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CASH-BALANCE PLANS

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- Design variations
- Rate of interest credit
- IRC section 417(e) problems
- Transition from traditional defined-benefit plans

MS. MARIA M. SARLI: I'm with Kwasha Lipton. Dale Grant is with the Segal Company. I'm going to handle the compliance and actuarial issues, and Dale is going to handle the design and implementation and other consulting issues.

MS. DALE B. GRANT: As Maria said, I'm going to talk about the design elements and the consulting part of the assignment that we get from the client. We always have the difficulty in these sessions of addressing people who have never heard of cash-balance plans before. Some people who have been working in the field and who have done many cash-balance valuations sometimes come to compare notes with others. So, we'll try to strike a balance between those two elements.

So, starting from the simplest discussion, what is a cash-balance pension plan? A cash-balance pension plan is like any other defined-benefit plan, and that's a little bit confusing to people who hear about it for the first time. A client can't somehow understand how a defined-benefit plan can provide an account balance. But, the cash-balance plan is really another way of expressing a defined-benefit formula. The defined-benefit formula discusses a "contribution" to a hypothetical account each year, which is accumulated at a specified interest rate, and the interest rate is also part of the plan design. It's in the plan document.

The benefit on termination is the value of the account balance. Note that it is not the account balance, but the *value* of the account balance. In a defined-benefit plan, the value of the account balance is not necessarily equal to the account balance. Just like any other defined-benefit plan, it must be paid in the form of a joint-survivor annuity, unless that form is rejected by the participant and the participant's spouse. The plan's sponsor invests the assets, just as the plan's sponsor would in any defined-benefit plan, without regard to the interest rate promised under the plan. Also, plan sponsors usually don't understand that in a defined-benefit plan, the assets can actually be less than the value of the total of all account balances. That's because you could have gains and losses in your actuarial funding. Additionally the funding method itself may produce assets less than the value of the account balances. Like any other defined-benefit plan, the actuarial valuation is one where the benefit is projected to retirement, and a present value is taken.

Now, why would any plan sponsor want to introduce a cash-balance plan as opposed to a traditional defined-benefit annuity plan? Well, these are advantages: it's a benefit that's highly appealing to employees. We see the reaction when a cash-balance plan is introduced. It's almost universally positive, unless it's a really terrible

conversion. It addresses many of the key issues that employers are focusing on: mobile work force, employee choice and diversity. A mobile work force is a key issue, because people who walk away from an employer at an early age can take away a sizeable retirement benefit in the form of their account balance; whereas in a traditional final-average-salary plan, they would have a very small benefit. Employee choice is a key issue, because typically in the cash-balance plan, a lump-sum benefit is offered as an option. So, that lump sum gives them the wherewithal to do things that they would not typically be able to do with an annuity. Just for those reasons, the cash-balance plan addresses diversity. In two-worker families, maybe one person wants to have the cash-balance account available, and one might want a traditional benefit.

Another advantage is that it's a chance to use excess pension assets and make it look like the employer is making a contribution; but it really isn't paying a penny. The first cash-balance plan was the Bank of America plan, and that was the situation there. It was a case where there were excess pension assets. The company made it look like it was making a contribution to an account by converting to a cash-balance plan, but because there was a surplus before the cash balance -- the surplus meaning the employer met the maximum deductible limitation and could not make a contribution even after conversion to a cash balance -- there was a maximum deductible that prevented making a contribution. So, still no contribution was required, and yet, 5% of pay was being credited to an account.

For the employee it seems like more tangible compensation, and that has value. We'll see a little bit later the trade-off between other forms of compensation and this benefit.

The career-average approach limits the employer's exposure from rapid salary increases. At times of high inflation, with a final-average-salary plan, a large cost exposure for the employer exists if there are rapid salary increases that have not been funded.

Now, what are the disadvantages? Well, there are almost as many disadvantages to a cash-balance plan as there are advantages. The high payout to early terminations is an advantage to the employee. But the employer may not want to spend its money on employees who are leaving the organization. Also, that high payout to early terminations has cash-flow implications. An employer may have to review how it's investing its assets, because more cash in the form of high lump-sum payments are being paid out early in the plan. It's difficult to reward late hires. A cash-balance account doesn't build up fast enough. Typically, if you want a cash-balance plan that costs the same as the traditional final-average-pay plan that it replaces, or that it would have replaced, then the trade-off is that people who leave early get higher benefits than they would have in a final-salary plan, and people who leave later get lower benefits.

A cash-balance plan does not track final pay and therefore hurts fast-track employees. Under an indexed, career-average plan, everybody's pay is being indexed at the same rate. A fast-track employee who's had salary increases that are higher than the typical employee's has a final benefit that compares poorly with final-average pay. So, it really is a penalty to fast-track employees, and in some of the cash-balance

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plans that were introduced several years ago, that's starting to show up now in benefit payments for new retirements.

The administration is more complicated because besides all the defined-benefit administration you have added the administration of maintaining account balances. Compliance issues are unsettled, and Maria will talk about that. Right now, employers that put in cash-balance plans really don't know whether the provisions they're using will be acceptable in the future.

Transition is difficult. If you can start out with a cash-balance plan, it's rather simple. But, moving from a defined-benefit or a defined-contribution plan into a cash-balance plan is more difficult.

Why would you have a cash-balance plan instead of a defined-contribution plan? We're talking about this here because there seems to be more and more interest in converting existing defined-contribution plans, like profit-sharing plans and money-purchase plans, into cash-balance plans, and there are real cost savings in doing that. The first advantage is that if you simply move a profit-sharing contribution into a defined-benefit plan, then the cost is lower. We did one where a 5% contribution could be provided for 4% of pay in a defined-benefit environment. The reason for that is the investment arbitrage. The defined-benefit plan credits interest at a specified rate, and the rate is usually something a little bit more than a T-bill rate, depending on how close the plan sponsor wants to get to actual investment return. Then the plan sponsor goes out and invests in a diversified portfolio, which produces maybe the T-bill rate plus 3%, 4% or 5%. So, the difference between the interest rate that's credited and the interest rate that's earned creates the savings in moving to a defined-benefit plan.

Now, this is really one aspect of providing defined-contribution account balances in a defined-benefit environment that represents one of the few win situations. The employer pays less. The employee typically gets more, because the employee would have invested in a very conservative manner in a defined-contribution plan. Here the employer is providing that same conservative return the employee would have elected anyway in the defined-contribution plan. But, it's making more money because of the way it invests its assets. So, the employee gets the same or better. The employer pays less, and it's all done through investment return.

Now, also from the employer's perspective, if the employer is choosing the investments in a defined-contribution plan, the embarrassment of having a defined-contribution plan that declines in value is avoided. Of course, there is the advantage of not having the real account recordkeeping. You do have to keep account balances in a defined-benefit plan when you use a cash-balance plan, but not with the same kind of allocations that you do in defined-contribution plans.

Now, what are the disadvantages of providing cash-balance versus defined-contribution plans? There are no loans or in-service withdrawals. You can have loans in a defined-benefit plan, but as you know, it's much more difficult to do so in a defined-benefit plan because of the fact you don't have in-service withdrawals and you need collateral for loans. There's no investment choice. The employer simply decides what the crediting rate is. The employee doesn't get a choice. PBGC

premiums are avoided in a defined-contribution plan. There is the administrative expense of defined-benefits plans: actuarial valuations, joint-and-survivorship rules, etc.

So, why would anybody want to put in a cash-balance plan? If you have a young, mobile work force, a cash-balance plan gets a very positive reception. The second reason is that if you have surplus plan assets, and many of the employers that have gone to cash-balance plans have that situation, the employer can make it look like there is a contribution. A cash-balance plan also might replace a defined-contribution plan or it might replace salary increases. IBM actually added a cash-balance plan to its pension plan, a cash-balance feature of something like 3%, although it was a more complicated formula than that, with the idea that that could replace salary increases at the rate of 3% (or something like that). It actually is a way to replace salary increases. If your plan is overfunded, it doesn't cost you anything. So, those are all of the reasons why you might have it.

