RECORD OF SOCIETY OF ACTUARIES
1980 VOL. 6 NO. 2

PENSION PLAN DESIGN FOR SMALL PLANS—U.S.

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This session will outline principles of pension plan design with emphasis on small (1-49 lives) United States plans. Topics to be covered will include:

1. Types of plans available
2. Considerations of corporate objectives and financial capabilities
3. Factors affecting normal retirement benefits
4. Ancillary benefit provisions

MR. DENNIS J. GRAF: Among pension plans covering 50 or fewer employees, there could be further division into two subgroups. First of all, plans with twenty or more lives very frequently possess the same characteristics as larger plans. The other group consists of the smaller plans, typically are under twenty lives, and includes the professional corporation plans. Of course these groupings tend to overlap. Presence in either one of these groups has much to do with the typical approaches to funding, which in turn can also influence the design of the plan.

Our objective is to present some of our experience in designing plans for these groups.

MR. THOMAS M. CHIAPPETTI: In small corporate pension plans, the main question is often how much the company wants to spend. From that question everything else flows forth. Once you know what they want to spend, then you can design a plan around it. The main idea is often to obtain a tax deduction. But, there usually are other motives involved. For a small employer, a qualified pension plan is a way of compensating its employees. In one way, the company is compensating them by saving up money to be able to pay a pension benefit to key people or to all employees when they retire or terminate. In another way, the company is compensating its employees by providing a tax preference benefit, in addition to the regular compensation of the participants. In general, the reasons for considering a retirement plan may include tax savings for the company or its owners, as well as a desire to provide a pension as a reward for long and faithful service. The plan is often considered when one or more of the owners reaches the age where he begins to be concerned about his own retirement.

When the question of plan design comes up, the actuary must ask a number of questions and consider a number of objectives. Some of the major considerations: Which employees are going to benefit by the plan? Who is it designed for? Is it to put tax deferred money away? Is it to provide a large benefit? Should there be a death benefit in the plan? Is there some estate planning reason for certain features of this plan? Another consideration is the ownership of the employer. How widespread is the ownership? Is it a professional corporation that operates much like a partnership? There are many equity questions in professional corporations that you do not find in

other types of business owned by stockholders.

The long range costs of the plan are important, especially to the small employer. They are concerned about what the burden will be on them after the plan has been in effect for four or five years. Will they get any surprises? Will the plan do what they want it to do? Will they be able to support it? All these questions come into play when you are trying to design a plan for a small employer.

There are three ways that tax savings are provided through any kind of qualified plan. First, there is a current tax deduction to the employer for his contribution. This is one of the reasons why professional corporations have come to be, because they can obtain a larger tax deduction for qualified plans than was available to them in sole proprietorships or partnerships. Second, the fund earns tax-free interest, whatever type of plan it is, during the time the plan is qualified. Third, when benefits are paid from the plan, they are usually paid in a way that reduces income taxes to the recipients.

One broad type of qualified plan is the defined contribution plan, which can be a money purchase pension plan, profit sharing plan or a target plan. The basic characteristic feature of a defined contribution plan is that the employer promises to put away a definite amount each year for each participant. The participants essentially bear the risk for investment results; if the money invested has good results on its rate of return, they benefit from it. On the other hand if there is a poor result, participants have the burden of that loss. A profit sharing plan is discretionary -- if there is no profit, the employer does not have to make any contributions. If there are profits, the employer can pay money into the plan according to its formula for contributions. A money purchase plan limits the employer's options in certain ways. The company must contribute according to a specific formula. The formula is usually based on pay, and sometimes length of service. The third kind is a target plan, in which the contribution formula is designed to accumulate to a specific retirement benefit if the fund earns a predetermined rate of interest. Contributions are higher for older participants.

In a defined benefit plan, the basic concept is that the employer promises to pay in whatever it takes to provide a promised retirement benefit. In this type of plan the participants do not bear the risk; the employer bears the risk. If investment results are poor, contributions will increase.

