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The Continuing Search for the "Ideal" Pension Funding

Now More than Ever, a Case for Communication Between the Actuary and the Financial Executive

by Thomas R. Benzmiller, Jeffrey A. Rees, and Frank G. Burianek

Financial executives in companies that sponsor pension plans sometimes leave the development of plan funding strategies to the actuaries, who return the "answers" (the size and timing of contributions) without full knowledge of corporate objectives. As a result, financial executives may fail to understand the range of options available for contributing to the plan, as well as the long- and short-term effects of different funding strategies. Even more complications can arise when funding for post-retirement medical benefits is combined with pension funding.

While a complex patchwork of laws and regulations governs pension funding, plan sponsors often have available a variety of contribution strategies to meet both plan funding and corporate financial objectives. A little analysis will enable the plan sponsor to capitalize on these contribution options and coordinate both short- and long-term funding strategies.

The Evolution of Pension Plan Funding Rules

The rules that govern the appropriate level of pension contributions have evolved since ERISA first mandated federal requirements in 1974. The Internal Revenue Service, through regulations and other pronouncements, expanded on the initial set of ERISA funding rules during the 1970's and early 1980's.

In 1987, the funding rules were significantly modified by the Omnibus Budget Reconciliation Act (OBRA), primarily to protect and improve the solvency of the Pension Benefit Guaranty Corporation (PBGC).

Further changes in the funding rules were brought about in 1994 with the passage of the Retirement Protection Act (RPA). This law was intended to further improve the funding of single-employer defined-benefit pension plans and again reduce the financial exposure of the PBGC.

While the primary intent of all these rules was to improve the funding of underfunded plans, the cross currents of these different funding requirements have often produced unintended results for well-funded plans or plans that are in a surplus position.

Additional complications arise for plan sponsors that have elected to fund post-retirement medical benefits through a 401(h) account in their pension plan. The complexities that arise from the interrelationship between the funding rules for pension and post-retirement medical benefits further cloud the issue.

A Typical "Ideal" Funding Strategy

Before developing the "ideal" funding strategy, the plan sponsor should consider the corporate objectives that will guide the process. The following list might represent one company's goals (its "ideal" funding strategy):

- Create a stable progression of future pension contributions, with each contribution fully deductible in the year for which it is made.
- Avoid large unexpected increases in required contribution levels from one year to the next.
- Cover the cost of the benefits earned in a year by that year's contribution.
- Maximize flexibility with respect to the timing of actual deposits to the pension trust during a year (i.e., no quarterly contribution requirement).
- Minimize the PBGC variable premium.
- Maximize flexibility for funding

retiree medical benefits in the 401(h) account, currently and in the future.
- Ensure that benefit promises made to plan participants are in no way compromised by the contribution strategy the company adopts. This is the over riding objective at all times. However, given the financial status of many corporate plans today—very well funded due to the performance of the stock market over the past few years—this is often not a constraint.

Overview of the Process

Of necessity, any rational process for achieving contribution flexibility must begin with a basic understanding of the funded status of the plan's benefits. As previously mentioned, the security of the benefit promises made to plan participants should be foremost in the plan sponsor's mind.

The first step in the development of any contribution strategy always involves a determination of the value of the future benefit promises made under the plan. The key step in this process is the selection of the assumptions about future events—investment return, salary increases (if appropriate), future mortality, termination rates, disability rates, etc.

For ERISA plans, the selection of assumptions is the responsibility of the Enrolled Actuary for the plan. However, the plan sponsor is usually able to provide valuable input about future expectations that will help the actuary in the selection of these assumptions. This is a key area for dialogue between the financial executive and the actuary.

Once the assumptions are selected—in conjunction with the plan participation data and plan provisions—the present value of all future benefits is determined. It is then a simple matter to apply one of the actuarial cost methods, sanctioned by ERISA, to determine the range of contribution requirements. In this regard, the plan sponsor should realize that just as different depreciation schedules will recognize expense over various periods of time, different actuarial cost methods will also recognize the emerging cost of the plan over different time horizons. With the help of the Enrolled Actuary, the plan sponsor should be aware of the characteristics of

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Legal and Regulatory Background
ERISA sets the minimum funding requirements for pension plans.