Now, what's the design? The simplest design starts with a flat percentage of pay. It's not special. A specified percentage-of-pay contribution for all people is the simplest kind of cash-balance plan. Everybody gets 5% of pay credited to his or her account. We have seen and worked with plans that are integrated, have age-related formulas that are integrated, and plans that take service into account. In one of these plans, the contribution is actually a grid, by age, service, and salary, because it's integrated. On top of that plan, there is another cash-balance plan that was added to take care of late hires because late hires couldn't get big enough benefits. So, you can make these plans as complicated as we make defined-benefit plans to get to the kind of result that you want.

Now, there are cash-balance variations. One is a full cash-balance plan where the entire plan is a cash-balance plan, and there are no other features in the plan. The second is the cash-balance plus annuity. That would be the IBM plan, for example, where you keep your old annuity, or replace it with a smaller annuity, and add a cash-balance feature. Some argue that that keeps the best components of each kind of plan. The third type is the larger-of formula. In a defined-benefit plan, you can have the larger of the cash-balance plan or the old annuity formula. Now, this is often an approach that's taken in transition when you're transitioning from a final-salary plan to a cash-balance plan. Some employers keep the old, final-average-salary formula just for a short time. This also addresses the short careers and the late hires.

Now, in making the transition from a final-average-pay plan to a cash-balance plan can you convert the annuity to a cash-balance account? How do you start out? Well, one way is a hypothetical, full-career starting balance. If you were going to have a 5% cash-balance plan and you started it some time after you had a plan in effect, then you could actually create an account balance for each employee, as if the plan had been in effect for that employee's full career. Go back and look at the employee's salary during his or her full career, track what the interest rate would have produced, and start out with an account balance.

The other way to do it is to just use the prior year present-value of accrued benefit (PVAB) as a starting balance, or use the prior year PVAB plus some special interest credit as the starting balance, or use an age-related contribution or an age-related

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contribution plus adjustments. When you convert from a final-average-pay plan to a cash-balance plan, older employees will get less under the cash-balance plan, and we want to preserve their benefits. So, the tricks in preserving their benefits are to use the age-related contribution and the age-related contribution plus interest adjustments.

An example is the Xerox plan; this was probably the most complicated kind of situation, and it is very interesting. It saved millions of dollars, which was a savings that was very well received by that organization, and people did not really get less.

Its old combination of retirement plans was the larger of a defined-benefit promise of 1.4% of pay times service, or a 5% contribution to a profit-sharing plan. But, it was a floor-feeder plan, and that meant that the profit-sharing plan was really the basic retirement vehicle. Five percent went in there each year. It was invested in general fund assets, a diversified portfolio. The 5% was the basic retirement vehicle. The defined-benefit plan originally only guaranteed that whatever happened, if there was a crash in the market or pay didn't go up, and there wasn't enough money in the defined-contribution plan to pay at least 1.4% of final average pay, then the defined benefit would kick in the difference. So, the whole benefit was paid from the profit-sharing plan, and the defined-benefit plan only paid to make up the difference, if it was necessary.

Xerox decided to put this combination of benefits into one defined-benefit plan. So, it transferred the profit-sharing account into the pension plan. Xerox simply said that what was occurring before was that the employee got the larger of the 1.4% final-average-pay formula or this 5% account, as it's now a cash-balance account. The start of the cash balance was the 1/1/90 profit-sharing account, when this plan went into effect. It became the beginning of the cash-balance account for purposes of this comparison, and that was credited with 5% further contributions each year and was credited at the T-bill plus one percent rate. But in the transition, it could not simply transfer the profit-sharing plan and make it into a defined-benefit plan. It had to continue the features of the defined-contribution plan for the amount that was transferred. So, now it ended up with this three-part formula. It's the larger of the 1.4% formula, the 5% cash-balance account accumulated at the T-bill rate plus 1, but it still has to keep account of those profit-sharing balances that were transferred and track actual investment return, because that's a feature of a defined-contribution plan that could not be taken away. So, it still has to track actual investment return, and if the market had gone up by 30% in the year or two following the transition, then it could be that the balance that was transferred, even though it doesn't get any further contributions, because it had such high investment return, became the larger of the three benefits.

Interestingly, when this came up, just to go back to the consulting challenges, the head of human resources came to the group redesigning the plan (this was a time when it was a compliance redesign), and said Xerox wanted a plan that was simple, that would cost no more to the company, and that would provide no less to employees. Well, that's a fairly difficult challenge, and simplicity went out the window.

The next example is one that we're working on now, actually, and we will still have some of these issues up in the air. A company currently has a defined-benefit plan.

It's 1.25% of final-average pay times years of service. It also has a defined-contribution, profit-sharing plan that's paid in addition of 6% of pay. Now, the proposed new formula is that it wants to change its 6% profit-sharing plan and bring it into the pension plan. It is not going to move balances, but it wants to make no more contributions to profit sharing. It is going to just make a contribution in the form of a cash-balance account. So, the proposed new defined-benefit alternatives – remember, no more employee profit-sharing account – is that it will pay the larger of a 10% contribution invested at the T-bill rate plus 1. That's the cash-balance piece. It is 10%, because it's replacing the old 1.25 final-average pay plus the 6% profit sharing. The 10% really reflects the combination of those two things. So, the employees get the larger of the 10% contribution invested at the T-bill rate plus 1 and 2% of service times the final-average-pay annuity. The 2% is higher than the 1.25%, because it's the combination of the 1.25% and the 6% profit sharing.

Now, if you look at that combination of formulas, the 10% contribution is going to be paid to the people who terminate early, because that will be larger than the annuity, and it's much more than the young people would have gotten under the old formula of 1.25% of final pay plus 6%, because the 1.25% wasn't worth anything when they terminated earlier. So, people who terminate early get more than they would have gotten under the old combination of things. But the 10% provides less than the old combination of benefits to people who stay to retirement. So we said they'll get the 2% formula. They'll get the 2% of service times final-average pay, which is still less than they would have gotten under the old formula, but not that much less than if we had just left them with the 10% cash-balance account.

Here the transition is difficult, because we're not transferring the profit-sharing account. So, these are the choices. One choice is to have a future-service-only approach. First let me explain why the transition is difficult. It's not obvious. We changed the pension formula from a 1.25% annuity-type formula to 2%, and that works for a full-career employee under the new combination of plans, because a full-career employee or a new employee hired would never have gotten those profit-sharing contributions. An employee retiring tomorrow has a profit-sharing account balance already. Yet, that employee retiring tomorrow would still be eligible for the 2% formula. If you just had this replacement formula, the person who retired tomorrow would get a windfall. He or she would get their 6% account balance that they had in the profit-sharing plan, plus a full 2% formula in the pension plan.

So, how do we smooth out that windfall to people who retire the day after or even several years after the transition? One approach is to go to the future-service-only approach. When we look at the combination of formulas, we say the larger of 2% final salary or 10% contribution applies only to future service. But, when we look at the past service benefit, then the employee still only gets 1.25% for the final-average-salary piece. So, in effect, for employees going up to retirement, you determine how many years of past service they had. They get 1.25% times past service, 2% times future service, and all that times final pay. That's one approach. None of these are perfectly simple.

The full-career approach would be to make believe this new plan was in effect for all years of service. So, in that case, you'd have a hypothetical beginning account balance, going back as if the 10% contribution had been in effect for all the years,

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and you compare that with the 2% for all years of service times final average pay. But, when you get that 2% of final-average-pay formula, you would have to subtract off the value of that 6% profit-sharing account that represented the additional benefit.

