

RECORD OF SOCIETY OF ACTUARIES 1988 VOL. 14 NO. 1

PENSION ACCOUNTING STANDARDS IN NORTH AMERICA

Moderator: MARTIN J. ZIGLER
Panelists: MICHAEL L. BOLLIN
DARRYL E. LEACH
Recorder: HARRY S. SOO

- o Review of experience under new pension accounting standards in the United States and in Canada (i.e., FASB No. 87 and 88, CICA)
 - Case studies
 - Published guidelines
 - Actuarial assumptions
 - Implementation problems
 - Impact of standards

MR. MARTIN J. ZIGLER: I am with TPF&C in St. Louis. Mike Bollin is with Mercer, Meidinger, Hansen in Kansas City. Darryl Leach is with Actrex Partners, Ltd. of Toronto.

We do not want to rehash the provisions of the pension accounting standards; nor do we want to get into theoretical discussions about them, as actuaries like to do in many cases. Rather, we want to focus on the implementation issues. Now that these standards have been around a couple of years, we want to deal with real experiences and have some time, perhaps, for some of you to share some of yours.

Mike is going to give a brief overview and some comments about FAS 87 and 88; Darryl will offer some comments about the Canadian standards. Mike will then speak again, using some case studies of real practical issues that he has faced. Next, Darryl will do likewise for Canada, and then we will open it up for questions and comments. Before turning the session over to Mike, I am going to make just a few brief observations about FAS 87 and 88 and what their impact has been.

Going back historically, it was felt that there was too much latitude in reporting financial implications of pension plans. That's really the impetus for the new accounting standards. There was a concern that results were not comparable between companies and not consistent from period to period for a given company. There was also concern that there were significant pension-related obligations that were not being recognized. This culminated in the issuance of FAS 87 in the U.S.

The purported purposes as listed in the introduction to FAS 87 were fourfold: (1) to provide a better measure of net periodic pension costs; (2) to provide more comparable and understandable pension costs; (3) to provide disclosures for better understanding of the pension plan and its financial status; and (4) to provide improved reporting of the financial position. The big question is, Are these objectives being accomplished? I think, based on my own experience over

PANEL DISCUSSION

the last couple of years, it's not clear that they are. We'll be interested in some others' thoughts on these things.

What is clear is that these accounting standards have had a very significant impact in other areas; for example, the investment design and funding of the pension plans. We'll be going through some examples that help illustrate that point. One example of a client that I have been working with illustrates how pension expense can be managed to meet an organization's objectives and, also, how it influences other business decisions.

This is a company with 6,000 participants in a pension plan and sales of about \$1 billion. The company is one of the relatively few that actually adopted FAS 87 for its 1985 calendar fiscal year. It was a company whose overall results were not that good. We were monitoring the FASB activity, and the company had made a decision to move quickly if the standard were to be adopted by the end of 1985, as advertised. The standard was published on December 26, 1985, and the company's chief financial officer wanted to meet with me on December 28 to talk about it. In any event, they did adopt FAS 87 for 1985. The expense under the Accounting Principles Board (APB) 8 basis they had been using was about \$2 million. Under FAS 87 it was a negative \$2 million or a \$2 million income item. This had the impact of increasing the earnings per share from \$2.46 to \$2.66 -- an increase of 20 cents or 9%. That increase is after reflecting the deferred tax item.

For 1986, the results for this company again under FAS 87 was about a \$2 million income item. But then the company purchased annuities to settle quite a bit of its liabilities for all of the retirees and inactive participants -- which resulted in a settlement under FAS 88 and an additional income item of \$15 million.

In this case, on the issue of driving other decisions, the purchase of the annuities was not driven by an investment strategy. It was driven by the impact of the expense and capitalizing part of this unrecognized net asset. It had a net income item for the year of about \$17 million, which increased earnings per share \$0.92 -- from \$2.44 to \$3.36 -- an increase of 38%. The impact of managing the pension expense to affect earnings per share was rather dramatic. In 1986, fairly late in the year, this company also considered implementing (for some other reasons) an early retirement window program, but basically decided to put it off because of the impact on pension expense for the year under FAS 88. Again, another decision was driven by the pension expense.

In 1987, the FAS 87 expense was negative \$1.8 million. They did implement an early retirement window that resulted in an expense item of \$8.8 million; and then, to offset that expense, decided on another annuity purchase for all the retirees that had retired since the last one, as well as those who retired under the window program. Coincidentally, that resulted in an income item of about \$7 million. When you net those three numbers, the result is about a zero impact for the year on pension expense. The point is that this is a situation where an organization is managing its pension expense, the impact of which is driving other decisions.

Going back to those purported purposes of FAS 87, is expense being measured better? Is it more comparable? With the impact that pension expense has on the bottom line and on earnings per share, more and more companies are realizing

PENSION ACCOUNTING STANDARDS IN NORTH AMERICA

that they need to manage the pension plan as much as any other strategic business unit because of the impact on results.

Another illustration of the impact of the standards is some survey data from the Fortune 100 companies, which again illustrates the impact of FAS 87. In 1986, of 62 Fortune 100 companies, 25 actually had pension income items. Only four (and for the size of these companies, it's not that significant an amount) had a pension expense of over \$100 million. Although 25 had pension income, there were also a significant number that had a very low pension expense.

From that same survey, if you look at the kind of assumptions that were used, the beginning-of-the-year discount rates range from 8% to 11%. And although there are some differences in those measurement dates, what this illustrates is that organizations are using discount rates to try to manage the pension expense. Given the criteria for the discount rate, it would be hard to justify that kind of range. At the end of year, the range was 7% to 9.6%, with an average of 8.4%. To summarize, FAS 87 and 88 may not be meeting the purported objectives when you look at these kinds of situations. And it may or may not be an improvement over APB 8.