The PBGC will impose a variable premium on a plan if it fails a solvency test.

The Internal Revenue Code:
• Dictates the maximum deductible pension and 401 (h) contributions;
• Determines possible range of interest rates used in actuarial calculations required by OBRA '87 and RPA '94.

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the various methods before selecting the one to follow.

The graph shows how different actuarial cost methods spread the same pension obligation for a new plan in which the number of active employees remains constant through the years. The abrupt drop at 30 years shows the point at which the unfunded actuarial accrual liability has been totally amortized. From that point on, only the annual (normal) cost

has to be paid. Note that the aggregate method never has an unfunded actuarial accrual liability.

The graph shows the most typical relationship between the costs generated by three of the most commonly used methods—unit credit starts out costing the least, aggregate the most. After the unfunded actuarial accrual liability is paid off, unit credit costs more than entry age normal.
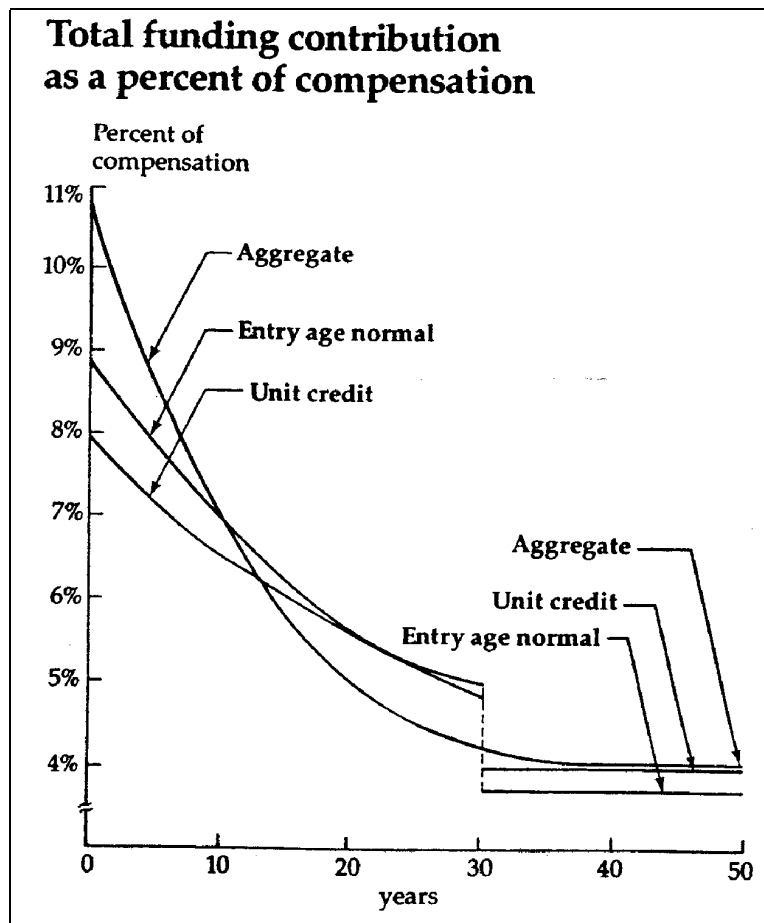
Total funding contribution as a percent of compensation

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Range of IRS Solvency Interest Rates (Jan. 1995 – Jan. 2000)			
Year	Minimum	Maximum (RPA '94)	Spread
1995	6.55	7.93	1.38
1996	6.35	7.62	1.27
1997	6.19	7.35	1.16
1998	6.09	7.17	1.08
1999	5.62	6.55	.93
2000	5.41	6.31	.90
2001	5.32	6.21	.89

Before making a final decision, it is usually helpful to study the future implications of selecting one method over the others. The enrolled actuary can provide projections that often reveal trends and patterns that examining a single year's results would never uncover.