A floor-feeder approach is just a variation of this. As I said, none of these are beautiful in terms of simplicity, and employers in this case may very well end up saying they don't care if there's a windfall; they want to make this plan simple. So what if the guy who retires in the next couple of years will get more? There are very many trade-offs between simplicity and perfect elegance in terms of equity.

I'm going to let Maria talk about compliance. I just want to mention a few other things in terms of plan design. To do the plan design, particularly when you're doing a transition from a final-average-pay plan to a defined-contribution plan, it's very important to do benefit projections under the old plan and under the replacement plan to see who's getting more or less and where all your problems are. Then you can figure out solutions based on what will happen when you make the change. When you do these projections under the old plan and under the new plan, you need to do them for all ages of retirement, for all salary levels, for all service levels, and also for all termination ages, because it affects people who would terminate at young ages very differently from people who terminate at older ages. You end up with a thick book of comparisons, but it really does help you through the design process.

MS. SARLI: As Dale said, I'm going to go through the compliance issues, and she mentioned the fact that there are some unsettled issues. You have to remember that when the rules were written for defined-benefit plans, they weren't thinking about cash-balance plans. They didn't have them in mind. For the most part, cash-balance plans satisfy the rules very nicely. There are a few problem areas. But, there are many plans out there covering many people. The IRS recognizes the validity of the concept. It had a safe harbor in the final 401(a)(4) regulations. It does have a ruling project underway. We anticipate that there will be a revenue ruling or a revenue procedure, something along those lines, eventually laying out the rules for cash-balance plans in some of these areas that might be unclear right now.

The first thing we need to look at is what is the definition of accrued benefit. In general, you need to define an accrued benefit as an annual benefit commencing at normal retirement age. Well, in the typical cash-balance plan, you can't tell at any point in time what somebody's annual benefit commencing at normal retirement age is, because it depends on what the level of interest credits is going to be in the future, which is usually based on some outside index, like T-bill rates, and also on the index that you're using to convert the account balance at retirement to an annuity. But, you don't really need to be able to say what the dollar amount of accrued benefit is for people at normal retirement age. You really just need the methodology for determining it. If the methodology is in the plan, then you have a definitely determinable benefit, and that's all you really need.

In particular, if you were to look at somebody's account balance now, run it up to retirement at the current interest-credit rate, and convert it to an annuity at the current rate, that is not something that's a protected benefit. Only the value of the index from time to time in the future is protected.

The next rules that we're going to look at are the benefit accrual rules. Most cash-balance plans satisfy the 133.33% rule. The way you demonstrate that it satisfies it is to take the pay credit, run it up to retirement with your interest credits, and convert it to an annuity, so you get an annuity accrual for each year. You then can compare that annuity accrual and make sure that it's not, at a later age, more than 133.33% of what it is at an earlier age. The interest credits that you would include there would only be interest credits that are 411(d)(6)-protected; that is, only interest credits that are payable even after termination of employment, if somebody leaves and leaves their money in the plan. Some plans have what's often called "double-indexing," where you get a higher interest-credit rate while you're employed than afterward. Those extra interest-credit rates are not 411(d)(6)-protected. They're not earned when the pay credit is earned, like the protected interest credits are. You have to watch out for those if you have too high a level of double-indexing, because in that situation, because of the double indexing, the extra increase in the account is earned in the year that that interest credit applies. Therefore, somebody who has a lot of service, is older and has a big account balance is getting a big accrual in that year, and that may be impermissible back-loading if that's too great.

The biggest outstanding issue is probably 417(e). In general, of course, we would like the account balance to always be at least equal to the 417(e) minimum lump sum. That works if your interest-credit rate is low enough. But, in the typical plan, if you take the current interest-credit rate, project it forward, and then discount back at PBGC rates, you're going to wind up increasing the account balance, and you're going to increase it the most for the youngest participants, because of the fact that the PBGC rates are select and ultimate, and you're applying a basically low interest rate to young participants when you discount back.

That's really the crux of the problem. The problem is that you're being forced to apply an inconsistent set of assumptions. You're projecting forward your account balance, based on essentially your current interest-credit value. So, you're assuming that the interest rate environment stays the same. When you discount back, you're using PBGC rates that assume that the interest environment is going to drop over the next 15 years. If you didn't have that inconsistency, this wouldn't be nearly as much of a problem as it is.

Let's step back a moment from the mechanics and just think about whether this should be a problem and what the motivation was for 417(e) to begin with. Well, Congress was concerned that there were defined-benefit plans in which people were guaranteed a particular level of annuity, and that expectation of that annuity was basically being thwarted, because some plans might cash that out at a somewhat high interest rate level, a rate that wasn't really realistic, that a participant couldn't go out and achieve on his own. That doesn't really happen in a cash-balance plan. In a cash-balance plan, what's guaranteed is this lump-sum amount and the ability to convert it to an annuity at whatever the interest rates happen to be from time to time. So, you're not thwarting somebody's benefit expectation if you pay the lump sum equal to the cash balance, the way you might be if you cashed out a defined annuity at a high interest rate. So, for that reason, 417(e), as it is, shouldn't be applied directly to a cash-balance plan, in my opinion.

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What's going to happen if it is? Well, plan sponsors are going to wind up paying out bigger lump sums than they intended. So, they're simply going to cut back the formula to the point where they're paying what they intended, to the point they're paying out a lump sum that they think is appropriate. That's just going to hurt older participants because the pay credit or the interest credit will be cut back or both, and the young participants are going to get that windfall when the 417(e) conversion is done. The older participants aren't going to get it, at least not to the same extent. So, for policy reasons, there really is a good reason to solve this for cash-balance plans.

A couple of ways it could be solved: the thing that makes the most sense to me is to just set up a corollary to 417(e) for a cash-balance plan. In a traditional plan you wanted to make sure that people who were promised annuities got a fair deal if they took another form, if they took a lump sum. So, for a cash-balance plan you just do the same thing. You promised a lump sum, so just set some sort of standards on the annuity conversion rates to make sure that someone who takes an annuity gets a fair deal. If you don't want to change the way 417 operates, and you just want to tinker with it to make it work, there are a few approaches. First, just get rid of this discontinuity, this inconsistency in projection, by allowing select-and-ultimate projection rates. If you are going to assume interest rates are going to decline in the future for discounting back then assume that they're going to decline in the future for projecting out the current interest-credit rate. This way any plan whose current interest-credit rate wasn't higher than the PBGC rates, and many plans do fall in that category, would not wind up with a lump sum bigger than the cash balance.

Another approach is to do what was done with the employee-contribution issue. If you remember when the rules first came out for crediting new higher interest rates to employee contributions, there was a problem in that you were supposed to take the employee-contribution account projected out at these very high interest-credit levels, discounted back at PBGC rates, to figure out what portion of the benefit was employee provided. That was statutorily fixed. Now, you project it out at 417(e) rates and discount it back at 417(e) rates so that you don't have that problem. Or, even simpler, there could just be a rule saying that for a reasonable range of interest rates, something from cost of living up to maybe T-bill plus 1-2%, just deem that those rates over the long term are not higher than PBGC rates, and any plan in that range would be okay.

If a plan sponsor is not optimistic that this is going to be fixed or is just a little nervous and wants everything cut and dry and wants to have a plan document that clearly satisfies the rules right now, there are a few approaches they can take. They can have either no interest credits that are guaranteed or low-interest credits that are guaranteed, so that it always will be less than the PBGC rates, and then you could give ad hoc increases periodically. There are some problems with giving ad hoc increases, which we'll talk about soon. Another approach would be not to allow lump sums at the young ages. Just say that if you want a lump sum from the plan, you have to leave the cash balance in until you are age 55. It takes away a little bit from the employee appreciation of the plan. But, it doesn't eliminate it entirely.