It is clear that there is still significant flexibility in managing the expense, at least for well-funded plans. One clear result is that the accounting treatment is driving decisions in other areas. For example, it's driving the investment strategy. Organizations typically want to avoid short-term fluctuation. They're willing to sacrifice yield for stability. In some cases, the annuities purchased capitalized some of the unrecognized net asset, without regard to whether or not it's an appropriate investment decision. The standards are driving plan designs. Improvements are discouraged since the cost may be recognized much more rapidly and there could be a balance sheet impact. The expense is driving plan funding. Many organizations, because of the accounting method, have changed their funding method appropriately or inappropriately. And finally, the expense is also influencing certain business and human resource strategies: whether or not to implement an early retirement window program, things like plant closings or downsizing that may result in curtailments and the impact on that, and acquisitions with the kind of treatment that's required under FAS 87 when an organization is acquired. So again, you have accounting, good or bad, driving decisions in all these areas. So, with this being said, Mike Bollin will provide an overview of the U. S. standards.

MR. MICHAEL L. BOLLIN: I think we may have already heard the overview. I was not an actuary who participated in committees over the 10 or so years of the gestation of FAS 87 and 88. I don't have special ties to Connecticut any more than most of you that give me knowledge beyond everyone else. I am an actuary who has had to work the last couple of years with clients trying to figure out the standards and apply them in a logical, reasonable, sensible way, and I want to talk a little bit about some of the issues that I've seen. We're not going to talk about the specifics in calculating the pension expense or those kinds of things. We are assuming that you know many of the mechanics. We'll talk a bit about pension expense and disclosure and then move on to the Canadian scene with Darryl Leach.

We can't talk about pension accounting without having some discussion about assumptions. Paragraph 43 of the statement requires that "each significant assumption used shall reflect the best estimate solely with respect to that individual assumption." Now I believe that it's the management of the plan

PANEL DISCUSSION

sponsor's responsibility to choose assumptions, but in practice I find that the action seems to fall more on my shoulders. Before the Omnibus Budget Reconciliation Act (OBRA) 87, the standard for pension accounting was notably different than the standard for ERISA. Now, with OBRA 87, we have some new words and some new standards; they seem to be much more like the accounting standards and guidelines. And that is a little disconcerting to me. Before, I always felt somewhat comforted by the fact that the two standards were different and if I wanted to choose different assumptions for funding than were chosen for accounting, at least I had a basis for that. The differences are not as marked now, and it makes me a little bit uncomfortable. I don't know exactly where we're going to end up on that issue.

The statement requires the disclosure of three of the assumptions: the discount rate, the long-term rate of return and the salary increase assumption. It also provides guidance about the choice of the discount rate and the long-term rate of return.

The discount rate must approximate the rate at which the liabilities could be settled in the marketplace by the purchase of annuities. There seems to be an attempt to find a standard that is outside of judgment of either the plan sponsor or the actuary. However, since the pricing of an annuity is generally considered a trade secret by competitive companies in the marketplace, we can not specifically calculate or look up a discount rate. If we do place annuities out for bid, we have annuity bids; we use that information, and that's definitive. Actuaries with large consulting firms will have access to information derived from the placement of group annuity contracts on an ongoing basis. All actuaries have access to the PBGC assumptions that are released each month and the yield from 30-year Treasury bonds. Unfortunately, there are problems with any of these items. PBGC assumptions are, as we know, more conservative than rates reflecting annuity quotes from insurance companies. Furthermore, the rates are issued prospectively and frequently understate the changes in annuity rates. The use of 30-year government bonds is probably also on the conservative side. Corporate debt securities, in which insurance companies invest annuity reserves, should have a yield above government securities. On the plus side, this information is easy to obtain, and gives an up-to-date reflection of the particular sector of the marketplace. Using interest rates quoted by insurance companies in proposals for the purchase of annuities may cause one to choose too great a discount rate.

The mortality assumptions used by insurance companies are frequently much more conservative than the mortality tables used by pension actuaries. Insurance companies also make profit margin charges as part of being a business. Therefore, we frequently find that a 9.5% stated interest rate by a carrier may yield an annuity quote that's similar to using an 8.5% interest rate along with the plan's other assumptions for mortality and retirement. The plan may have design features that would affect the amount that would be quoted by an insurance carrier. In particular, the payment of large lump sums from a plan can decrease the interest rate assumed by carriers and can increase the premium charge for annuities. On the other hand, factors like enhanced early retirement benefits should already be reflected in the retirement assumption used by the actuary and should not impact the discount rate.

Choosing the long-term rate of return is not any less difficult. The statement says it shall reflect the average rate of earnings expected on the funds invested or it is to be invested to provide for the benefits included in the projected

PENSION ACCOUNTING STANDARDS IN NORTH AMERICA

benefit obligations. There's some question about what this period should be -- whether it's a medium-term period or a long-term period. My feelings are that it was intended to be a long-term rate. We therefore need to reflect the return on current assets and future contributions over a period of many years. Now, in some cases you may have assets that exceed the Projected Benefit Obligation (PBO), so maybe it doesn't reflect future contributions. The standard would seem to be the same as that used for choosing an interest rate for purposes in ERISA valuation. And in talking with some actuaries, I find that they do choose a long-term rate equal to their funding rate in most cases, and have funding rates that are higher than mine, for example.