In Exhibit 1, we have tried to list the objectives of most small employers in designing a pension plan. The four types of plans we've discussed are rated - on a scale from 1 to 4 - as to how each would meet these various objectives. This is a subjective rating, and you are welcome to disagree one way or another about whether a plan can handle each objective the way it is rated.

Rating these four different types of plans on the scale of 1 to 4 shows that the defined benefit plan accomplishes more of the objectives than the other plans, not to say the other plans don't accomplish certain objectives very well. I think it is pretty clear as to which ones provide which.

Perhaps one primary concern is that, if only defined contribution plans are used, the contribution for any individual cannot exceed 25% of compensation.

The 25% can be exceeded with a defined benefit plan, if desired.

Some of the objectives listed in Exhibit 1 occur more frequently than others. There is also some overlap between certain listed objectives and conflict between others.

With that said about plan selection objectives, we can now discuss plan design elements. The main tool is design of the benefit formula. You can design the accrual rates, the percentage benefit, a retirement age, and a form of payment. You can sometimes use the funding method as well as some other items to meet plan objectives. Some additional design details include integration with Social Security, and considered compensation (you can consider only certain compensation for the plan). With those tools you can take them and design a program that will match the objectives of the plan sponsor. You may need to proceed by trial and error to obtain as close a match as possible to the company's objectives.

Small companies frequently seek to skew the plan benefits toward certain key employees, usually the highly compensated. One way to do this is through Social Security integration. When you integrate with Social Security, you are saying that Social Security plus the pension plan benefit will be an approximately level percent of preretirement earnings for all participants in the plan, and because Social Security is a higher percentage for lower paid people, the pension plan should be the exact opposite. Social Security integration, then, helps achieve skewing toward the highly paid. Occasionally integration may not work out so well, for example, where the normal retirement age is 55 and the plan provides a joint and survivor benefit automatically. In the small professional corporation, the contribution dollars saved through integration of a defined benefit plan are often not worth the bother. But it is generally useful in the other small corporations.

Another way of achieving leverage toward key people results from the basic employee characteristics of the group. Usually in a small corporation most of the key employees are in their 40's or older, while the remaining employees tend to be much younger. Because of this age difference, the contributions needed for the key employees turn out to be much higher because they have fewer years to go to retirement.

MR. GRAF: I would like to add to what Mr. Chiappetti has said about the concept of leveraging the costs or benefits toward key employees. From the tone of what we say, it may sound like we are advocates of discrimination against rank and file employees in favor of highly compensated. I would like to make it clear that this is not the case. We are not trying to advocate discrimination, but we are trying to present how things are in the real world of small corporations. The facts are that in the small corporate market there is much more of a tendency for the corporation to desire this form of leveraging than there is in the larger corporate market and, since certain types of leveraging and discrimination are legal, I think it is our responsibility as actuaries to know how these things can be accomplished and what the limits are. We have run into many situations where a corporation would rather not set up a plan at all if it provided equal contributions or benefits for the rank and file employees.

Under a defined benefit or target benefit plan in a small, closely held corporation, typically but not always, the owners, officers, etc. have two

things going for them. They tend to be older and closer to retirement. They can have a specific benefit funded over a relatively short time producing higher current tax deductible contributions for them than are produced for the remaining employees. Second, they tend to have longer periods of past service than the other employees, resulting in advantages to them if the defined retirement benefit is based on length of service. When these relationships are not present, the natural advantages of a defined benefit or target plan disappear.

Another plan feature that can create some leverage is the use of a normal retirement age less than 65. Exhibit 2 was prepared to give some idea how much money can be sheltered under a defined benefit plan providing benefits at maximum rates, based on varying entry ages and varying normal retirement ages. The point to be made for purposes of this discussion is that, while the leverage for retirement age 65 is obvious under a defined benefit plan, it becomes even more obvious when we reduce the retirement age to 60 or 55. Incidentally, all percentages assume that the employee would have 10 years of service at normal retirement age. By lowering the normal retirement age of the plan, the leverage due to age becomes even more powerful.