Many plans have determination letters, and it's not clear from looking at the plan document that you would get that sort of result, where you would wind up with a

lump sum that is larger than the cash balance. So, many plan sponsors just have their determination letters and they're going to rely on them. I'm not sure that gives you all that much protection. Other people have suggested defining the accrued benefit as being equal to the cash balance instead of the annuity commencing at normal retirement age. I don't really think that works either, because I think that even if you do that, you still have to demonstrate compliance with all the rules on the basis of an annuity commencing at normal retirement age. Some people have even said to just get around the problem by defining normal retirement age as being 21 and 5 or 25 and 5. That is actually a possible approach that would eliminate that projecting and bringing back.

The next issue is ad hoc interest credits, which are fairly common in cash-balance plans. There are two types: prospective and retroactive. For the prospective type, let's say your plan has as its interest-credit basis the T-bill rate in effect on November 30 of the preceding year. This is the rate that applies to the next year. The retirement board gets together in the beginning of December, looks at the rate, decides it's not really as high as they want to pay, so an amendment is put in for the coming year. They're going to pay T-bill plus 1% instead of T-bill. What they're intending to do is increase it just for that year. They're not intending to say that it will be T-bill plus 1% for all future years. Be careful about the 411 regulations, which say that if you have repeated amendments that are basically the same amendment for short periods of time, but consecutive periods of time, that higher benefit level will be deemed to be part of the plan formula. So, if every year you increased it to T-bill plus 1%, never varied it, never skipped a year, you would probably put yourself in a situation where that would become part of the plan formula and would be guaranteed for all future years, at least with respect to the current balances.

Another approach is not to do it prospectively, but to do it retroactively. Just like any other defined-benefit plan, you can adopt amendments at any point, increasing benefits under the cash-balance plan. So, you could just increase everybody's account balance to about the level it would have been if you'd given a higher interest credit in the past. It isn't back-loading, because it's an amendment. You do have to make sure you're satisfying the 401(a)(4) rules on plan amendments. But, those rules are mostly related to timing of an amendment. They want to make sure that you're not in a small-plan situation, for example, waiting until most of the nonhighly compensated employees terminate employment and then giving an amendment that mostly highly compensated will benefit from. In a larger-plan situation that rule is not going to be much of a problem. There also might be some implications of the *SFAS 87* with retroactive amendments. We're going to talk about that a little further along.

Optional forms of benefits -- just like with any other plan, the qualified joint-survivor annuity (QJSA) has to be the most valuable. Most cash-balance plans tend to subsidize the annuity options for a few reasons. First, they don't want the participant to take his or her lump sum and go to an insurance company and be given a bigger annuity than what the plan offered. Many times the plan sponsor wants to encourage annuities or simply wants to encourage people to leave money in the plan, because the sponsor feels that even with some subsidy, he or she can earn a better return on the money if it's left in the plan. You will usually see that even if you subsidize annuity options much of it winds up not costing all that much because most participants are going to take the cash balance anyway.

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Of course, you can't pay the lump sum above \$3,500 without consent, and you have to offer an immediate annuity. So, if you offer a 30-year-old a lump sum, you have to also offer a life annuity if he or she is single, or a joint-and-survivor annuity if he or she is married. That turns out to not be a problem because they never take it. Many plans are even written where, instead of offering a level-life annuity, they only offer increasing life annuities, life annuities that go up with the level of interest credit every year. The initial monthly amount for someone who's 30, when you offer him or her an increasing annuity, is so small that nobody will ever take it.

For the preretirement survivor benefit, most plans simply pay the full account balance on death. Most plans will pay it directly to the spouse. They only have to pay 50% to the spouse. You'll see some plans that will allow the employee to elect another beneficiary for 50% of the remaining account balance without getting any waiver or anything from the spouse.

You do have to be careful if you converted from a traditional defined-benefit plan, if you have a frozen accrued benefit, or to a greater extent, if you have a dynamic grandfather provision in the plan. It could be that the 50% survivor benefit on that old plan's grandfathered benefit is bigger than 100% of the cash balance, particularly if you have a very heavily subsidized early-retirement feature that you didn't build into the opening cash balance or if, in some cases, the spouse is much younger than the participant, and you're not really charging for that in the conversion. So, that's something that doesn't apply very much, but it needs to be checked.

Section 415: First of all, there is commencement after Social Security normal retirement age, or before age 62. After Social Security normal retirement age, you're supposed to adjust the limits by using the lesser of 5% and the rate that the plan uses. For commencement before age 62 you would adjust by using the greater of 5% and the rate the plan uses. Cash-balance plans do not usually have explicit early-retirement factors or deferred retirement factors, but there is something implicit in the interest adjustments that people are getting and the annuity conversion rates that they're getting if they stay and retire late or if they retire early. So, the question is, do you automatically use 5% because there's nothing explicit in the plan, or do you use what's implicit in all the conversions with the 5% limits applied? I think you use what's implicit in the conversions, even though it's a little more complicated.

Now, with regard to optional forms, the question is, when can you pay the lump sum? IRS Notice 83-10 is clear to me; if you could pay the annuity, the straight life annuity, that the person is offered in lieu of the lump sum, then you can pay the lump sum.

401(a)(17): First of all, obviously, you have to limit the annual pay to which you apply the pay credit. But, cash-balance plans are indexed benefits, and there really isn't much guidance as to how you apply these sorts of limits to benefits that are indexed. For example, if you have accrued average-pay updates on benefits that have been limited by 401(a)(17), or if you have the interest credits on a cash-balance plan, I tend to think that an interest credit in a cash-balance plan is okay if it's 411(d)(6)-protected, because it was earned when the pay credit was granted. So, it's part of the benefit accrual in the year the pay credit is granted, and the pay is limited by 401(a)(17) at that point. We do know from the 401(a)(9) regulations that

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it is okay in general to pay increasing annuities. Now, the rest of 401(a)(17) is interpretation, because we don't really have any hard and fast rules.

With regard to current pay credits, the question is, to what extent are the future interest credits okay? As I said, if they're 411(d)(6)-protected, I think they're okay. They should not be based on pay. They should be based on some outside index, and they should probably be based on a reasonable investment-type index. It probably shouldn't be too high, even if they are 411(d)(6)-protected. I might be a little concerned if there were 10-15% guaranteed interest credits that were increasing this benefit that had been based on a limited pay.

Now, we talked about the current-pay credits. What about the portion of the cash balance that came from pre-1989 benefits? Let's say you converted from a traditional defined-benefit plan. On December 31, 1988, you had an accrued benefit that reflected pays above \$200,000. What sort of things in your cash-balance plan could cause you problems? As I said, I think double-indexing, if it's too high, is a problem. Beyond that, I'm sort of analogizing it to the way it works when a 415 limit changes. When the 415 limits change, and you've already accrued a benefit that's in excess of the new limits, you're allowed to keep that old benefit. In fact, you have to preserve that accrued benefit. But, you can't go changing the plan in such a way that you are enhancing the value of that benefit. You can't change annuity conversion rates in such a way that you're enhancing the value of this guaranteed benefit. I think the same thing would apply under 401(a)(17). So, you would have to be careful if you were changing the actuarial equivalence basis of an option. You would have to be careful if you were converting to a cash-balance plan afterward, so that in doing the conversion and applying the interest credits, you weren't somehow increasing the value of that protected December 31, 1988 accrued benefit.

There are a few ways you could do that. You could track the pre-December 31, 1988 benefit separately if it did include pay over \$200,000. Then, when it came time to pay, convert it to an annuity and compare it to the annuity that had been accrued and guaranteed at the time of conversion. Make sure it's not bigger than that, and reduce it if it is. Then, add it to the account that's based on pay credits after 1988. Another approach would be to simply set up an account that's based on pay that is limited. You could then combine those two approaches by paying the greater of those two accounts.

