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MULTI-EMPLOYER PENSION PLANS

Teaching Session

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Introductory Session for beginners.

MR. STEVEN M. RABINOWITZ: I would like to begin by defining the term "multi-employer pension plans". The simple, straightforward definition that we will use for purposes of this session is as follows. A multi-employer pension plan is a plan which covers employees of two or more unaffiliated businesses and is maintained under one or more collective bargaining agreements.

These plans are commonly called Taft-Hartley Plans. The Labor-Management Relations Act of 1947 (the Taft-Hartley Act) stipulates that employer contributions cannot be made to a union or its representatives. Contributions must be made to a trust which is jointly and equally administered by union and employer representatives. Therefore, these plans are required to have an equal number of union and employer trustees. Although it is not common, there can also be one or more neutral trustees appointed by the other trustees.

There are some very special characteristics of multi-employer pension plans. These can be grouped into three main categories.

- 1) They provide portability of pension credit among contributing employers. Participants do not lose pension credit if they shift employment among the contributing employers. This is one of the main advantages of these plans.
- 2) They contain a form of termination insurance. Typically, benefits are provided to participants even if their employer goes out of business.
- 3) Contributions and benefits are determined in a unique manner. With few exceptions, contributions are specified in the collective bargaining agreements, usually as a rate per unit of employment or production (e.g., cents per hour or cents per ton of coal mined). Benefits are typically set by the joint board of trustees, based on an actuary's estimate of the benefit level that can be provided by the fixed contribution rate.

The arrangement of providing both defined benefits and fixed contributions is one of the most essential features of multi-employer pension plans. The fixed contribution aspect provides employers with known pension costs during the term of a bargaining agreement. This is important in industries like construction, where employers rely on set labor costs in bidding on projects. There are even some plans where both contribution rates and benefit levels are set in the bargaining agreements.

Even though there are not many multi-employer pension plans in the U.S., they are a significant part of the private pension industry. These plans started in the 1940's, grew very rapidly in the 1950's and 1960's, increas-

ing from about one million covered workers in less than 200 plans in 1950 to approximately 8 million workers in nearly 2,000 plans today. This represents about one out of every four workers covered by private pension plans. Multi-employer plans tend to be concentrated in industries characterized by irregular employment and/or by small employers. For example, the construction, water and motor vehicle transportation, trade services, apparel, and printing and publishing industries. In these industries it would be impractical or uneconomical to establish single employer plans because few workers ever remain long enough with one employer to qualify for a pension and/or because of the high attrition rates of the small and sometimes financially unstable employers. About one-half of the multi-employer pension plans in the country are in the construction industry. They cover about one quarter of the multi-employer plan participant population. Multi-employer plans are rarely found in manufacturing industries characterized by large firms.

SETTING CONTRIBUTION/BENEFIT LEVELS

Multi-employer pension plans present several unique problems for the actuary. Most stem from the fact that the starting point for these plans is contributions, not benefits. The contrast with single employer plans is clear. For typical single-employer plans, actuarial calculations determine the incidence of contributions and justify the tax deduction. For multi-employer plans, actuarial calculations are used to set the benefit levels that can be supported by the anticipated flow of contributions to the plan.

When contribution rates are negotiated and the level of benefits is established by the trustees (or set in the bargaining agreement), it is important that the pension clause of the agreement be consistent with the assumptions and methods used by the plan's Enrolled Actuary. This is particularly important if either the union or the employer association, or both, retain their own actuaries for purposes of bargaining.

How are the benefit levels set in these plans? First, there is the usual actuarial valuation of alternative benefit formulas and levels. Next, an estimate is needed for the anticipated number of hours of service or other units of production used as the base for the fixed contribution rates. This is needed to project contribution flows over the term of the agreement and beyond. The third step, is to determine the benefits that can be supported by the anticipated contribution flow under the funding policy established by the trustees (i.e., the period over which unfunded liabilities are amortized should remain at the desired level under the new contribution and benefit structure).