A normal retirement age less than 65 should not be advocated without noting several shortcomings. First, the plan may exclude employees hired within five years of normal retirement age only if excluding those people does not violate the I.R.S. 70%-80% participation test. Second, reducing the normal retirement age below 65 reduces the leverage advantages of integrating with Social Security. Third, the normal retirement age must be realistic within the business, and the I.R.S. intends to be auditing plans to see what their actual experience is as opposed to the plan's stated normal retirement age. In other words, if the normal retirement age is 55 and everybody in the plan retires at 60, I do not think the I.R.S. is going to allow you to fund for benefits at age 55.

Another point is that maximum benefit plans under Section 415 have severe restrictions on the increases in the benefits that are available after retirement age. This virtually eliminates any funding after normal retirement age and may actually cause late retirement benefits to be less valuable than normal retirement benefits. If the normal retirement age is earlier, to accelerate funding, the trade-off is that funding will cease earlier for each participant.

Finally, if the normal retirement age is too close to the age of the principal shareholder or shareholders of the corporation, or any other highly compensated employee for that matter, and if the level annual funding type of approach is used to fund benefits or aggregate cost, the benefits for these people may have to be funded over at least 5 years. That will happen if any three participants in the plan own more than 50% of the total plan liabilities. It is something that happens frequently in small plan situations.

The next item that can lead to some degree of discrimination or leveraging is the concept of the plan's vesting and benefit accrual schedules. I personally have a preference that the plan's benefit accrual schedule fit the other characteristics of the plan in order that the administration of the plan can take on some additional simplicity. There may be situations, however, where something different is desirable enough to the plan sponsor

despite the added complexity in administering the plan.

Under ERISA, certain limited types of back loading are available. For instance, one of the rules under ERISA allows that the benefit accrual in the future years cannot exceed 133% of the benefit accrual currently. This accrual, rather than being based on particular calendar year or plan year, is based on a particular year of age or year of service of any participant in the plan. Another technique is the distinction between a level annual funding type of accrual and a defined benefit type of accrual. The defined benefit accrual is more frequently used in both small and large benefit plans and essentially it is a ratable portion of the person's projected normal retirement benefit, based on the length of service or length of participation that they have achieved to date.

The level annual funding type of accrual is something that under certain circumstances has been approved by the I.R.S. It must be based on specific assumptions and must have all the characteristics of a defined benefit. It is usually very close, if not equal to, the amount funded for any participant.

The defined benefit type of accrual is much slower than is the level annual funding type of accrual and is much more favorable to older participants than it is to younger participants.

Related to benefit accrual is the plan's vesting schedule. Any of the three ERISA vesting schedules will result in little or no benefits payable to young, short service employees. The same is true for the "4-40" vesting which has been widely used in small plans under the assumption that it was a safe harbor. Recently the I.R.S. has issued regulations saying that "4-40" is not a safe harbor, and that only something they define that sounds fairly close to full immediate vesting will guarantee plan qualification. We hope that these regulations will be withdrawn.

The next subject is financing the plan. One thing that I have used in talking with small corporations and groups is the concept of stages in the evolution of a corporation. When a new corporation is formed, it usually has little or no consideration of employee benefits. It is enough of a problem trying to earn enough profits to pay salaries at least in the first year or two of operations.

The second stage is when profitability begins. Salaries of both employees and owners are covered and the company might start thinking about some way of reflecting on the contributions of either the owner or all the employees to profitability. One of the things they might look to is a profit-sharing plan, so that if the current level of profits cannot be sustained, the company can always reduce the contributions to the profit-sharing plan.

In the third stage, the company starts making regular profits and, at this point, they start thinking that the owners and managers and those who got the business working to this point should be entitled to some form of additional compensation. This is where they start thinking about pension plans, particularly leveraged pension plans.

The fourth stage would be where the company becomes a mature corporation and very likely is now concerned, not only with the welfare of the shareholders and managers, but also with all the other employees, feeling that

all of their employees have contributed to some extent to making profits. Not all corporations go through all four of these steps, and not all of them get to the fourth step.

Other factors that might complicate this process might include unionization. There might be some point along the way where the formation of the labor union is followed by the bargaining of a pension plan. I have encountered a number of corporations that, after setting up a pension plan for their unionized employees, have set up an identical pension plan for their salaried employees.