Age discrimination -- I don't really think there's much of a problem with cash-balance plans. One thing that people originally thought might be a problem was 411(b)(1)(h), which basically says that you can't have decreasing accruals because of increasing age or service. In fact, that's sort of what you have in a cash-balance plan. When you grant the pay credit, you're also granting all the interest credits up to normal retirement dates. So, the actual annuity payable at normal retirement dates that you're granting each year is going down as you have fewer years to retirement. But, the 401(a)(4) preamble has indicated that it is not going to apply that provision against cash-balance plans in effect. So, that's not going to be a problem.

The Age Discrimination in Employment Act (ADEA) of 1967 happens to have the same provision. But, under ADEA, normally you look at something like an equal-cost principle. If you're giving a 4% pay credit to a younger employee and a 4% pay

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credit to an older employee, it's going to be okay, and they're not going to be looking at the projection of it. The Older Workers' Benefit Protection Act simply got rid of that exception that used to exist under ADEA for bona fide employee benefit plans that were not a subterfuge. So, again, there is some concern there. But it's okay on an equal-cost principle if you're not actually giving a smaller percentage of pay to the older person than to the younger person. I don't think it's a problem. There was a case, the Hamilton case, that basically clarified that it is okay to discriminate in favor of older people. For example, someone who's 40 and someone who's 60 are both within the protected class under ADEA. But you can give a higher credit to someone who's 60 than to someone who's 40.

Some issues on implementation -- there's the 15-day notice that's required whenever you're cutting back benefits. If you're going from a final-average-pay plan to a career-average-pay plan, you're almost certainly cutting back benefits for someone. In most cash-balance plans, because of what Dale was describing, someone somewhere is getting hurt. So it's a good idea to always assume you have to give the notice. Most plan sponsors don't give a notice per se. They just get the communication material describing the new plan out in time, and that satisfies the 204(h) notice. You also have to make sure that, to the extent that you're not building them into the opening balance, you protect any subsidies that had been accrued on the prior-formula accrued benefit.

For most cash-balance conversions, you won't build in the full, early-retirement subsidy, and you won't build in the 417(e) value of the benefit, because then you're giving away those subsidies to people who don't terminate. The traditional plan gave them away to people who actually terminated. So, for people who terminate, within a year or two afterward, oftentimes when they get those subsidies it will turn out that the prior-formula accrued benefit is bigger, and you have to protect that.

In the final 401(a)(4) regulations, there was a safe harbor. They've repropounded the final regulations. But, when they repropounded them, they reserved the section on cash-balance plans. That technically means that they've made no changes to it. If they adopt the repropounded regulations as is, what was in the original final regulations on cash balance stays. We're hoping that this is going to be changed in connection with this IRS ruling project that I mentioned earlier. But, as it stands now, there are two choices for a safe harbor. If you have uniform pay credits for everybody, then no testing is required. If you have nonuniform pay credits, pay credits that are graded by age, for example, then you just have to do a defined-contribution-type general test on those pay credits.

Within the safe harbor on either type, you can have DC-style integration. But, to use the safe harbors, you have to satisfy a list of restrictions, and very few current plans really satisfy these restrictions. If you were starting up a plan from scratch, maybe you could design it to satisfy them. But, as it stands now, I don't know of any cash-balance plans that are going to satisfy these restrictions. For one thing, you have to use one of the listed interest-credit rates that are in the regulations, and they're not comprehensive, and you can't use rates that are clearly between rates that are listed in the regulations either. You can't subsidize annuities, which most plans do, unless you're using the uniform accrual safe harbor. You can't use age- or service-weighting of the pay credits unless it's basically a fresh-start cash balance in which you don't

have an opening balance. If you do have an opening balance, you only have two choices. It has to be either the 417(e) lump-sum value of the prior-plan accrued benefit, or it has to be one of those retroactively reconstructed cash balances, as though the cash-balance formula had always been in effect. In fact, it would have to be as though a level pay-credit cash-balance plan had always been in effect. You do have to apply 417(e) rate and wind up with lump sum values that are bigger than the cash balance to fit in the safe harbor.

Luckily though, because a cash-balance plan gives so much greater value than the traditional plan does to younger people who tend to be lower paid, most plans just fly through a general test. Because of this, you can have significant grandfathering for the older participants and still satisfy the general test easily, assuming, of course, that you have a reasonable level of interest credits that are 411(d)(6)-protected, so that you can actually say that they accrue when the pay credit accrues and use them in the analysis.

One thing that is good: in the original regulations, not specifically related to cash-balance plans, but just generally, it said that if you had an index in a plan to determine benefits, you had to assume the current value of the index when you projected your benefits out, or you could also use a recent average. But, if interest rates changed a lot, your test results would be jumping all over the place. They've changed that. Basically, the new regulations aren't nearly as specific as to how you do certain methods of calculation, so you can just use something reasonable now. You don't have to use the current rate every year.

Accounting issue – the first issue is when you change to a cash-balance plan, particularly from a final-average-pay plan to a cash-balance plan, you probably are going to have a reduction in liabilities because you're going to what is essentially a career-average-pay plan. That's not always the case. If you have a lot of grandfathering, that won't be the case. But, if you do have a negative amendment under *SFAS 87*, you offset negative amendments against any positive amendments that you have, or against any remaining transition obligation that you have, and you could do that in a number of ways if you have more than one such base.

Paragraphs 167 and 169 have to be looked at in situations where you have many repetitive amendments. One of those paragraphs is sort of similar to IRC Section 411. It says that if you continually amend a plan the same way, repeatedly, that's really part of the plan formula, and you should be expensing for those changes in advance, rather than as amendments when they occur. The second one is a little more likely to occur, I think. Let's say you have a situation where you have a career-average-pay plan and every five years you're updating the career-average-pay plan. You're not promising you're going to do it. Participants understand that you're not always going to do it. But, you do it often enough, and they've sort of come to expect it. Well, go back to the reason why under *SFAS 87* you're allowed to amortize amendments to begin with. The theory is that a plan sponsor would not retroactively increase benefits unless he or she thought they would get an economic benefit out of it, unless he thought that employees would be appreciative and he would get an economic benefit from higher productivity and morale and so forth, over the rest of their future working life, and that's why you can amortize over the future working life.

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Well, if you repeatedly give five-year increases and at the end of five years you don't give it, they're no longer going to be happy that you gave one five years ago. They're going to be upset that you're not giving one now. So, you're not really getting an economic benefit over their future working lifetime when you give a five-year increase. You're getting it for five years. So, if you do things like that, you may be required to amortize it over five years. In a cash-balance plan, if it's an interest credit for one year, you may be required to amortize the cost of it over one year. I haven't actually seen this applied to any plans. But, I think in time, as they get a little more experience under *SFAS 87*, they're going to start applying it.

SFAS 88 issues – first of all, like any other defined-benefit plan, if you pay lump sums that are bigger than the service cost plus interest cost, you have settlement accounting. That doesn't happen very often in the plans I work on, but it does happen much more often than in the traditional plan. Again, it's optional at a lower level of lump sum. You can go through settlement accounting, even if the level is not that high, as long as you do it consistently.

I mentioned before that in many cases people may not actually accrue a benefit for a few years after you convert to cash balance because if they terminated immediately after you converted to cash balance you would have to pay a 417(e) lump sum, perhaps with early-retirement subsidies, and that may not be built into the cash balance. Well, curtailment is the elimination of accruals for some or all future years of service for employees. So, to the extent you have that effect happening in any really material way, it may be a curtailment. I've never seen that applied either. But, if it was really significant, it would be something to look at.

What is the vested benefit obligation? Is it the present value of the benefits at immediate termination, which is essentially the cash balance, or is it at expected separation? In most cases, at expected separation is going to be a smaller number, because of that interest rate arbitrage that Dale was describing. An Emerging Issues Task Force said that either approach was okay.