The method for amortizing amounts is substantially different under the statement as compared to ERISA. This provides a source of discrepancy between the ERISA valuations and pension accounting. The method prescribed by the statement for amortization of prior service cost is rather complex. Therefore, for plans where there will be frequent increments of prior service cost, choosing a simplified method of amortizing the prior service amounts is probably a good investment, even though this generally results in a somewhat more rapid amortization of the prior service cost, and an increase in pension expense. A plan such as this might be an hourly plan that has a multitude of bargaining units in it, so that each year it has one or more increments of prior service cost. The requirement to amortize amounts over the expected future lifetime for plans with all inactive participants can yield unexpected results. I was working on a plan with only retirees and survivors. For this plan the amortization period for the losses the plan experienced was longer than the period over which benefits were expected to be paid. This was because many of the benefits were not payable for the lifetime of the recipients. This was somewhat surprising to me, given the goals of the statement.

Looking at assets, the statement allows the use of market-related value of assets to calculate the expected return on assets and to calculate the amount of the gain or loss subject to amortization. This was an apparent compromise by the Board to help dampen the volatility of pension expense. Although the use of market-related value of assets has shortcomings, I feel it can be a useful tool. In talking with other actuaries, however, I sense that a majority use fair value for pension expense. The argument against the use of market-related value would go as follows.

Discount rates are a function of general interest rates. As interest rates decline, discount rates decline. The use of lower discount rates increases the service cost and the PBO, tending to increase pension expense. The lower interest rates also increase the value of both fixed income and equity securities held in the trust. The increase in the asset value will help offset the increase in pension expense. So the dampening of such increase by the use of a market-related value of assets is undesirable. All of this assumes a fairly perfect scenario. In response, I would point out that most portfolios are not structured so that the change in fair value of assets is in proportion to the change in PBO with a given change in the discount rate. In addition, the value of equities can change without a change in underlying interest rates. The October crash was not based on an increase in interest rates. In such instances, the use of a market-related value for assets can reduce the change in the expected investment return component of pension expense from year to year. Furthermore, the use of market-related value will reduce the volatility in pension expense caused by amortizing fluctuation in investment return.

PANEL DISCUSSION

In my opinion, the use of a market-related value of assets can influence the choice of a long-term rate of return. If the market-related value of assets is significantly less than the fair value, as frequently is the case now, the rate of return on market-related value of assets might well be considered to be greater than the rate of return on fair value of assets. The plan sponsor is allowed to use a measurement date up to 90 days before the date of the financial statement. When this is done, pension expense is measured from measurement date to measurement date -- not over the fiscal year of the employer. In some circumstances, the measurement date can simplify application of FAS 87.

For example, consider a plan sponsor with a fiscal year end of September 30. The pension plan has a plan year ending June 30, and valuations have been done as of July 1 each year. Using a measurement date of June 30 will eliminate the need to obtain trust data at September 30 and will allow the employee data from the valuation to be used to calculate the PBO and Accumulated Benefit Obligation (ABO) directly. In this situation, the June 30 measurement date has clear advantages. However, the use of a measurement date can have disadvantages. It can add complexity. Employer contributions made between the measurement date and the date of the financial statement must be included in the assets, and the accrued or prepaid pension costs must be as of the financial statement date.

Plan sponsors have some problems with aspects of the new rules. First, volatility of pension expense is a concern. A major responsibility of financial managers is to control the change in expense for the company from year to year, especially increases in expense. The volatility in pension expense which is due to reasons outside the control of the company can be frustrating. Budgeting for pension expense can become difficult and it may be impossible to do much in advance of the fiscal year. In some cases the use of a measurement date can help the budgeting process, since it can allow the company to know its expense before the beginning of the fiscal year. The pension expense can bear little relationship to the funding requirements for the plan. Normally, this has given plan sponsors more freedom in funding decisions. However, some plan sponsors have difficulty with variations between funding and pension expense over time. For example, cooperatives pay dividends to members each year based on specific guidelines and tax codes. A cooperative that is contributing more to its pension plan than is shown as expense could appear to its members to be making and retaining money which should be paid to its members in dividends. To avoid problems due to members' perceptions, I have found the pressure is on to keep funding and expense closely related.

Even with all the materials and guidance provided by the Board on FAS 87 and 88, questions frequently arise on how to perform the calculations in a particular situation. Although FAS 87 and 88 are accounting guidelines, I find that accountants are typically not good sources for resolving detailed questions. I find that the more efficient approach is generally to use one's best understanding of the statements in performing a calculation and then present it to the auditor for a review. I think that pension actuaries in the U.S. have become accustomed to applying regulations to the letter, following the strict form of a transaction. These habits need to be modified when dealing with accounting treatment of events. The accounting statements tend to look at the substance of events in determining the accounting treatment for the events. We will look at an illustration at this point, and, if you read through the guidelines, I think you will constantly be finding that the questions try to bring us back to the substance of events rather than small deviations being reflected differently.

PENSION ACCOUNTING STANDARDS IN NORTH AMERICA

In terms of disclosure, we know that the footnote has grown substantially under FAS 87. Some of the additional requirements include the disclosure of certain assumptions, the components of pension expense and the funded status of the plan. Disclosure of the components of pension expense includes actual investment return for the year. Where there is a question about the detail of the calculations of the investment return, the nod seems to go toward showing the greatest possible value. For example, the actual investment return may not be net of investment expenses. The development of the funded status of the plan is relatively straightforward. However, the time pressures can make this a challenging task. Assumptions must be set as of the measuring date, and in most cases, either additional computer runs performed or manual adjustments made to determine liabilities at the new discount rate.

If the measurement date is prior to the financial statement date, employer contributions to the plan between the measurement date and the financial statement date must be known. Some asset managers have difficulties quickly preparing necessary financial statements on the investments. The bottom line is that the actuary must have the cooperation and the commitment of a number of parties in order to complete the disclosure on time. Adequate planning is a necessity in some cases. The potential problems increase geometrically when the sponsoring employer is highly decentralized, with numerous pension plans and multiple actuarial firms. In this case the actuary for the parent should write a letter defining all aspects of the calculation of the FAS 87 information -- including assumptions, calculation of market-related values that are applicable to measurement date, and any other special calculation procedures chosen by the parent company. The timing for receipt of the results by the company and the time and means for disseminating the new assumptions for each measurement date should be defined.