In our day to day contacts with our smaller corporate clients, we run into a number of possible concepts that I classify as budgeting scenarios. Each of these may give you some indication of which direction to go, both in designing a pension plan and selecting a funding method. Some examples:

1. The company has sponsored a profit-sharing plan but wants to provide larger benefits. They would like to do more for their older employees -- profit-sharing accounts are inadequate. The company liked having the funding flexibility in their profit-sharing plan. What can we do for them, particularly if the contribution has to go over 25% of payroll and they can no longer contribute to a profit-sharing plan? This indicates using some type of funding method that generates past service liabilities so that there is a range between minimum and maximum. It will not necessarily close the gap, as far as the flexibility they had previously, but it could go a good deal of the way.

2. The company might come in and say, "We can't really afford much for pension contributions, but we want it all to go to certain key employees." Usually, the first thing we might look to is an integrated excess-only type of plan, as long as those are still allowed by the I.R.S. This could be either defined benefit or defined contribution.

3. The company is concerned about equity among various participants in the plan. They have one person within three years of normal retirement age and two others within 15 or 20 years of normal retirement age. They do not want to fund that one person's benefit over three years, or even five. Usually something can be done in the way of designing the normal retirement age in terms of age-plus-service or age-plus-participation.

4. The company has three shareholders, all earning the same compensation, all equal owners -- one is 60 years old, one is 45 and one is 35. They all want identical pension contributions to a defined benefit plan. (Of course, they could have identical contributions to a defined contribution plan, but they want to exceed 25% of payroll so they have to go to a defined benefit plan.) We have been quite successful in working out something -- it may often involve a unit benefit type of plan which may or may not include past service -- something that needs to be done by trial and error.

5. The company might set aside a large sum of money, but they are afraid of a poor year sometime in the future. Here is a situation where the past service liability concept in a defined benefit plan is helpful. They may initially fund it on a 10 year basis. Sometimes they are open to the idea that they can exceed 10 year funding. They will not

get a deduction for it now, but the consequence is not as horrible as many other people might lead you to believe. They might pay in much more than a 10 year funding payment, and at some time in the future they can always deduct it -- maybe in a poor year in the future when they cannot make a contribution. They not only have built up a substantial amount of funding standard account credits, but at the same time, in a year when they have losses, now they have an additional tax deduction that can work in their favor.

6. Each owner has a different objective as regards deferral of compensation. For example, of four people, one wants to put away as much as he can. Another wants a fixed commitment, 25% a year, to put away. A third wants to put in something closer to 10%. A fourth says, "I can't afford to put anything in a retirement plan, I'm too far in debt right now." Sometimes these things can be satisfied within a single plan. It can be very difficult, but with compromise, a satisfactory solution can sometimes be reached. Another possibility in this scenario is the creation of multiple corporations. I think some of you may have been reading recently of the Kidde and Garland cases, which involved physicians who each incorporated and then formed a partnership of corporations. As a result of so doing, they provided benefits for themselves and were able to exclude their employees, and this was held up in court. I am not advocating excluding the employees. The employees of these separate corporations should be included on some kind of a pro-rated basis. If they are willing to pay the multiple expense of having several corporations and several retirement plans, this could be the only solution to this type of problem.

MR. CHIAPPETTI: Let's get into ancillary benefits. Ancillary means anything other than retirement benefits in the pension plan. The first one I can think of is vesting. Many small corporate plans installed after ERISA use "4-40" vesting. Everybody thought this was a provision that would not lead to discrimination problems with the I.R.S. Any of you who have been into pension plans within the last couple months know that there is a new proposed regulation, 1.411(e), that says "4-40" is not a safe harbor anymore. That could be a real expense item for these pension plans, but in the design of a pension plan we normally use "4-40". Hopefully this new rule will be disposed of.