When you apply the unit-credit funding method to a cash-balance plan, or actually, when you apply it to any type of plan, there are always questions as to what's the right way to apply it. In cash-balance plans, there is no right way, there is no correct type of attribution under unit credit. It really depends on whether the formula is front-loaded or back-loaded. Cash-balance plans can be front-loaded or back-loaded, depending on what your interest-credit rates are, or what your salary scale is, and whether your actual pay credits are back-loaded.

First, let's step back and review what the requirements are. For funding purposes, any reasonable attribution is okay. So a service proration would be okay. We know that traditional unit credit is okay for a career-average-pay plan. This is essentially a career-average-pay plan, even though it's indexed. But the indexation is earned in the year that the pay credit is granted. So I think it's also okay for a cash-balance plan. Another type of approach that I've seen used is to prorate on accrual factors. Essentially you take the pay-credit rate, run it up to retirement with your interest credits, convert it to an annuity, and get an annuity accrual for each year. The numerator would be the sum of those accruals up to the valuation date, and the denominator would be the sum of the accruals up to the event. That would give you

a bigger proration fraction than a straight-service proration. So, it front-loads the accrual more than a straight-service proration does. It has an advantage in that it always produces a larger projected-benefit obligation than an accumulated-benefit obligation, which some of the other methods don't.

Many people also think that for funding purposes at least, you should always make sure your reserve is at least the sum of the accounts, and maybe higher if you have some other bells and whistles in the plan. For *SFAS 87*, the requirements are that the attribution should follow the plan formula, unless it's significantly back-loaded, in which case you're supposed to use the straight-service proration.

One point I mentioned before is the fact that people don't accrue benefits for a year or two in some cases under a cash-balance plan. The minimum projected benefit obligation (PBO) for particular events should be the 417(e) value. So, when you first convert to a cash-balance plan, your PBO might be a little elevated and your service cost a little bit depressed for a couple years until that works its way out.

When is a cash-balance plan front-loaded or back-loaded? Well, each year, as you get one year older in age, your benefit payable at the normal retirement date is a little bit lower, because you have one year less of interest credits. But, you also have a higher pay to which your pay credit is applied. So, if your salary scale and your interest credits are equal, then those two things basically cancel out, and you are accruing a flat-dollar benefit, payable at the normal retirement date each year. So, in a situation like that, where your salary scale and interest credits are close, you might want your PBO to equal your accumulated benefit obligation (ABO) or something close. A straight-service proration produces that. Accrual factor proration, because it's very much front-loaded, doesn't produce that; it produces a larger PBO.

If your salary scale is bigger than your interest credits, then the accruals that you're earning later are worth more in terms of an annuity at normal retirement date. So, that's essentially a back-loaded formula, and if you do a straight-service proration on a back-loaded formula, your PBO will always be bigger than your ABO. That accrual-factor proration that I was referring to is going to produce an even larger PBO, because it's applying a larger proration fraction to that same projected benefit.

If your interest credits are bigger than the salary scale, in effect, your formula is front-loaded, because the early accruals are going to be worth more than the later accruals. If you have a front-loaded formula, and you apply a straight-service proration to it, you're going to wind up with your ABO being bigger than your PBO. In most cases, then, you should reset your PBO to at least be equal to the ABO. Again, the accrual-factor proration is always going to produce a PBO that is larger than an ABO, and in this case, that's probably what you want. The formula is front-loaded, and it's based on pay. Under *SFAS 87*, you probably want something that's bigger than the ABO for a front-loaded formula that's based on pay. If you do a straight-service proration here, you wind up with a PBO that is less than an ABO, and you set it to the ABO. So, using the accrual-factor proration in a situation like this may be the way you want to go.

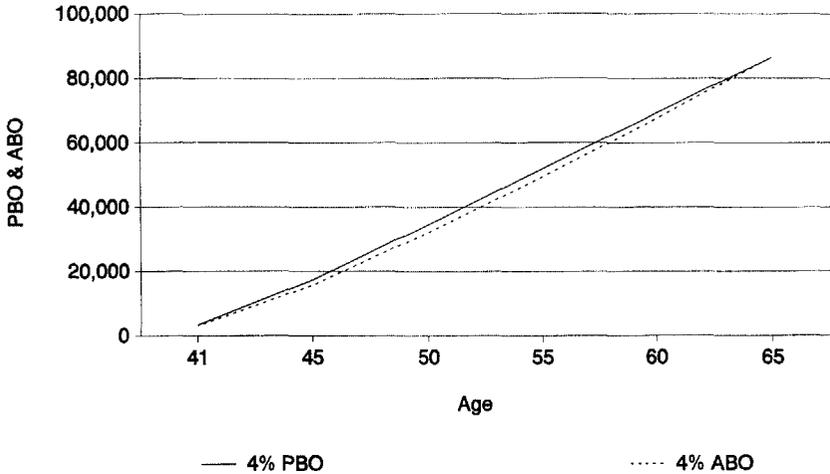
Chart 1 shows a level 4% pay credit using a straight-service proration. Interest credits are less than the salary scale so this is a back-loaded formula. If you apply a

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straight-service proration to a back-loaded formula, the PBO is larger than the ABO, and that's the case here at all ages.

CHART 1
PUC Straight-Service Proration -- 4% Pay Credits

Interest Credits 4%; Salary Scale 5%



Age	41	45	50	55	60	65
4% PBO	3,458	17,292	34,565	51,877	69,170	86,462
4% ABO	3,076	15,678	32,125	49,378	67,477	86,462

Chart 2 shows what happens when the interest-credit rate equals the salary-scale rate. This is the situation that I said was essentially a flat-dollar formula. If you do straight-service proration, the PBO exactly equals to the ABO.

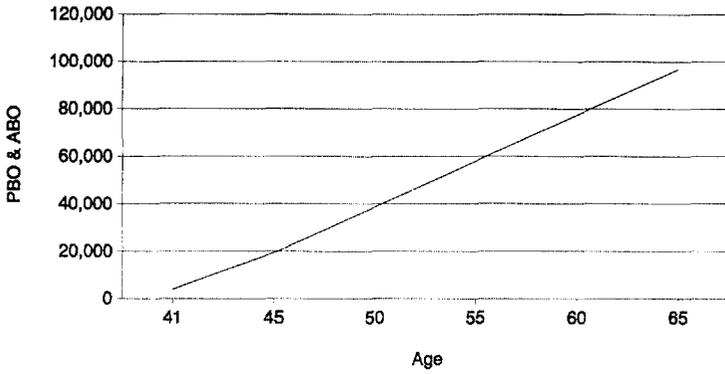
Continue to kick the interest-credit rate up. Chart 3 shows what happens when it's higher than the salary scale. That makes this a front-loaded formula. The PBO should be a little bit lower than the ABO, because if you apply a straight-service proration to a front-loaded formula, you'll wind up with the PBO being smaller than the ABO, and you can see that that's the case here at every age.

Chart 4 uses the accrual factor proration. I have the interest credit being equal to the salary scale, so you can see the difference. When we did the straight-service proration, the ABO equaled the PBO. Here this is giving you an ABO that is significantly larger than the PBO, even though it's a flat-dollar plan. So, you may not want to use it in this type of plan. But you may want to use it in other types of plans.