There are two schools of thought on the problem of projecting contributions. The first is that the actuary must be directly involved in estimating future contribution flows to assist adequately in the determination of the benefit level that can be supported. The second school maintains that a forecast of future trends in a particular industry may be outside the actuary's area of professional expertise. These forecasts are really short-term and long-term economic projections. Who among us would claim expertise in answering the following questions? Is a recession eminent? How deep will it be? How will it impact the construction industries? How will a recession affect the level of contributions paid into a particular construction industry plan over the next several years? How will the possible de-regulation of the trucking industry impact contribution flows to the Teamster plans over the

term of their new agreement? What is the future of the coal industry and the United Mine Workers' multi-employer pension plans?

Contribution estimates are critical in establishing benefit levels. Overly optimistic projections could lead to deficiencies in the funding standard account during the term of the agreement, long term funding problems, possible future benefit reductions, or even plan insolvency. Overly conservative projections could deprive participants of benefits actually supportable by the negotiated contribution rates. It should be noted that the argument between the two schools of thought becomes academic when the shortfall method is used. Under the shortfall method, a contribution estimate is automatically an actuarial assumption and the actuary is responsible for the estimate.

ACTUARIAL ASSUMPTIONS

There is another interesting question regarding actuarial assumptions for multi-employer plans. Who really has the final responsibility for setting the actuarial assumptions - the actuary or the trustees?

On the one hand, the trustees have final responsibility for all the features of the plan's design and operation, including determination of the best benefit-contribution relationship to meet the needs of the plan's members. Thus, they must fully understand the implications of various actuarial assumptions and they must participate in the selection of such assumptions. In the final analysis, they must be responsible for such assumptions.

On the other hand, the actuary must certify that the actuarial assumptions are reasonable and his or her best estimate. Therefore, the assumptions are outside the province of trustee decision. The trustees cannot be expected to be knowledgeable about, and meaningfully participate in, the determination of appropriate actuarial assumptions. They are responsible for choosing the actuary, not the actuarial assumptions. They must rely upon the integrity, professionalism and expertise of the actuary they choose to establish the appropriate contribution-benefit relationship.

I believe that both the actuary and the trustees are responsible. The actuary must certify the assumptions and the trustees must exercise their fiduciary responsibility of setting benefits which are based upon clearly responsible assumptions. Obviously, the actuary must work very closely with the trustees on this matter. The actuary must convince the trustees of the reasonableness of the assumptions being used and certified. If the trustees ask the actuary to change assumptions, the actuary must be prepared to either (1) certify that the new assumptions are reasonable and his or her best estimate or (2) refuse to make the change and convince the trustees of the appropriateness of the current assumptions.

The actuary must be prepared to resign if the situation reaches the point where professional codes of ethics and ERISA legal requirements dictate so. Similarly, the trustees must be prepared to fire the actuary if they cannot accept his or her assumptions. Under this severe set of circumstances, the trustees have the obligation to try to retain another actuary whose judgment is more in line with theirs.

Before we leave the topic of assumptions, I would like to make some brief comments on several assumptions, which are somewhat peculiar to or partic-

ularly important, in valuing multi-employer plans. One is the turnover rates. Because of the portability aspect of these plans, the turnover assumption should reflect the anticipated rates of termination from covered employment with any of the participating employers. Another complicating feature is that many of these plans have reciprocity agreements with other plans. This must also be reflected in the rates used.

One of the key assumptions for multi-employer plans is the number of hours of service. The assumed average number of hours per year by a participant is extremely important in valuing a plan, both in terms of projected benefits and anticipated contributions. One approach is to assume that each employee will continue to receive credit for the average number of hours he or she had over the previous two or three years. The averaging period selected should encompass the full term of a bargaining agreement to eliminate fluctuations that might be caused by occurrences such as a long strike. Use of a two or three year average for each employee smoothes out yearly variations and directly relates the projected value of benefits to the age, sex, service characteristics of each employee.

Another key area for special attention is the asset valuation method. Since contributions are fixed in the agreement, it is particularly important to use a method that adequately smoothes market value fluctuations. This will reduce the possibility of large actuarial losses from investments triggering deficiencies in the funding standard account.