Finally, define the form in which the information should be provided which might include certain statements from the actuary that the information has been compiled according to the procedure established by FAS 87 and 88. We talked about the balance sheet impact; we know that we can have an additional liability booked to the balance sheet and, in some cases, a reduction in shareholder equity. And that's attracted the attention of Chief Financial Officers (CFOs). Frequently, this affects investment decisions of plan sponsors of poorly funded plans or hourly plans with little surplus. In doing so, it might be said that a short-term problem is being solved in a way that impedes the accumulation of wealth in these plans by giving up return. If so, the companies will be faced with higher cost in the future or participants will be faced with lower benefits, depending upon the relative strength of the two parties at the negotiating table.

Another approach to the balance sheet problem is to merge poorly funded plans with well-funded plans. Where one of the plans is negotiated, terms of the bargaining agreement may limit the plan sponsor's ability to take these actions without negotiation. If negotiations are required, it is reasonable to assume that there will be some cost to the company. The merger of these plans may make the future sale of a division more complicated. If the seller wants assets of the plan to follow the employees, a spinoff would be required -- with its cost complexity and opportunity for litigation. Even if cash is available, additional funding may not be a desirable solution. There is no reduction in the minimum liability by prepayment until the assets exceed the ABO. The limits on the deductible contributions and the excise tax on contributions in excess of the deductible amount may discourage the level of advanced funding necessary to solve the problem. This potential balance sheet liability has also caused some

PANEL DISCUSSION

plan sponsors to negotiate only future service increases in benefits. This tends to negate one of the advantages of a defined benefit plan -- the ability to recognize past service.

In summary, one of the purposes of the accounting information is as a tool to managers to run a business. When viewing FAS 87 and 88 as management tools, it seems the information provided can be misleading. There's enough latitude and judgment that comparability between companies is still far from perfect. And settlements may be the hot management-by-objective technique, albeit an unrecognized one. Managements may have been paid bonuses due to the results in the new pension accounting standards that weren't necessarily justified on operation. Personally, I have enjoyed the challenge in learning the new rules and consulting with clients about their impact on businesses. I feel that the statements FAS 87 and 88 have increased the visibility of pension accounting to the CFO and as a result have increased the visibility of the actuary. At this time I would like to turn to Darryl Leach for a look at pension accounting standards in Canada.

MR. DARRYL E. LEACH: Marty and Mike have both said Canadian actuaries tend to have a greater familiarity with FAS 87 and 88 requirements than do American actuaries with the CICA requirements. We are frequently involved in doing pension expense calculations for subsidiaries of American companies where we have to decide whether to do it on the FASB basis and see if that will satisfy CICA as well, or whether we end up with two sets of pension expenses -- one for the Canadian auditors and the second for the U.S. auditors. As said earlier, the purpose of this session is not to go back over all the details of how the various pension expenses are calculated, so what I'm going to do is go through a few examples and just point out the areas where there are differences between the FASB and the CICA requirements.

Now the objectives of both, as Marty's already stated, are identical. The problems that existed were that the reported pension costs for companies were not consistent from period to period, nor were they comparable from one company to another. And there were significant pension-related obligations and assets not recognized in financial statements. Finally, there was inadequate disclosure. Now as Marty has indicated, the objectives of the rules for both CICA and FASB are to get greater comparability period to period, from company to company and to provide increased disclosure. One thing Marty did not mention was that the underlying principle in both cases is accrual accounting -- not cash accounting; but that's not terribly important for this discussion. FASB requirements have already been covered by Mike and Marty.

One point that we talked about in Canada was the difference in the selection of assumptions. The CICA handbook clearly states that it is management's best estimate. As I understand it, there is nothing in the FASB document itself that specifies whose assumptions they are. The American Academy's document that describes how to interpret it states that they should be management's best assumptions. They obviously should be. But there seems to be less pressure in the United States on the auditor to make sure it is management's best estimate and to confirm, in fact, that the actuary has agreed that they're acceptable estimates.

As a background on CICA's previous requirements, the companies in Canada simply expensed what they funded -- one set of calculations. There are absolutely no guidelines concerning actuarial assumptions or methods, and no

PENSION ACCOUNTING STANDARDS IN NORTH AMERICA

disclosure requirements. Current requirements are similar to FASB. Separate calculation of the pension expense is required. The projected accrued benefit valuation method, prorated on service, must be used but is stated slightly different from FASB. But we will go into that later. As I stated, the actual assumptions must be management's best estimate. Assumptions must be reasonable on their own and internally consistent. Assumptions are to be long-term and, as Mike mentioned, there is some suggestion that the asset rate for FASB is a somewhat shorter term rate than the asset rate that we use for CICA. We'll come back to that later.

A fairly significant difference between CICA and FASB is that in CICA, it is simply a set of principles and guidelines. The interpretation and the application is left largely to the employer. FASB is much more specific and has rules and procedures to cover most situations. As a consequence of that, it's much more likely that the FASB assumptions and methods would satisfy the CICA requirements than vice-versa. In other words, if we are doing a valuation for the U.S. subsidiary, we're more likely to look at what management in the U.S. might be using there and see if those results will be acceptable under CICA; and, if there are any differences, we would see whether or not those differences would be material.

As I said on the methods, where CICA uses Projected Accrued Benefit method prorated on service, FASB uses Projected Accrued Benefit method prorated over the period to which the benefit accrues. In most cases those periods would be the same. An example of a difference would be a benefit accruing over a 25 year period, that is, with a maximum limit of 25 years of service. If an individual is going to have 35 years of service under the CICA guidelines you would expense 25/35 of the benefit per year. Under FASB, you would do it over a 25-year period rather than over 35 years.