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CHART 2
PUC -- Straight-Service Proration; 4% Pay Credits

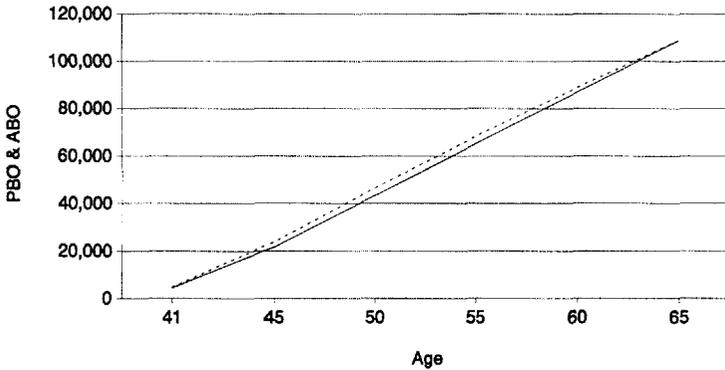
Interest Credits 5%; Salary Scale 5%



Age	41	45	50	55	60	65
5% PBO	3,870	19,351	38,701	58,052	77,402	96,753
5% ABO	3,870	19,351	38,701	58,052	77,402	96,753

CHART 3
PUC -- Service Proration; 4% Pay Credits

Interest Credits 6%; Salary Scale 5%

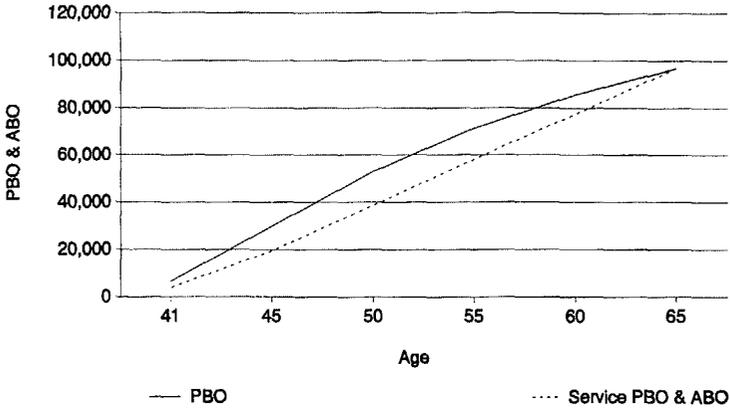


Age	41	45	50	55	60	65
6% PBO	4,346	21,732	43,465	65,197	86,930	108,862
6% ABO	4,859	23,840	46,576	68,259	88,939	108,862

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CHART 4
PUC -- Accrual Factor Proration: 4% Pay Credits

Interest Credits 5%; Salary Scale 5%



Age	41	45	50	55	60	65
PBO	6,538	29,721	53,009	71,255	85,551	96,753
Service PBO & ABO	3,870	19,351	38,701	58,052	77,402	96,753

What about if the pay credits are not level? What about if they're increasing by age or service? Well, if the salary scale is larger than the interest credits, we already decided that that was a back-loaded formula. Now we're making it more back-loaded by grading the interest credits. So, if you do a straight-service proration, you're definitely going to get a PBO that is larger than an ABO. If the interest credits are larger than the salary scale, however, the interest credits being larger will make it front-loaded. The increasing pay credits by age make it back-loaded. So, here it could go either way. There is basically a tug of war between the interest credits, which are front-loading it, and the pay credits, which are back-loading it. So, if you have low interest credits and steep-age grading, you basically have a back-loaded formula, and you have the opposite if you have high interest credits, and you don't have steep age-grading.

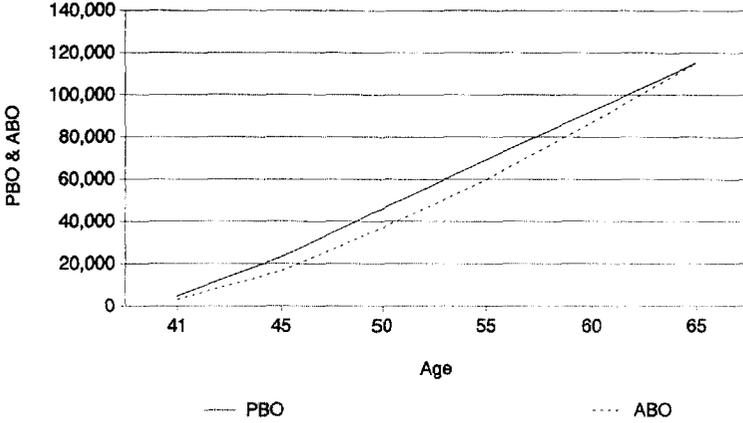
Chart 5 uses a 4%/5%/6% formula. It's 4% for the first five years of service, 5% for the next five years, and then 6% thereafter. We have the interest credit rate being lower than the salary scale. So, this is a back-loaded formula, and the PBO is larger than the ABO, with a straight-service proration.

Now, we're going to kick the interest-credit rate up (see Chart 6), and you can see that the PBO is larger than the ABO. That means the formula is still back-loaded. If you apply a straight-service proration to a back-loaded formula the PBO will be larger than the ABO. Even though the interest-credit rate is higher it's still back-loaded because of the graded-pay credits.

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CHART 5
PUC -- Service Proration; Graded Pay Credits

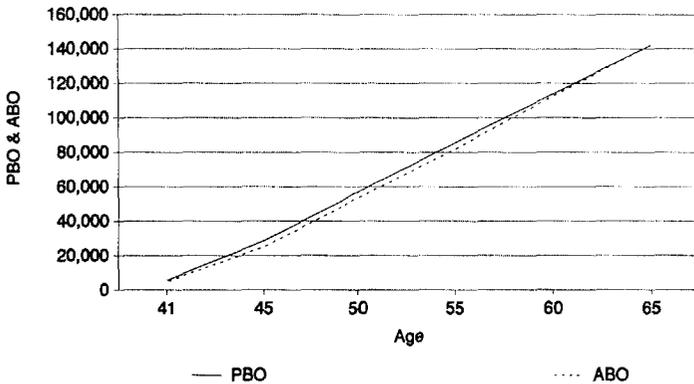
4%/5%/6% Pay Credits
Interest Credit Rates 4%; Salary Scale 5%



Age	41	45	50	55	60	65
PBO	4,604	23,021	46,043	69,064	92,086	115,107
ABO	3,076	16,477	37,036	59,481	86,629	115,107

CHART 6
PUC -- Service Proration; Graded Pay Credits

4%/5%/6% Pay Credits
Interest Credit Rate 6%; Salary Scale 5%



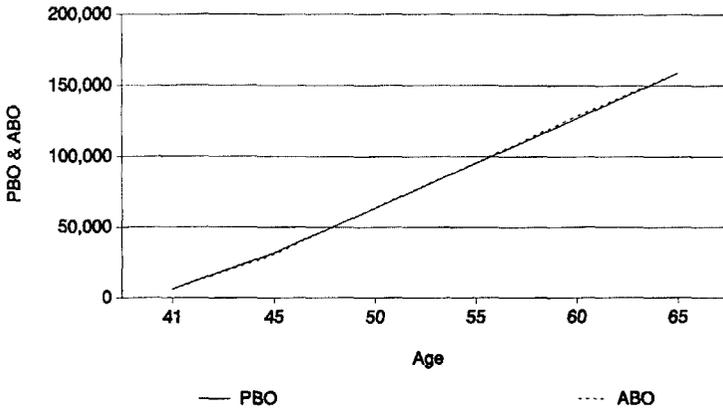
Age	41	45	50	55	60	65
PBO	5,688	28,440	56,881	85,321	113,761	142,201
ABO	4,859	25,009	53,429	81,597	112,617	142,201

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We keep kicking it up (see Chart 7). The interest credit rate is now two points higher than the salary scale; you practically have a flat-dollar formula at this point. Kick it up again to 8% (see Chart 8), and you finally have a front-loaded formula. Finally, the interest credits being so high are front-loading it, irrespective of the pay credits, and if you apply the straight-service proration, the ABO is larger than the PBO. You then probably want to make some adjustments in what you're doing.