In a small plan, death benefits are often an important consideration. Often the plan has been sold to the company by an insurance agent in the form of ordinary life insurance policies. We sometimes recommend term insurance, if the death benefits need to be substantially more than the participant's funding reserve. With an individually designed plan, within certain limits, you can design a death benefit any way you please. Sometimes there will be an estate planning reason for putting larger death benefits in the plan. They might also be a very attractive feature to the younger people.

Another ancillary benefit is the disability benefit. I do not recommend these in a small plan. Beyond full vesting benefits when someone becomes disabled, these plans are too small to adequately bear the risk of a disability benefit. If they want disability benefits, it might be better to put them outside the plan in a separate policy.

Early retirement benefits are common -- I think they are fine in a pension

plan of any kind. The reduction factors for early payment are a matter that the plan sponsors must decide, with the help of the actuary. If the plan has subsidized early retirement of any kind, there may be funding questions and actuarial assumption questions that have to be answered.

Another ancillary benefit of sorts is a lump sum distribution option. These are popular in professional corporation plans because the corporations have breakups; people get disenchanted and want to take their money with them. Often the plans are too small to "insure" annuity payments. I do not recommend lump sum options for other pension plans. A retirement plan is for retirement benefits, except for a cash-out of small benefits to avoid recordkeeping and administration for a large number of vested terminated participants. The plan should not pay the lump sums to retirees -- it can be a treacherous practice to do that. Another problem with lump sum options can occur, particularly in professional corporation plans, when they go for accelerated funding based on age 55 normal retirement, 100% joint and survivor annuities, etc. If the benefit is payable in a lump sum, the participant cannot pull out all the money from his "account." He can only take the equivalent on the life only basis, which means that there may be some money left over that he has funded for himself. If there is only one principal in the corporation, this problem is reduced.

MR. DAVE WALCZAK: Do you temper your design considerations when you know the plan will probably terminate when the principal retires and he will have less than 10 years of service in the plan?

MR. CHIAPPETTI: Yes, you do. What you try to do, of course, is let the principal know he must wait 10 years to get maximum benefits. If there is a conflict between how much he wants to contribute and how much he can contribute, you have to let him know.

MR. GRAF: I have been involved with at least two or three plans that have terminated within 10 years. At least one case involved a plan that was designed to last less than 10 years until the principal's normal retirement age. The accrued benefits for all participants were more than fully funded, and the I.R.S. allowed them to distribute the assets proportionately according to the accrued benefits. What you are addressing is the Mimeograph 5717 situation where, if a plan has not been in effect for 10 years, there are certain restrictions on benefits to highly compensated employees. The purpose is to avoid having a plan set up as a temporary plan, with all the assets upon termination going to the highly compensated employees. As long as there is a fair distribution of assets among all employees, the I.R.S. should allow it.

I would like to comment on plan design as it interfaces with plan administration. We have not gone into specific details of plan design in our discussion. We have been rather general, but mainly have covered some of the concepts employers might be looking for. Frequently you will find that, in order to satisfy the employer's desires exactly, you will have a plan that is extremely unworkable. There are certain trade-offs that should be recommended in designing a plan, in favor of making the plan a simple thing to operate. There may be some specific provision that the employer absolutely has to have in the plan. If he is advised that this is going to complicate the actuarial work, the calculation of benefits, and administration, and he still wants it, it is still something he needs to be aware of. Some of the fine tuning that the employer may want may cause him to terminate the plan

in a relatively short time because it is so complicated.

A defined benefit plan has one strong disadvantage, in the minds of many corporations, in that it requires the services of an actuary. I frequently encounter this as being a strong disincentive to setting up a defined benefit plan. There are many instances where a money purchase plan will come nowhere near meeting the employer's retirement plan objectives. We need to convince the employer that the cost of retaining an actuary is really very small compared to the additional advantages.

There are also situations where a corporation is maintaining a defined benefit plan and should not be. There are times when it is our responsibility as actuaries, even though not in our self-interest, to talk them into a money purchase plan. Sometimes a prototype or master plan offered by an insurance company or bank might simplify the problem. These have certain advantages and disadvantages. They are less flexible than a custom designed plan, but in many situations they might provide everything the employer is looking for.