The development of a contribution or funding strategy involves the determination of the unfunded liabilities of a plan – which brings into play the determination of the value of the assets set aside for the payment of future benefits. Here, again, there is a wide range of options available—ranging from using full market value to spreading asset gains and/or losses over future years.

Once selected, the funding methods must generally be followed on a consistent basis from year to year. It is possible to change methods, but the IRS has established rules to prevent manipulation of funding results. Certain method changes are automatically approved, but may occur no more frequently than once every five years. Other changes cannot be made without first obtaining explicit IRS approval, and even then frequent changes are generally not permitted.

Most financial executives are familiar with this process and have a general understanding of how the calculations unfold. These steps are the ones mandated by ERISA since 1974. The intricacies in the funding calculations brought about by the 1987 and 1994 legislation are frequently not as well-known. Both of these laws essentially incorporate a solvency test into the determination of the ongoing funding requirements of a plan to protect the interests of the PBGC. The assumptions and methods used for these calculations are markedly different from those in ERISA. They focus on the relationship of plan assets to the value of benefits accrued to date. These rules also specify a range of interest rates from which the rate to be used to value accrued benefits must be selected. This rate (based on a four-year weighted average of 30-year Treasury bond rates) has, in recent years, tended to fall well below rates commonly used for the regular ERISA funding calculations. Any rate within this range is acceptable, but different rates create different results for a plan. This is a relatively new area in which flexibility can be achieved through judicious selection of the interest rate without any communication with or approval from the government.

Relationship of Pension and Postretirement Benefit Funding Rules

When a plan sponsor has decided to prefund post-retirement medical benefits through a 401(h) account, the interplay of the funding requirements associated with those benefits and basic pension benefits adds complexity to the calculation. Regulations subordinate 401(h) contributions to pension plan contributions: the rule states that cumulative contributions to a 401(h) account over the life of the retirement program cannot exceed 25% of the total contributions made under the plan for current service benefits (the normal cost) plus 401(h) contributions. For example, assume the following table displays the contributions and pension normal cost for a plan containing a 401(h) account (note: all amounts are in millions):

	401 (h)	Pension		
Year	Contribution	Normal Cost (1)	Contribution (2)	Minimum of (1) and (2)
1996	$2.7	$19	$6	$6
1997	$4.2	$26	$33	$26
1998	$5.7	$26	$52	$26
1999	$5.2	$27	$23	$23
2000	X	$30	$30	$30
Total	$17.8 + X			$111

If X represents the deductible 401(h) contribution for 2000, then solving the following relationships determines the size of X:

$$17.8 + X < .25 (111 + 17.8 + X)$$
$$17.8 + X < 27.75 + 4.45 + .25 X$$
$$.75 X < 27.75 + 4.45 - 17.8$$
$$.75 X < 14.4$$
$$X < 19.2$$

Thus, a 401(h) contribution of up to $19.2 million would be under this limit for 2000. Note that there are two other limits based on medical liabilities that may reduce this limit further.

In order to maintain maximum flexibility for contributing to the 401(h) account, pension contributions must continue at a level at least equal to the normal cost. If contributions to the pension plan drop below the normal cost, the amount that the plan sponsor can contribute to the 401(h) account will be reduced in the future.

Corporate Financial Goals Related to the Pension and 401(h) Plan

- Maintain the largest possible 401(h) contribution now and in the future in order to deduct SFAS No. 106 expenses.
- Ensure that desired contribution to pension plan is currently deductible.
- No PBGC variable minimum for the next year.
- No quarterly contribution requirement for the next year.

