NEW METHODS OF DETERMINING EMPLOYER CONTRIBUTIONS TO PRIVATE PENSION PLANS

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The title to this paper begs a question: Are there any?

A review of the voluminous available literature leads one to suspect that the answer is no. The mental agility of the actuarial profession and, perhaps more importantly, the flexibility of the computer appear to have reached a state of the art where there is "nothing new under the sun". Obviously, this cannot be so, and yet the variety of financing methods available (and well documented) is so profuse – pay-as-you-go, repartition, accrued benefits, entry age normal, discontinuance funding, terminal funding, what have you – and the sophistication of approaches to choice of assumptions so marked, that in theory the actuary should be able to hand-tailor the determination of contributions to the needs of the employer.

In theory. In practice, of course, we are aware of the multiplicity of influences that in most countries limit the actuary's tailoring abilities:

- legal requirements for minimum funding, as in Germany, the U.S. and now (apparently) the U.K.;
- legal limitations on tax deductibility as in, again, Germany and the U.S.;
- the force of local customs, as in a number of the countries of continental Europe (level premium required) and Latin America (repartition preferred); and
- of course, the ministrations of our sister profession, accountancy (APB 8, and all that).

With all of these constraints facing him, the actuary's freedom of choice may come close to that of a man in a strait-jacket.

Still, just as the near-absolute freedom postulated earlier was illusory, so also is this near-total bondage. Obviously, local custom is self-bondage, and hence cannot be easily overcome, but the other fetters binding the actuary can come close to falling away – depending on the problem the actuary is trying to solve for his client.

What are the purposes of making a pension plan valuation, of determining an employer contribution? Three stand out:

- The assignment, as far as possible, of pension plan costs to the "proper" fiscal year.
- The levelling out, as far as possible, of the amounts of cost taken as an expense deduction.
- The segregation of adequate funds to ensure, as far as possible, the security of employee benefits.

The first two are obviously concerns of the employer. The third, although apparently of moment only to employees really rebounds on the employer in the area of personnel relations. An insecure employee is not a jolly one. Hence, it is not unreasonable to assume that the employer-client will ask his consultant-actuary to help him solve all three of these problems.

The <u>three</u> purposes do, however, really subdivide into <u>two</u> separate problem areas: how to allocate benefit costs under the plan (purpose one), and how to determine an appropriate contribution to the plan (purposes two and three). Of these two problem areas, the second – contribution determination, or in its broadest term, choice of financing strategy, has received the greatest attention in the literature, largely because of its impact on tax deductibility. Both, however, deserve close attention.

We now proceed to the purpose of this paper: to present in very brief compass some thoughts on both of these problem areas. They will be approached under the assumption of complete freedom of choice – there are, after all, some countries where this is true, and in any event practical solutions can be determined as adaptations to reality from the ideal. In the interests of compactness, well-known facts will not be repeated. In the interests of eliciting discussion, provocativeness will be aimed at. And to begin in this light, we will discuss them in reverse order.

CHOICE OF FINANCING STRATEGY

There are two items to consider under this heading, as noted above: levelling out allocations, and employee security.

With respect to the levelling out question, methods that produce separate past service liabilities have severe drawbacks: the past service funding period must eventually expire; liabilities can diminish abruptly, and severely, under offset-integrated plans; and, in any event, experience gains and losses play hob with the liabilities. An aggregate funding method is thus much to be preferred, preferably one that is based on the covered group as a whole and, in the light of inflation, that expresses costs as a percentage of compensation. It is, of course, possible to carry out determinations only on the current closed group of employees. However, to achieve the maximum in levelness, an open-group method has much to recommend it, with replacements based on future expectations as to the number and type of new entrants.

Employee security may require modification in the above approach. Most importantly, some period should be set over which it is desired to build up the requested funds (which can include book reserve allocations) to

cover the accrued vested benefits, together with a longer period to cover all accrued benefits. This argues in favor of a discontinuance funding method, with the period extended with each periodic valuation. Another modification lies in the area of handling increases in pensions in payment to cover cost-of-living increases. The preferred method is to include in the cost allocation for the year of increase the total lump-sum liability associated with the benefit increase.

In all determinations, though, it is just as important not to set too much aside as it is to set aside too little. In the absence of strong countervailing factors, one should aim only at covering accrued liabilities – without regard to future inflation – as a long term goal.

ALLOCATION OF COSTS

The problem here is to make sure the employer is aware of costs as they arise, so that he can properly include them in his pricing. Since these costs will not necessarily be financed as they accrue, levelness of incidence is of no real concern.

It is of concern, however, to make allowance for inflation – both assumed future and actual past. It would be a mistake for the employer not to consider how that inflation will affect the benefit based on the employee's work performed today.

This argues, then, in favor of a unit credit or accrued benefit valuation method. Each year's allocation would consist of the cost associated with the projected benefit based on the current year's service, plus the lump sum cost required to bring the benefits for prior service years up to the new level necessitated by the current year's inflation. Other experience gains and losses would also be fully reflected in the current year's allocation. Any unfunded past service liability existing when the plan is set up would require some level financing technique. This, however, should be the only exception to the rule of letting the chips fall where they may.

Obviously, the allocations produced would be anything but level. Still they would give the employer the preliminary information he needs to think about his pricing levels.

Conclusion

These are very sketchy looks at ideal solutions to the two problem areas the actuary can be asked to illuminate for his client. They are meant to stimulate discussion.

The analysis does, however, rest on one major premise. As professionals, we are asked to solve our client's problems, and this must be our major concern – subject of course to the rules of law, professional conduct and common sense.