The last item on assumptions relates to the problem of incomplete data. This can be a major problem, especially in large multi-employer plans. The missing data might be birthdates, sex, date of hire, or years of service. Direct valuations would be impossible. There must be assumptions to correct or fill in the gaps. The problem might even be more serious. It may be impossible for anyone to determine which participants are currently active. The number of terminated vested participants may be totally unknown. Because of the data problems, actuaries sometimes must qualify their opinion in Schedule B.

IMPACT OF FUNDING STANDARD ACCOUNT

The funding standard account has very serious implications for multi-employer plans. If the contribution flow is inadequate and a deficiency emerges, there are severe problems. The available courses of action are all unpleasant.

One possibility, if the situation becomes apparent early enough, is to reduce future benefit accruals. This is rather difficult to do on short notice and this is usually not a viable alternative to stop an imminent funding deficiency. Another possibility is to try to reopen the bargaining agreement to increase employer contributions. Again, not a very tenable approach.

The trustees could apply for a waiver of the funding standard requirements or an extension of the amortization periods (assuming that the latter will have a large enough impact to alleviate the deficiency). The problem with these options is that future benefit increases cannot occur while the waiver or extension is in effect.

Another possibility is for the Schedule B to be filed with the deficiency

clearly noted. I.R.S. could then impose the excise tax penalties on the employer. They would have two problems in imposing this tax. The allocation of the tax to each employer could be a complex problem for the I.R.S. Secondly, there is a legal question of whether the I.R.S. can reopen bargaining agreements to require employers to contribute additional money over and above the amount bargained for in order to alleviate the deficiency.

The next approach is the simplest and probably the approach that would be taken as a short-term solution. It is to "borrow" contributions from the next plan year. Any contributions received within 8½ months after the end of the plan year can be deemed attributable to that plan year. If the deficiency was caused by a temporary phenomenon, such as a long strike, this might be the most logical and the best approach. If it was not a temporary phenomenon, "borrowing" will only delay the inevitable need for stronger remedies.

SHORTFALL METHOD

To avoid deficiencies caused by lower than anticipated contributions, I.R.S. issued proposed regulations permitting the use of the shortfall method in the funding standard account. Under the shortfall method, the charge to the funding standard account is not expressed in terms of a fixed dollar amount determined at the beginning of the plan year. Instead, the charge is determined by multiplying an estimated minimum funding unit charge by the actual number of units of service or production which occurred during the year. Therefore, a decline in service or production will not create a funding deficiency.

To implement the shortfall method, the following items are determined:

Estimated Base Units are the expected units of service or production for the plan year. The unit selected would be the base which is used in the agreement to determine employer contributions (e.g., cents per hour or ton of coal mined).

Estimated Unit Charge for a plan year is the Anticipated Annual Charge, which I will describe later, divided by the Estimated Base Units. The Estimated Unit Charge can be viewed as the minimum required contribution rate per unit of service or production.

Net Charge to the account is the Estimated Unit Charge multiplied by the actual number of units during the plan year.

Anticipated Annual Charge for a plan year is equal to the normal cost plus the net charges (and credits) for amortization of unfunded liabilities actuarial gains and losses plus an amount to amortize Shortfall Losses less an amount to amortize Shortfall Gains.

Shortfall Gain for a plan year is the excess of the Net Charge over the Anticipated Annual Charge. If the Anticipated Annual Charge is larger than the Net Charge, a Shortfall Loss occurs. A Shortfall Loss arises when the actual number of units of service or production during a plan year is less than the number of Estimated Base Units. For multi-employer plans, a Shortfall Gain or Loss can be amortized over 20 years.

To illustrate the shortfall method, refer to the hypothetical example on

pages 529-32. Without the shortfall method, the hypothetical set of facts would produce the funding standard account balances shown in Table 1. Funding deficiencies would occur in 1979 and 1981. Now suppose that the shortfall method was adopted effective January 1, 1977 and the Estimated Base Units for each year is 150,000 hours. Table 2 shows the computations of the Net Charges and Shortfall Gains and Losses. The development of the funding standard account balances, using the shortfall method, is shown in Table 3. Funding deficiencies that would have occurred in 1979 and 1981 are eliminated by the shortfall method. Under the shortfall method, credit balances increase when the contribution rate in the agreement exceeds the Estimated Unit Charge (e.g., years 1978, 1979 and 1980 in Table 3). Conversely, if the Estimated Unit Charge is larger than the actual contribution rates, the credit balance will decline (e.g., year 1981 in Table 3) and a funding deficiency can occur.