Pension Plan Funded Status (Regular ERISA Rules)

Assets	$420
Actuarial Accrued Liability	$413
Surplus	(7)
Normal Cost	$30

(note: all figures in millions)

Case Study

The relationship between these different sets of funding rules—the basic ERISA ongoing funding measurement, the OBRA/RPA solvency test calculations, and 401(h) funding calculations—sometimes creates problems for a plan sponsor. Consider a company that funds both pension and post-retirement medical benefits in its pension plan. Although the pension plan is well-funded, the company still has to pay a PBGC variable premium and is subject to a quarterly contribution requirement—requirements typically imposed on underfunded plans. Even though the plan is well-funded according to regular ERISA rules, the special OBRA and RPA rules make the plan subject to these requirements. The current low levels of interest rates inflate the liabilities under the solvency test giving the appearance the plan is under-funded when under the regular ERISA rules there is a $7 million surplus.

Assume the plan sponsor has adopted the "ideal" funding strategy previously mentioned with one additional goal: full deductibility of its SFAS No. 106 expense. Thus, it wants to ensure the desired contribution to the pension plan is fully deductible. It also wants the future 401(h) deduction limits to be as high as possible so that it can contribute and deduct the SFAS No. 106 expense each year. Finally, the company wants to avoid quarterly contribution requirements and minimize its PBGC variable premium.

As noted earlier, cumulative contributions to the 401(h) plan cannot exceed 25% of the total contributions to the plan. This limit and the goal of deducting the SFAS No. 106 expense dictate the range of possible contributions: the 401(h) deductible limit has to be greater than or equal to the SFAS No. 106 expense, and the pension contribution has to be greater than or equal to the normal cost in order to maximize future deductions for the post-retirement medical plan. Given these variables, the company must contribute at least $30 million to the pension plan-the normal cost—in order to maintain funding flexibility for future 401(h) contributions.

To eliminate a PBGC variable premium and avoid paying quarterly contributions, two other tests must be met:

- The contribution to the pension plan must be enough to bring the value of assets equal to the actuarial accrued liabilities at year end under the regular ERISA rules (i.e., the plan must be "fully funded"), and
- Under the solvency test, assets must be at least equal to the accrued benefit liabilities using an interest rate from within the IRS range of permissible rates.

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Pension and 401(h) Contribution Options
(note: all amounts in millions)

	Scenario 1	Scenario 2	Scenario 3
Solvency Test Interest Rate	6.31%	5.41%	6.26%
Maximum Deductible Pension Contribution	$ 25	$ 133	$ 30
Variable Premium Exemption Contribution	$ 25	$ 75	$ 25
Quarterly Contribution Exception	Yes	No	Yes
Maximum 401(h) Deduction Limit	No	Yes	Yes

In order to achieve these corporate goals, a number of solvency interest rates were tested to find the one that would achieve the best results. Often the enrolled actuary, in the absence of additional information from the financial executive, will automatically use the highest possible interest rate, but OBRA and RPA provide a range of interest rates. Choosing a different interest rate results in different amounts for the maximum deductible pension contribution, the necessary contribution to be exempt from paying the PBGC variable premium, and exemption from three different scenarios using three different interest rates were developed from the permissible range of 5.41% to 6.31%. Scenario 1 set the rate at the maximum. Scenario 2 used the minimum rate and Scenario 3 used a rate designed to achieve all the company's goals. Each scenario changed how, and if, the company could meet its corporate financial objectives regarding the contribution strategy. In each scenario the contribution for maximum 401(h) funding flexibility was $30 million.

Scenario 1

In the first scenario, the interest rate was set at the top of the range: 6.31%. Often this is the way the enrolled actuary selects the rate (without guidance from the financial executive, this rate is chosen to produce the lowest possible liability).

This produced a maximum deductible contribution to the pension plan of $25 million. To avoid a PBGC variable premium, the company must contribute at least $22 million—the "full funding" limit under the ERISA rules. Under this scenario, the company was exempt from the quarterly contribution requirement. However, under this funding scenario the goal for 401(h) funding flexibility was not achieved: the maximum deductible pension contribution was less than the pension normal cost of $30 million.