CHART 7
PUC -- Service Proration; Graded Pay Credits

4%/5%/6% Pay Credits
Interest Credit Rate 7%; Salary Scale 5%



Age	41	45	50	55	60	65
PBO	6,355	31,776	63,552	95,327	127,103	158,879
ABO	6,087	30,729	64,076	95,590	128,726	158,879

Well, what about accrual-factor proration if you have increasing pay credits by age? The accrual-factor proration always produces a PBO that is larger than an ABO. Does it always produce a PBO that is larger than a straight-service proration? It doesn't always. It's going to produce a larger PBO if the interest credits are high, if it's a very front-loaded formula. If it's a very back-loaded formula, it's going to produce a smaller PBO than the straight-service proration. For most plans, though, it's still going to produce a larger PBO than a straight-service proration because there's a limit to how much you can back-load the formula under the accrual rules.

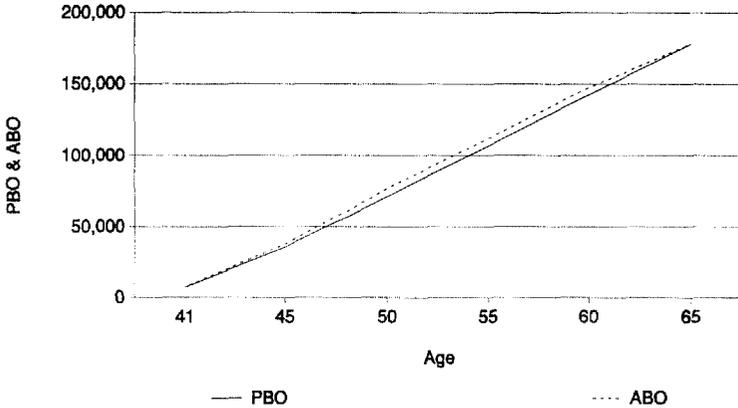
Chart 9 shows the interest-credit rate being 8%, the salary scale being 5%, and the ABO being less than a straight-service-proration PBO. The accrual-fraction proration does give something that's significantly larger, in fact, than both the ABO and the straight-service-proration PBO. I wanted to play around with it to try and get it so it went the other way, so that the service-proration PBO was actually larger, and this formula just barely satisfies the accrual rules (see Chart 10). Five percent, 7.5%, and 10% are the pay credits, and it has a low interest credit of 3%. You can see, at

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least at some of the ages, that the accrual fraction PBO is smaller than the service-proration PBO at age 41-45. When you get to about 50-55, it's about the same.

CHART 8
PUC -- Service Proration; Graded Pay Credits

4%/5%/6% Pay Credits
Interest Credit Rate 8%; Salary Scale 5%



Age	41	45	50	55	60	65
PBO	7,124	35,622	71,244	106,865	142,487	178,109
ABO	7,609	37,691	76,769	111,995	147,376	178,109

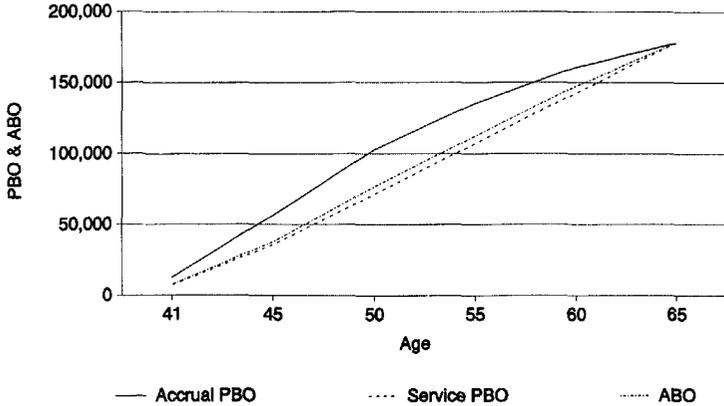
Keep in mind that I'm looking here at one person. You really need to worry about the demographics of your plan and how the formula affects whether something is front-loaded or back-loaded for the people who are actually in your plan. High-interest credits front-load something much more if your population is young than if it's old. So, even though it appears that this is always going to give a larger PBO than a straight-service proration, except in a very unusual case, I think it only appears that way because of who we're looking at. It may be a little more common if you have a group, for example, where the liabilities are really heavily weighted toward older and longer-service people.

There is another accrual-type-factor proration. But, instead of having it based on just the pay credits and interest credits, it's also based on the salary scale. So, the accrual factor that you would calculate at each age is the pay credit rate brought forward to retirement with the interest-credit rate and brought back with the salary scale. This produces a PBO that is always equal to the ABO. Some people suggest using this approach. There are probably problems with it. For funding purposes it probably violates reasonable-funding-method regulations because the salary scale is in the proration. It may also be inconsistent with SFAS 87 requirements because you're not getting a PBO that is larger than an ABO with a pay-related plan.

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CHART 9 PUC -- Accrual Factor Proration; Graded Pay Credits

4%/5%/6% Pay Credits
Interest Credit Rate 8%; Salary Scale 5%



Age	41	45	50	55	60	65
Accrual PBO	12,567	56,499	102,600	135,045	160,670	178,109
Service PBO	7,124	35,622	71,244	106,865	142,487	178,109
ABO	7,609	37,691	76,769	111,995	147,376	178,109

MR. RICHARD M. KAYE: Maria, with respect to paragraphs 167 and 169 of *SFAS 87*, did you mean to imply that cash-balance plans were more likely to have unwritten substantive commitments due to more ad hoc increases, pattern increases, or something like that?

MS. SARLI: Yes. Many plan sponsors have been having ad hoc increases so regularly that it does make me worry a little bit.

MR. KAYE: Ad hoc increases of what nature?

MS. SARLI: For example, every year they may increase the interest rate from T-bill to T-bill plus 1%. That's a pattern that should be broken or varied. There is usually more of a lag between the updates for a career-average-pay plan. They're not usually as regular as some of these ad hoc interest credit increases that I've been seeing.

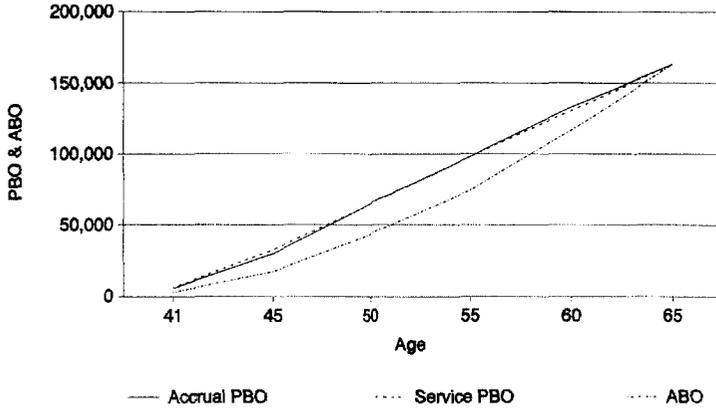
MS. GRANT: One of the other issues that some people say is a problem is that when you do ad hoc increases you have to worry about 415 and the ten-year phase-in and every time you're doing an amendment. (NOTE -- 10-YEAR PHASE-IN NO LONGER APPLIES).

MR. JOHN W. WOOD, JR.: What do you think the PBGC guaranteed benefits are on these plans?

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CHART 10
PUC -- Accrual Factor Proration; Graded Pay Credits

5%/7.5%/10% Graded Pay Credits
Interest Credit Rate 3%; Salary Scale 5%



Age	41	45	50	55	60	65
Accrual PBO	5,805	29,962	65,393	97,875	133,027	163,349
Service PBO	6,534	32,670	65,340	98,009	130,679	163,349
ABO	3,049	17,496	43,670	74,482	116,781	163,349

MS. SARLI: I think that the PBGC guaranteed benefit is the same as what I would call a 411(d)(6)-protected benefit, which is the annuity that you would get by taking the cash balance, running it up with the T-bill rate, or whatever rate is in the plan, and converting it at the index in the plan. The PBGC doesn't guarantee lump sums, as I understand it. Even though 411(d)(6) does protect lump sums, if a plan terminated, I don't think that the lump sums would be protected. I think that the annuity would be protected with those interest credit rates that are in the plan.