There are a couple of wrinkles not included in the example. One is that amortization of Shortfall Gains and Losses need not occur immediately. Regulations permit multi-employer plans to defer amortization for four years. This deferral option usually allows the impact of Shortfall Gains and Losses to be postponed until the next bargaining agreement is negotiated. Amortization could begin with the 5th plan year following the year in which the Shortfall Gain or Loss arose and end with the 20th plan year following the plan year it arose. Similarly, multi-employer plans using the shortfall method can defer amortization of actuarial experience gains and losses for four years.

As previously mentioned, there is a question of whether actuaries have the expertise to project future contribution flows and short-term economic and industry trends. Therefore, I personally believe that it is very important that the Estimated Base Units be developed by some formula. The formula, rather than a single number, would be the actuarial assumption. For example, a formula such as the following could be used: Estimated Base Units could be developed by multiplying the number of active participants used in the valuation (that the funding standard account charges were based upon) by a moving average number of hours worked each year by those participants. The moving average could be the previous two or three year period. The moving average would smooth fluctuations and get the actuary out of the business of making economic forecasts.

The shortfall method reduces the possibility of a deficiency occurring because of a reduction in service or production. If the negotiated contribution rate equals or exceeds the Estimated Unit Charge and no contributions are delinquent, a funding deficiency cannot occur. On the other hand, utilization of the shortfall method can diminish the actuarial soundness of plan funding when losses occur. The emergence of a funding deficiency is clearly a warning signal indicating potentially inadequate contributions. This warning signal and legal trigger for sounder funding is masked when the shortfall method is used. Shortfall losses that may arise must be monitored with care and recognized as a negative element that may indicate potential funding problems.

It should also be noted that the shortfall method will result in lower credit balances (and consequently higher minimum contribution requirements) when Shortfall Gains arise. Gains must be amortized and additional contributions generated by increased production will not produce funding standard account

ILLUSTRATION OF SHORTFALL METHOD

Suppose the following hypothetical set of facts applies for a multi-employer collectively bargained plan

- Plan YearJanuary 1 to December 31
- Credit Balance in Funding Standard Account on December 31, 1976 \$10,000
- Effective dates of three year bargaining agreements..... January 1, 1977 and January 1, 1980

Plan Year Beginning January 1

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
- Employer contribution rate per hour of service stipulated in bargaining agreement	\$1.00	\$1.10	\$1.20	\$1.30	\$1.40
- Normal Cost	\$100,000	\$110,000	\$100,000	\$120,000	\$140,000
- Net charges to funding standard account for amortization amounts that would apply if the shortfall method was not used	\$ 50,000	\$ 55,000	\$ 60,000	\$ 65,000	\$ 70,000
- Actual number of hours of service rendered during plan year	160,000	140,000	100,000	150,000	130,000

(Note: Interest is ignored in the illustration, for the sake of simplicity).

TABLE 1

	<u>Plan Year Beginning January 1</u>				
	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
1) Funding Standard Account balance at beginning of year	\$ 10,000	\$ 20,000	\$ 9,000	\$ 0	\$ 10,000
2) Actual Hours of Service Rendered	160,000	140,000	100,000	150,000	130,000
3) Employer Contribution Rate per Hour of Service	1.00	1.10	1.20	1.30	1.40
4) Employer Contribution = (2) x (3)	160,000	154,000	120,000	195,000	182,000
5) Total credits = (1) + (4)	170,000	174,000	129,000	195,000	192,000
6) Normal cost	100,000	110,000	100,000	120,000	140,000
7) Amortization charge for Unfunded Liability	50,000	55,000	60,000	65,000	70,000
8) Funding Standard Account balance at end of year = (5) - (6) - (7)	20,000	9,000	(31,000)	10,000	(18,000)
9) Employer contribution required by ERISA to eliminate funding deficiency	0	0	31,000	0	18,000