Scenario 2

The second scenario used the lowest possible interest rate of 5.41%. This rate generated a maximum deductible pension contribution of $133 million and required contribution of $75 million to avoid a PBGC variable premium. The plan would not be exempt from the quarterly contribution requirement unless a contribution of $133 million was made-well in excess of the desired contribution level. While this scenario allowed for a very large contribution by the company, it made the contribution for PBGC variable premium exemption 240% greater than the amount needed to maintain the maximum possible 401(h) deduction limit.

Scenario 3

After some analysis the enrolled actuary (in consultation with the financial executive) set the interest rate .05% below the maximum interest rate possible. This produced a maximum deductible pension contribution equal to the $30 million, and it set the necessary contribution for variable premium exemption at $22 million. This scenario also left the company free of the quarterly contribution requirement. Under this scenario the company achieved all its corporate financial objectives.

Conclusion

Funding options for pension plans lie within a tangle of laws and regulations that become even more snarled with the introduction of post-retirement medical benefits. ERISA, OBRA, and RPA have each added a set of standards and requirements that apply to these plans. Navigating these standards can be a daunting task, yet there are options that can be used to optimize contribution strategies. Possible means of optimization range from a change to another actuarial cost methods sanctioned by ERISA to selecting the appropriate solvency test interest rate. The use of these tools can allow plan sponsors to achieve their contribution strategy and thus further overall corporate financial objectives.

However, none of these objectives can be achieved if the enrolled actuary and financial executive do not discuss and analyze the company's funding goals together. A little planning before the calculation process has begun can go a long way to finding the "ideal" funding strategy.

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2001 Enrolled Actuaries Meeting
Session 406 - Multi-employer Plans
March 20, 2001
by Pam Marlin

Editor's Note: This panel discussion featured two consultants and three IRS representatives. The session was more formal than the related Session 606 and concentrated more on compliance.

The IRS was looking to issue the multi-employer plan guidelines in final form shortly at the time of the meeting. Some tips on avoiding common errors were given. Not only should there be a system in place to satisfy the compliance rules, but it should be documented and there should be evidence that it is followed. Collective bargaining agreements need to be reviewed to make sure that they are not in conflict with the plan document. Locator services should be used to find participants who have turned age 70 1/2 and who have not yet applied for their benefits. Suspension of benefits notices must be given to participants continuing to work beyond their normal retirement date. Benefits lost prior to the issuance of the notice must be made up. The IRS representatives responded informally to several prepared questions:

If a retroactive amendment is adopted following the close of a plan year to cure deductibility problems, it must be made retroactive to the beginning of the year if the cost of the amendment is to be deductible for the year. Also, anyone retiring during the year must have his or her benefits recalculated to reflect the terms of the new amendment.

A multi-employer plan can establish the deductibility of contributions that would otherwise exceed the deductible limits for multi-employer plans under the 90% of current liability funding threshold rules using the interest-rate assumption at the bottom of the statutory corridor. However, this same interest rate must then be used for determining the full funding limits for meeting minimum funding requirements.

2001 Enrolled Actuaries Meeting - Session 606
Multi-employer Plans Workshop
March 20, 2001
by Pam Marlin

Editor's Note: This session was related to Session 406 - Multi-employer Plans but was structured as more of a workshop than a panel discussion.

One topic of interest was keeping contributions within the minimum required/maximum deductible corridor in the current economic environment. Until last year, huge gains in the stock market sent many plans into full funding, an event that normally causes little concern in the single employer sector. However, contributions to multi-employer plans are normally fixed over the life of the collective bargaining agreement. If the full funding limit applies, a benefit increase may be required to keep these contributions deductible. One approach to benefit increases was to note that investment gains are past experience and should only be used to increase past service benefits, not a bad idea in light of the recent stock market reversal.

There was a strong feeling that an asset smoothing method best serves these plans. Practitioners using one of these methods delay full funding restrictions on maximum deductible contributions during upswings in the market and help to soften the impact of dramatic downturns in the market on minimum funding requirements.

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