Plan features, under any type of plan, that can be tailored to match objectives but can create administrative problems, include integration with Social Security, definitions of compensation, and employee contributions. Various definitions of service, for various uses, are an item that has really gotten out of hand since ERISA. A revision in the retirement benefit formula might create the need for a minimum benefit, running for short periods of time or long periods of time, depending on the wishes of the plan sponsor. The longer it lasts the more complicated it is. Also, for many items in the plan, you have a pre-ERISA definition and a post-ERISA definition.

Many of these problems are found only in plans that existed before ERISA. They arise from an effort to meet ERISA minimum standards when, in fact, many of these provisions were already in compliance, at least in operation. I would like to see no more than three or four definitions of service in any plan, but frequently there are at least six and as many as ten or twelve. The same is true for compensation used in computing benefits -- only one definition should be needed. Particularly with small corporations, where benefit calculations are infrequent, there is no room in the administrative budget to calculate benefits under the more complicated plans we often see.

I referred to Social Security integration, also. There are several ways available to integrate. The simplest is to have integration and benefits associated directly with length of service. Flat benefit plan integration is more difficult. Offset formulas tend to be the most difficult unless you have an efficient and foolproof method of approximating the primary Social Security Benefit.

MR. JOHN A SCHOF: Relative to previous discussion of the 1.4 rule with a money purchase and a defined benefit plan, did you say that the 1.4 rule does not come into play if you have those two plans?

MR. CHIAPPETTI: No. The 1.4 rule governs the combined benefits and contributions that can be allocated to individual participants. Section 415 of the Code limits contributions to 25% of pay in the money purchase plan or, for that matter, in any or all defined contribution plans covering any participant.

The other 25% figure, the one we have referred to more often, is the deduction limitation on tandem plans under Section 404(a)(7) of the Code. If one of these plans is a profit sharing or stock bonus plan, the deduction for employer contributions to all plans cannot exceed 25% of aggregate payroll. If you wish to exceed 25%, you may have more than one plan, but none can be of the profit sharing or stock bonus type. This becomes an important design consideration principally when the plan sponsor is a professional corporation.

EXHIBIT 1

Small Employer Objectives

Qualified Retirement Plans Rated on a Scale of 1 to 4

Scale:
4 = Very Good
3 = Good
2 = Fair
1 = Poor or not at all

Objectives	Plan Type: Profit Sharing	Money Purchase	Target	Defined Benefit
1. Skew benefits and contributions in favor of the owners and other highly compensated employees.	1	2	1	4
2. Obtain maximum allowable contribution flexibility from year to year.	4	1	1	3
3. Tailor or individualize plan contributions on a per-employee basis.	2	2	2	4
4. Get a high initial year contribution, decreasing to a lower level thereafter.	3	1	1	2
5. Transfer of retained corporate earnings to the qualified plan so as to avoid "excess" retained earnings tax.	2	2	2	3
6. Maximize plan benefits within the limitations of ERISA and the "1.4" limitation.	2	2	2	4
7. Skew plan contributions (and benefits) in favor of the longer service employee and/or employees at advanced ages.	1	1	2	4

EXHIBIT 2

Illustrative Pension Contribution Levels

Defined Benefit Pension Plan

(Maximum Benefit - 100% of High 3-Year Compensation)

Entry Age	Contribution as Percent of Participant's Compensation — Normal Retirement Age 55	60	65
25	28.3%	20.7%	15.0%
35	47.0	32.1	22.2
45	103.8	59.3	37.0
50	218.0	93.4	51.8
55	N/A	196.2	81.7
60	N/A	N/A	171.6

Notes:

(1) No single set of actuarial assumptions is appropriate for all situations. Actual contribution results may be higher or lower than shown, depending on choice of appropriate actuarial assumptions.

(2) Maximum amount of contribution in 1980 is approximately $110,625 multiplied by percentage shown.

Examples:

(A) Participant age 45 with $50,000 salary can contribute approximately $50,000 × .370 = $18,500 for an age 65 normal retirement benefit.

(B) Same participant with $200,000 salary can contribute approximately $110,625 × .370 = $40,931 for maximum benefit at age 65.