Relative to the assumption side, both CICA and FASB are best estimate assumptions and both would be management's best estimates, although CICA is clearer on that requirement. FASB has two interest rates. There is the discount rate, which is a current conditions rate for the liability side, and the asset rate, which is based on rates expected on current investments, current year contributions and the reinvestment of those contributions. And that's why I said earlier that there is some question about whether that is a long-term rate in the sense that the CICA rate is, or whether it is more of a medium-term rate. Currently, my colleagues and I are treating it as more of a medium-term rate. Obviously, the asset return rate can differ from the discount rate. Under management's best estimate assumptions, there is a single asset return rate. There is no discount rate used under the CICA guidelines.

One of the objectives of the new rules is increased disclosure. Under CICA, all that is required to be disclosed is the value of the accrued benefits and the value of the assets. And that can either be a market value of the assets or it can be the market-related value, provided that the adjustment to market is done over a period that does not exceed five years. What is considered desirable in Canada is to also disclose pension expense, the amount of any deferred charge or accrual for pension cost, the asset valuation basis, the salary and interest rate assumptions and the methods and periods of amortization plus the plan description, the data-related accounting valuation and the nature and effect of significant matters affecting comparability.

PANEL DISCUSSION

Those of you familiar with FASB will recognize most of the desirable Canadian disclosure requirements as being mandatory under FASB, and there are also more details required in terms of the individual components of the disclosure. In terms of amortization periods, there are some differences between Canada and the United States as well. The transition asset or obligation under CICA is normally amortized over what I refer to as an EARSL which is the Expected Average Remaining Service Lifetime of the active employees. That term would be very similar under FASB but not necessarily identical. Under FASB, as you know, it can be amortized on a straight line basis over the EARSL or over fifteen years, if that's a greater period. Gains and losses under CICA, again not specific but vague, normally will be amortized over the Expected Average Remaining Service Lifetime. FASB has a 10% corridor, the excess of which is amortized over that same period. But accelerated amortization is permitted. Again, plan amendments under CICA are normally amortized over the EARSL and under FASB are amortized over the same period; but the amortization method is specified. Again, CICA and FASB settlement and curtailments are essentially the same: gains and losses are recognized in income immediately.

Now for a quick overview. In Canada, because of the flexibility in selecting the assumptions, which is greater than it is in the United States, (in particular, the fact that you do not have to use a discount rate for the liabilities) I think there is less of the accounting numbers driving plan design investment decisions than there is in the United States. The pension expenses are being managed to the same extent, but there is sufficient flexibility for many of the clients I've seen to come up with a pension expense number that looks very much like what they're funding, rather than let their accounting expenses drive the assumptions in the purchase of annuities and so on. Other observations I have made are in terms of the objectives. Have they been achieved in terms of comparability? Perhaps in Canada, because the discount rate isn't there, there's less volatility, and you get greater comparability within an organization from period to period. But from my experience, there is virtually no comparability from one organization to another organization because they don't pick out their best estimate assumptions and live with the result. They actually want to see a range of results, then pick the one they think best suits their purposes. After Mike shows his examples of FASB, I'll deal with a couple of them for CICA purposes.

MR. BOLLIN: I'd like to take the opportunity to go through some fairly simple case studies and review a number of aspects of the new accounting statements. The first is the same kind of situation that Marty had. For fiscal 1987 the pension expense under APB 8 was \$985,000 for this client. For fiscal 1988 pension expense under FAS 87 is \$380,000. For 1987 we are using 30-year funding. Our amortization period for the transition asset is, in this case, 15 years. We have a 9% discount rate, 9% long-term rate of return, and in calculating this pension expense we've used a little bit higher salary scale assumption than we used in the prior year. It drops by 2/3. The range of reasonable alternatives for 1988 that were presented to the client (in some cases a 9.5% discount rate, 9.5% long-term rate of return) went from the \$380,000 that they chose as representing their best estimate down to \$240,000 in income. I think in terms of the differences between the 1987/1988 pension expense, that we used market fair value in calculating the transition asset. This happened to be just before or just about at the peak of the market in 1987, so we had tremendous gains that were reflected and amortized and reduced pension expense. In addition, some of the pension credit numbers would be generated from using that fair value in the calculation of the expected returns on assets. We actually used

PENSION ACCOUNTING STANDARDS IN NORTH AMERICA

the market-related value in the calculation of pension expense. So, there's a lot of variability even with reasonable procedures.

We almost always have to deal with projections, as has been my experience. Let's take a very simple situation and maybe a slightly more complex one. We have a January 1 valuation date, a December 31 fiscal year-end, and we've chosen a December 31 measurement date. For fiscal 1987 we do a January 1, 1987, valuation run using assumptions for FAS 87 as of 12-31-86. For the asset data as of 12-31-86, we know our pension accruals from the client, and we calculate the pension expense. It is fairly straightforward. Now we get to the end of the year, 12-31-87. We take our 1-1-87 valuation run, we make a 1-1-87 valuation run using assumptions for FAS 87 as of 12-31-87. Now for benefits: In this case, we need to reflect whatever benefits are in place 12-31-87. I then project the results to 12-31-87 using standard actuarial calculations that accrued liability plus normal cost, plus interest less benefit payments, yield an accrued liability at a later date. Take the asset data as of 12-31-87 and determine the funded status. Now in this particular calculation, we'll have a gain or loss and that won't be the gain or loss that we have in our pension expense for 1988, because in this case, for 1988, we'll collect our data as of January 1, 1988, run a valuation using the assumptions from the prior disclosure, determine the long-term rate of return, and then we calculate the pension expense. Typically, when I communicate the year-end disclosure values at 12-31-87, I do not state a long-term rate of return as of 12-31-87 because, in my opinion, it hasn't been chosen yet. Here we'll pick up the gain or loss from the demographics that was not reflected in the funded status disclosure that we did 12-31-87.