TABLE 2

	<u>Plan Year Beginning January 1</u>				
	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
1) Normal Cost	\$100,000	\$110,000	\$100,000	\$120,000	\$140,000
2) Amortization charge for Unfunded Liability	50,000	55,000	60,000	65,000	70,000
3) Shortfall amortization* over 20 years (see line 9) from					
1977	-	(793)	(793)	(793)	(793)
1978	-	-	868	868	868
1979	-	-	-	4,232	4,232
1980	-	-	-	-	0
Total		<u>(793)</u>	<u>75</u>	<u>4,307</u>	<u>4,307</u>
4) Anticipated Annual Charge = (1) + (2) + (3)	150,000	164,207	160,075	189,307	214,307
5) Estimated Base Units	150,000	150,000	150,000	150,000	150,000
6) Estimated Unit Charge = (4) ÷ (5)	1.00000	1.09471	1.06717	1.26205	1.42871
7) Actual Hours of Service Rendered	160,000	140,000	100,000	150,000	130,000
8) Net Charge for Year = (6) x (7)	160,000	153,260	106,717	189,307	185,733
9) Shortfall (Gain) Loss = (4) - (8)	(10,000)	10,947	53,358	0	28,574

* Assumes 5.5% interest and payment on the first day of each plan year.

TEACHING SESSION

TABLE 3

	<u>Plan Year Beginning January 1</u>				
	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
1) Funding Standard Account balance at beginning of year	\$ 10,000	\$ 10,000	\$ 10,740	\$ 24,023	\$ 29,716
2) Actual Hours of Service Rendered	160,000	140,000	100,000	150,000	130,000
3) Employer Contribution Rate per Hour of Service	1.00	1.10	1.20	1.30	1.40
4) Employer Contribution = (2) x (3)	160,000	154,000	120,000	195,000	182,000
5) Total Credits = (1) + (4)	170,000	164,000	130,740	219,023	211,716
6) Net Charge for Year	160,000	153,260	106,717	189,307	185,733
7) Funding Standard Account balance at end of year = (5) - (6)	10,000	10,740	24,023	29,716	25,983

credits for that year. When the shortfall method is used the possibility also exists that a deficiency can occur that would not have occurred had the method not been used. This could arise when the negotiated contribution rate is less than the Estimated Unit Charge.

DECLINING INDUSTRY

The most difficult problem that a multi-employer plan could face, is that of a declining industry or union. This is the problem that the PBGC has been grappling with the last two years. There is no good solution. As the contribution base declines with fewer and fewer active participants, the plan becomes less and less solvent. Contribution rates would need to increase to maintain benefits. This could trigger employer withdrawals, further compounding the problem.

The pre-ERISA solution was simply to reduce benefits. With one exception, under ERISA, accrued benefits cannot be reduced. The exception is that benefits accrued under multi-employer plans for past service with an employer before the employer contributed to the plan can be forfeited when the employer withdraws from the plan. In a declining industry, if future benefit reductions are not sufficient to solve the plan's funding problem, the eventual outcome could be plan termination.

BENEFIT FORMULA DESIGN

In terms of plan design, multi-employer plans have several unique problems. For example, there may be more than one bargaining agreement with different contribution rates stipulated in each agreement. This creates the problem of designing a benefit formula which will equitably vary benefits to reflect the different contribution rates. There are two general types of formulas used to recognize different contribution levels.

One method is the percentage of employer contribution approach. Monthly future service benefits would be a percentage (e.g. 2%) of employer contributions paid for the employee. Any past service benefit provided could be in terms of a flat dollar per year of service. This percentage of contributions approach is very convenient when there is a wide variety of contribution rates. But it does not adjust for inflation. Therefore, the approach is comparable to a career average salary benefit formula.

The second method is a final contribution rate approach. Under this approach, the plan would contain a schedule of benefit units which vary by the final average contribution rate applied to each employee. The final average contribution rate is defined as the rate applicable to the bargaining unit in which the employee worked the majority of his hours during the last 3 to 10 years of covered employment. This type of formula requires the actuary to project future contribution rates to obtain projected benefit levels.

ADMISSION OF NEW GROUPS

Another unique multi-employer plan design problem is the treatment of new groups being brought into the plan. Since there will always be some employers who will eventually withdraw from the plan (e.g., bankruptcy, change of location, union decertification), the soundness of most of these plans depends upon the continual admission of new employers.

