unfunded old liability is less than zero, in other words, if you are fully funded as of January 1, 1988, would you use zero for that amount?

MS. TINO: Yes.