Looking at a slightly different situation, we have a January 1 valuation date, an August 31 fiscal year-end, and a May 31 measurement date. Pension expense for fiscal 1988: We run our January 1, 1987 valuation using assumptions for FAS 87 as of 5-31-87. Again, benefits should be based on 5-31-87. And when I say 5-31-87, that would include any negotiated increases or future changes. Project the 1-1-87 results to 5-31-87. We have asset data as of 5-31-87 and pension accruals as of our fiscal year-end date, 8-31-87, and we calculate pension expense. Now we get around to disclosure as of 8-31-88, and in this case, we have to collect our 1988 data and get our valuation ready to go because we're going to use our 1-1-88 valuation and run it using the assumptions as of 5-31-88. Project those 1-1-88 results to 5-31-88, get our asset data, and determine our funded status. We have to include the contributions from 5-31-88 to 8-31-88 and use an accrued or prepaid expense as of the 8-31-88 date. So it's fairly straightforward. In this case we don't have to redo anything to get our pension expense for 1989. We already have our liabilities from our previous valuation, we determined our long-term rate of return, and we know our accruals when we calculate our pension expense. In a sense, this seems like a slightly slicker, neater package.

I'd like to look at a different situation -- a business combination for an underfunded plan. We'll look quickly at an underfunded and an overfunded plan and see what happens. The facts are: We have a PBO of \$200, assets of \$100, a 10% long-term rate of return and discount rate. Service cost at the beginning of the year is \$30, and our unrecognized transition obligation at this point is \$105. It's being amortized at \$7 per year, and our accumulated gain is \$5. With those facts, we calculate net periodic pension cost. We see that without the combination we have \$50 as our net periodic pension cost for this particular year. If the combination occurs at the beginning of the year and we have to calculate pension expense reflecting that business combination, then we'll have a lower

PANEL DISCUSSION

pension expense. At the same time, we will have recognized on the balance sheet at combination a liability of the PBO less assets, or \$100. So, the business combination in this case, for the underfunded plan, means that our balance sheet is worse off but our pension expense is less in the future.

To compare, let's look at an overfunded plan where the assets are now \$300. We add an unrecognized transition asset of \$105 being amortized at \$7 per year and we have an accumulated loss in this case of \$5. Before our combination, we have a net periodic pension cost of \$16. After the combination or if this combination were to occur at the beginning of the year, we'd have a net periodic pension cost of \$23. At the same time, we also have an asset on the balance sheet of \$100. For the overfunded plan, our balance sheet gets stronger by the combination and our expense is greater, so this does mean that there are some extra steps to go through if you work with organizations that make a lot of acquisitions or divestitures.

Let's look at a settlement for just a minute. It's a fairly simple calculation, but one of the issues here is that the results don't always make sense, at least not to me. The PBO prior to settlement in this case is \$150 million. The assets are \$200 million, and we have an unrecognized net asset of \$30 million and an unrecognized net gain of \$20 million. The plan sponsor requests a bid for purchase of annuities for all retirees. Three bids for premiums of \$49.5, \$50 and \$50.5 million are received. The question is, what is the gain reflected in the income statement based on the alternative bids received? In calculating these alternatives, since we are settling the retirees, the PBO for the retirees becomes the cost for the annuity. So one alternative is it's \$49.5 million, another alternative is it's \$50 million and a final alternative is it's \$50.5 million. Going through the calculations, this changes our gain and in the first alternative we have the maximum gain, naturally, of \$20.5 million unrecognized gain, for a total of \$50.5 million when combined with the assets. The second alternative is still \$50 million. The third alternative has dropped to \$49.5 million. Now a portion of the PBO changes a little bit between the alternatives. The gain from the settlement becomes \$16.72 million on the first alternative and in the worst alternative, \$16.61 million. The difference here is about \$100,000 or \$110,000 even though we have a million dollars difference in the gain and we're settling a third of the liability. The mechanics here are that since we get a better deal on our annuity on the first alternative, we're settling a smaller portion of the PBO, and we only get to reflect a smaller portion of the gain. The mathematics are all correct and fairly simple and straightforward, but the result just doesn't seem logical.

I'd like to illustrate a case with a termination restart. We buy annuities to settle all of the \$100 million dollar ABO. We get a reversion from the termination of \$50 million. The PBO is still \$150 million. Before settlement, we have a total gain of \$50 million, which is the unrecognized asset and the unrecognized gain. The portion of the PBO settled is two-thirds, and so our gain from settlement is \$33.3 million, even though we get back \$50 million. The other amounts are in the amortization of the transition asset. Even though the new plan starts out with assets equal to zero, we have a transition asset that's still being amortized and is reducing future pension expense.

Briefly, another case has to do with a settlement situation. If you've read the implementation guidelines for FAS 88, you'll find a similar example to this. The plan sponsor complied with FAS 87 in 1986. The salaried and hourly pension plans were terminated June 30, 1986, and liabilities were settled by purchase of

PENSION ACCOUNTING STANDARDS IN NORTH AMERICA

annuities. Then the salaried and hourly employees entered a newly formed career average pension plan on July 1, 1986, that provided less benefits than the terminated plans. I was called for some help and guidance on this particular situation. I was informed about the termination and the settlement. The person walked through their accounting treatment and then afterwards wondered how they should handle the new plan. This was way before the guidelines had come out on FAS 88. But I think this is an example of how our habits in terms of dealing with maximum deductibles or funding standard accounts, etc., typically go in a very strict order, almost step-wise in some cases, and the accounting rules are a little different. We have to back up. The fact that there are different plans here has absolutely no relevance. This is just a settlement, there is no curtailment; and, in fact, we have a plan with a plan amendment that generates a negative prior service cost and has to be accounted for in that manner.