When a new group is added, it is very important to examine the cost characteristics of that new group. If these are unfavorable in comparison with the existing group, various types of benefit limitations should be examined. For example, no past service benefits, or only minimal past service benefits, may be provided. In addition, the future service benefit formula may or may not be appropriate for the new group. The aim is to achieve rough equity. These plans should establish rules to guard against adverse financial selection by new groups.

WITHDRAWAL OF CONTRIBUTING EMPLOYERS

Withdrawing groups also present important plan design problems. It is extremely important for these plans to contain provisions which provide for the forfeiture of past service benefits upon withdrawal of an employer unit. Employer withdrawals can severely damage the plan's future funding status if the forfeiture provisions are not part of the plan.

To illustrate the importance of forfeiture provisions, suppose a new group joins the plan with past service credits given for both vesting and accrual purposes. If this new group withdraws in a few years, the plan could be left with substantial unfunded past service liabilities. If the withdrawn employer increased contribution rates while participating in the plan and if past service benefits were also increased during the same period, the financial burden on the plan after withdrawal could be extremely great.

An employer, who is not a substantial employer, can withdraw without any future financial obligation to the plan. A substantial employer is one who has contributed 10% or more of the contributions during the last few years. Upon withdrawal, a substantial employer must either post a bond with the PBGC in an amount equal to 150% of the amount of the PBGC determined unfunded vested liability or transfer funds under a trusteeship to the PBGC in an amount equal to the unfunded vested liability (but not larger than the 30% net worth limit). The amount of the bond or the transferred funds can be used by the PBGC if the plan terminates within 5 years of the employer's withdrawal. PBGC's proposed legislation addresses this situation by assigning withdrawal liabilities to employers.

RECIPROCITY AGREEMENTS

Another unique aspect of multi-employer plans is the existence of reciprocity agreements. These are arrangements between plans which permit employees who terminate covered employment and move into employment in another geographical area covered by another plan, to avoid breaks in service and retain pension credits. There are two general types of reciprocity agreements.

The "pro-rata" approach is generally used by funds where participants change geographic locations permanently (i.e., not temporary transfers). Under this approach, benefits provided by the reciprocal plans are prorated (i.e., based on total combined services and allocated proportionally between the plans). For example, if you work 10 years in one plan and 5 years in another, you get a 15-year benefit based on 5 years in one plan and 10 years in the other. The pro-rata approach involves extensive record-keeping by both plans.

The second type of approach is known as "money follows the man." Under this approach, contributions made for a participant are transferred to the par-

ticipants' home plan. Benefit credits in the home plan are given for service in the other jurisdiction, depending upon the relative levels of the contributions in the reciprocal plans. The attractive feature of "money follows the man" is that it simplifies record-keeping. However, the pro-rata approach is generally preferred by most plans. It achieves greater equity among reciprocating plans, since actuarial gains generated by terminating employees who never qualify for benefits are realized by both plans.

PBGC Plan Termination Insurance

At this point, it is likely that mandatory plan termination insurance for multi-employer plans will be further postponed until May 1, 1980. The PBGC has submitted proposed legislation to revise substantially the termination insurance program for multi-employer plans.

In the time remaining, let me briefly summarize this proposed legislation. The fundamental concept is that basically PBGC wants to insure plan insolvencies (i.e., inability to pay benefits), not voluntary plan terminations. The innovative feature of their proposal, is a concept called plan reorganization. Any plan that meets certain trigger points of inadequate funding (called a reorganization index) would be permitted to cutback benefits to the PBGC guaranteed level. If the benefits are cutback to this level, PBGC would provide financial assistance in the event of plan insolvency. PBGC proposes a reduction in the guaranteed benefit levels. Basically, guaranteed benefits would be equal to 100% of the first \$5 per month of benefit accrual plus 60% of the next \$15 per month of benefit accrual. In addition, the 5-year phase-in that is used for guaranteed benefits for single employer plans would not be provided for multi-employer plans. No benefit would be guaranteed unless it had been in effect for at least 5 years.