Here is another example of some of the kinds of things that you can bump into. In this fact situation, only executives named by the company are eligible for this plan. The benefit is 15% of pay at retirement, no accrual. There's no stated vesting schedule, but benefits are available upon retirement at ages 55 or greater. This is obviously an executive supplemental plan, and what happens is, for the most part, the participants in it are ages 55 or greater. The end result is that we end up with no service cost and large liabilities, due to the special requirement that if there is no accrual under the plan, it's considered to accrue by the first date that it's vested or can be received. So, this is again an unusual kind of a situation. Our regular actuarial mathematics would handle a situation like this easily in terms of an entry age normal, or aggregate, or whatever funding method, but the rules are different in accounting.

MR. LEACH: Briefly, on the issues, in terms of the comparability, I said before that I don't believe FASB and CICA have achieved any comparability from organization to organization. FASB on the disclosure side will definitely have greater disclosure. Under CICA, all you have to disclose is the value of the assets and the value of accrued benefits without mentioning the assumptions. On the selection of assumptions for CICA and FASB, I've said that the tendency in Canada, I believe, is to select assumptions so you can do one valuation for accounting expense that will satisfy the American parent and Canadian auditors. Negotiated plans are still an issue. Again, this is an area where under CICA they talk about amortization of benefit improvements being done over the Expected Average Remaining Service Lifetime of the group but they suggest that for a flat benefit plan which is negotiated with the union, it might be appropriate to amortize it over the life of the contract. So there are a number of companies that will decide that the economic value of the benefit improvement actually accrues over the EARSL. Others might decide to expense it over the life of the contract, and still others might decide to go somewhere between those two sets of numbers. So again, that does not help the comparability issue very much.

In career average plans some actuaries are projecting the earnings up to retirement, prorating the total cost of the benefit over the working career, and subtracting off the current year employee contributions. Others are projecting both earnings and contributions to retirement, figuring out the net benefit paid for by the employer, and then bringing that back and prorating it over the years of service. Volatility is a bigger issue in the U.S. because of the fluctuations in the discount rate.

PANEL DISCUSSION

On the issue of materiality, one of my clients recently called to say his auditor had asked him whether their pension contribution for the last fiscal year was all current service or included a past service component. I reminded him that he had a fairly healthy surplus and he was using that to reduce current service contributions. I suggested that his auditor probably wanted to know what the CICA results would look like. He said he didn't, because the auditor had already decided the result would not be material. And I said, "Wait a minute, what do you expect your bottom line to be this year?" He gave me the number, and I said, "Do you realize your funding amount is 20% of that bottom line? And that if you turned around and did a CICA number, you wouldn't have a pension expense? You'd probably have pension income which might be 30%-40% of that bottom line." I said, "Do you want me to do an approximation to confirm that what I suspect to be the case is in fact true?" He said he didn't want to know the result. It was just that the auditor didn't think it was material and so he wasn't going to bother with it even though it was, in fact, very material.

Qualification of results is a bit of an issue as well, given that the assumptions are management's best estimates. If management says, "Here are my estimates, give me a number," I know of some actuaries who will just say, "Here, your assumptions are detailed in Appendix A to the document, and here's the result." They do this without any qualification of saying that they think 30% interest and 2% salary may not be appropriate. It states quite clearly in the CICA handbook that the auditors are expected to discuss the assumptions with the actuary to confirm that he finds them reasonable, even though they are ultimately management's responsibility.

Marty and Mike both made the comment that there's a lot of things about FAS 87 and 88 that are driving other decisions in the United States. I don't think CICA does it to the same extent in Canada, although there is some tendency to make sure you have one set of answers for funding and expensing. And to that extent, there is some less conservative funding taking place.

Two other comments that come to mind that I should have made earlier refer to the change in cost method for funding purposes in the United States. To those of you who aren't aware the unit credit or projected unit credit method is far more common in Canada and has been, even without the accounting requirements. Not many organizations are forced to change their actuarial cost method for funding purposes in order to comply with the one they're using for expensing. Second, with regard to the amortization periods, which are now shorter in the United States, they are in fact the same, if not longer, for most Canadian plans, because pension laws in Canada usually had things being amortized over a period of no more than 15 years and the EARSL. Most of the ones I've looked at have tended to be in the 15- to 20-year range, and they've in fact liberalized the funding a bit from an expensing standpoint.

One example I have is an actual client of mine, a subsidiary of a U.S. company. Table 1 illustrates what I think is happening in terms of comparability and other things.

The numbers in Table 1 are the results of a valuation done for funding purposes. That one was done first. The interest rate is at 7.5%, salary is at 6.5%, retirement age is 63. We had a funding deficiency of \$754,000 and current service funding requirements of \$1.2 million. The amortization of the unfunded is at \$1.3 million. They were aware of the fact that they had to make expense calculations for the American parent and for CICA purposes.

PENSION ACCOUNTING STANDARDS IN NORTH AMERICA

TABLE 1

Actuarial Valuation Results

Assumptions:	Interest Rate	7.5%
	Salary Increases	6.5%
	Retirement Age	63
Results:	Assets	\$25,446,000
	Accrued Liability	26,200,000
	Funding Deficiency	754,000
	Amortization Payment	80,000
	Current Service Funding Requirement	1,250,000
		(3.8% of payroll)
	Total Contribution Requirement	\$ 1,330,000

So we discussed with them the assumptions shown in Table 2. The return on assets, as I said earlier on our interpretation of FASB versus CICA, is that CICA is somewhat longer term than FASB. So we used a 1% differential there for illustrative purposes. We had a discount rate of 9.75% for 15 years and 6% thereafter. That's essentially the same as a level rate of about 8.5%.

TABLE 2

CICA/FASB Results

Assumptions:	Return on Assets:	CICA - 8.50%
		FASB - 9.50%
	Discount Rate:	CICA - 8.50%
		FASB - 9.75% for 15 years
		6.00% thereafter
	Salary Scale:	CICA - 5.50%
		FASB - 5.50%
	Mortality - GAM '83	
	Terminations - Ontario Heavy	
	Revenue Canada	
	Maximum - assumed to increase	
	by 4.50% from 1995	
	Retirement Age - 63	

For CICA we used 8.5%, and a salary scale of 5.5%. Given those sets of assumptions, we came up with a CICA pension expense number of \$710,000 and a FASB number of \$450,000. Part of that decrease is the interest on the asset; and the largest part of that is, you'll notice, on the liabilities. Although we had a discount rate of 9.75% for 15 years and 6% thereafter, which we said was equivalent to about 8.5%, we just applied the 8.5% for the purpose of this illustration. Had we used the 9.75% rate at that point, we would have \$742,000 as the FASB expense.

PANEL DISCUSSION

This particular client thought those numbers were very interesting, so I said, "What kind of assumptions should be your best estimate assumptions?" After some discussion they asked for a matrix. They said they'd like to see the results for interest rates of 7.5%, 8%, 8.5%, 9%, and salary scales of 5.5%, 6%, 6.5% and 7% and see what they do. What those numbers show on this table (see Table 3), are the actuarial liabilities and the surplus. At 9% interest and 5.5% salary scale, they've got \$22.2 million in liabilities and \$3.3 million of surplus. Whereas, at 7.5% interest with a 7% salary scale, they have close to \$30.7 million in liabilities and \$5.3 million of unfunded liability -- a huge difference.

TABLE 3

Liability and Surplus (Deficit)
(000's)

<u>Interest Rate</u>	<u>Salary Scale</u>			
	<u>5.5%</u>	<u>6.0%</u>	<u>6.5%</u>	<u>7.0%</u>
7.5%	\$27,200 (1,754)	\$28,300 (2,854)	\$29,400 (3,954)	\$30,700 (5,254)
8.0%	25,300 146	26,300 (854)	27,300 (1,854)	28,400 (2,954)
8.5%	23,600 1,846	24,500 946	25,400 46	26,250 (904)
9.0%	22,150 3,296	22,900 2,546	23,700 1,746	24,550 896

Getting back to the comparability issue, you can very well have two organizations with similar plans and similar work forces picking those extreme numbers. They then wanted to look at what their current service funding requirements would be, which are shown in (see Table 4). Then, right down to the bottom line, they asked "what the pension expense was on all those bases."

TABLE 4

Current Service Contribution
(000's)

<u>Interest Rate</u>	<u>Salary Scale</u>			
	<u>5.5%</u>	<u>6.0%</u>	<u>6.5%</u>	<u>7.0%</u>
7.5%	\$1,324	\$1,417	\$1,516	\$1,622
8.0%	1,175	1,257	1,343	1,435
8.5%	1,046	1,117	1,193	1,274
9.0%	933	996	1,062	1,133

The ultimate decision was to pick the 8% interest, 6% salary scale -- which had a pension expense of \$1.3 to \$1.4 million (see Table 5). And the reason for selecting it wasn't because they felt 8%/6% was their best estimate. They eliminated all of the numbers around the edge of the grid, because that did not give them any flexibility to move in all directions. So, they were into the four numbers in the center. The \$1.3 million was pretty close to what they were funding. They decided they could justify it by 7.5% and 6.5% being their funding assumptions, which was more conservative than the 6% and 8% that they were using for expensing. That's how they selected their number.

PENSION ACCOUNTING STANDARDS IN NORTH AMERICA

TABLE 5

Pension Expense (CICA)
(000's)

<u>Interest Rate</u>	<u>Salary Scale</u>			
	<u>5.5%</u>	<u>6.0%</u>	<u>6.5%</u>	<u>7.0%</u>
7.5%	\$1,558	\$1,801	\$2,057	\$2,329
8.0%	1,152	1,361	1,601	1,844
8.5%	779	976	1,184	1,403
9.0%	436	615	801	999

From talking with other actuaries in Canada about this particular approach, I've yet to hear a story from someone who said, "My client told me what his best estimate was, I went away and did my calculations, I gave him the answer, and he used it." If there's anybody who has a client like that, I'd be interested in hearing about it.

MR. JOSHUA DAVID BANK: I've worked on less than 10 FAS 87 situations. And not once has either an accountant or a client come to me and said, "This is our suggestion for discount rate or asset yield rate." They usually say, "What do you think?" And we're forced to tell them what we think. I'm looking forward to the day when the accountants will actually have some opinion or some idea of how to estimate those numbers.

MR. ZIGLER: I guess that's generally been my experience. However, what I'm finding is there are more and more accountants who seem to be taking an interest in it. Back in 1986, when many organizations adopted FAS 87, the accountants seemed to be more concerned about the form than the substance -- modifying the format of the information they needed to collect. Very few really raised questions about the substance, but I have had a couple of experiences, now that some of them think they have their form under control, where they are asking questions about the change in the discount rate from year to year. So they're beginning to address some of those issues. And I guess one thing we might see, if there's perceived abuse, is a movement toward dictating what the discount rate should be.

MR. LEACH: When Canadian auditors call up and ask questions about the CICA requirements, they'll ask me if I know anything about it. I'll say, "Yes, are you referring to handbook section 3460?" They're impressed. I'll ask them a few questions about whether they understand it and they'll say that they don't. They tried to read it last weekend, but they need the numbers for their financial statements the following week. So I'm looking forward to running into an auditor who does understand the requirements.

