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INTERNAL REVENUE CODE SECTION 415 LIMITS

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- o Plan design and funding issues arising from changes to 415 limits, including:
 - Transition rules
 - Adjustments to the \$90,000 limit
 - Combined plan limits
 - Top-heavy plans
 - Problem solving

MR. DONALD J. SEGAL: We are going to have presentations on Section 415 covering problems, situations, comments, and discoveries. We're going to cover both small and large plans, and afterwards we will open it up for discussion from the floor.

MR. STEVEN D. BRYSON: I've been asked to address the unique issues of 415 that apply to small plans, although in the process of going through general descriptions, I will probably end up covering areas that apply to all size plans. The question always comes up, "What is a small plan and how do we define it?" Most people have their own ideas of how large or how small an employee group can be and still be considered a small plan. Some will reference it in terms of who has control over that plan or in terms of the intended permanence of the plan. In other words, is it really a bona fide employee benefit program that's intended to continue indefinitely, or is it simply someone taking advantage of the current tax situation to reduce after-tax income?

My definition of a small plan is any plan in which the principal owners of the plan really control the plan for their own purposes. That adequately defines how we want to look at 415 from the point of view of the small plan.

Let's take a look for a moment at the unique aspects of small plans. The first one that would come to mind is that they are generally top-heavy, probably in many cases, super top-heavy. The person who is responsible for the administration of the plan is generally not very sophisticated in regard to technical matters so he requires a great deal of support from his consultants, whether that be the actuary, the attorney, the accountant or some combination of those three. The decisions that the plan administrator takes tend to be driven by self-interest and are generally curbed only by the law and hopefully by the professionalism of the service providers that he has retained. All of the issues of plan design, coverage, distributions, funding, investments and so forth are going to be driven by the goals of that plan administrator for himself, and the plan will generally continue for as long as the plan can be favorable to the

PANEL DISCUSSION

owners. That pretty much establishes, at least in my mind, the kind of plan that I want to address. But as I said before, many of the items that I will speak about will apply to large plans as well.

First, the maximum benefit is going to be equal to the lesser of 100% of high three average compensation at any age and \$90,000 per year at the Social Security Normal Retirement Age (NRA). That 100% of high-three compensation is going to be prorated for less than 10 years of service, as that term is defined in the plan for benefit accrual purposes, and the \$90,000 limit is reduced for less than 10 years of participation, also as the plan document defines that term. We can have a diminimus annual benefit of \$10,000, also prorated for less than ten years of service. There are cost-of-living adjustments (COLAs) that are supposed to be made to that dollar limit. In the case of participants who are covered by both defined benefit (DB) and defined contribution (DC) plans, there are combined limit determinations which are not, by the way, part of my intended presentation but will be picked up by other speakers.

Now, what did the Tax Reform Act of 1986 (TRA 86) do to us or for us? The first thing that it did is that it nailed that \$90,000 limit to the Social Security NRA instead of any age from 62 to 65. It is important to understand that the Social Security NRA, as it is implemented by our friends at the Service, is not the age at which an individual will receive unreduced retirement benefits, if that age turns out to be a fractional age. In other words, if under the Social Security Act, an individual's unreduced retirement benefit age should be age 66 and two months, then for purposes of Section 415 the Social Security NRA is 67. So you could have a situation in which an individual would elect to defer his retirement until his Social Security unreduced benefits age and still not be able to receive a full unreduced maximum 415(b) limit benefit.

Another thing that it did was that it specified that any reduction in that dollar limit down to age 62 will be based on the Social Security early retirement factors (ERFs). I suppose that's not really a change; that's really a new provision because prior to the TRA 86 there was no reduction at all down to age 62. The \$75,000 floor at any age at or after 55 was repealed entirely. The \$30,000 annual additions to a DC plan were frozen until the \$90,000 limit at the Social Security NRA should increase up to \$120,000 and beyond as a result of the 415(d) increases.

Finally, it did give us one thing by softening the blow of the transition. If we have an accrued benefit that is greater than the new limit due to accruals under the plan as it existed prior to May 6, 1986, and based on compensation and service to the end of the 1986 limitation year, we get to keep that. Also, whether or not that occurs, if the imposition of the new lower limits results in the combined fractions under 415(e) being greater than 1.0, we get a transition adjustment very much like the T-6 adjustment in Notice 83-10 or, if you would prefer, the Tax Equity and Fiscal Responsibility Act (TEFRA) Section 235(g)(3) adjustment.

Before we get into looking at what the changes in 415 limits have done to our plans, I would like to point out some other relevant code sections to you. We need to be careful about the aggregation rules that are under code Section 414, specifically subsections (b), (c), (m), (n) and (o), and those regulations that came out last fall. Don't forget about code section 404(j) which limits any advance funding for the cost-of-living adjustors. Pretty soon we are going to have to deal with 401(a)(26) and the minimum participation rules for our small

INTERNAL REVENUE CODE SECTION 415 LIMITS

plans and finally, the \$200,000 cap on annual compensation in the benefit formula.

Graph 1 shows the changes in the 415 dollar limits starting with ERISA in 1975 and projected by myself from 1988 through the year 1999. The idea is to show what would happen to three individuals who all started a plan in 1975 with anticipated retirement in the year 2000, one retiring at age 65, another at age 62 and another at age 55. Now you can see for yourself very clearly where TEFRA comes in and knocks us down and then again where the TRA 86 knocks us down. I'll just point out some statistics to you. For a person age 65, TEFRA reduced the benefit by about 34%. At age 62, obviously also by 34%, because those two ages were treated the same by TEFRA. The reduction at age 55 was a good 45%. Now, TRA 86 had no impact on somebody with a Social Security NRA of 65. For the individuals here in this graph, there was a further 25% reduction to an age 62 retiree and another 44% reduction to the age 55 retiree. In case you're curious, I computed those actuarial reductions using a 5% interest rate and a 1971 Individual Annuity Mortality Table set back three years for males and females. So, overall between 1982 and 1987 a 34% reduction for retirement age 65, 51% for retirement age 62, and 69% reduction for retirement age 55.

Assuming what I consider to be a conservative projection of 4% compounded between now and the end of the century, what we notice is that it takes until 1998 for the age 65 limit to return to the pre-TEFRA limit. Although you can't see it on the graph, it takes until the year 2005 for the age 62 limit to return to that level and to the year 2017 for the age 55 limit to return to that level.

Graph 1 shows the dollar limits themselves but for these particular individuals, we anticipate regulations which will only allow these increases to phase in over 10 years. Now that's not based on any insight that I have particularly, and obviously we don't have any hard guidance from the Service on how they want to do that phase in, so I just took something which I thought looked reasonable. Graph 2 shows the maximum annual projected benefits as adjusted for the anticipated phase-in rule.

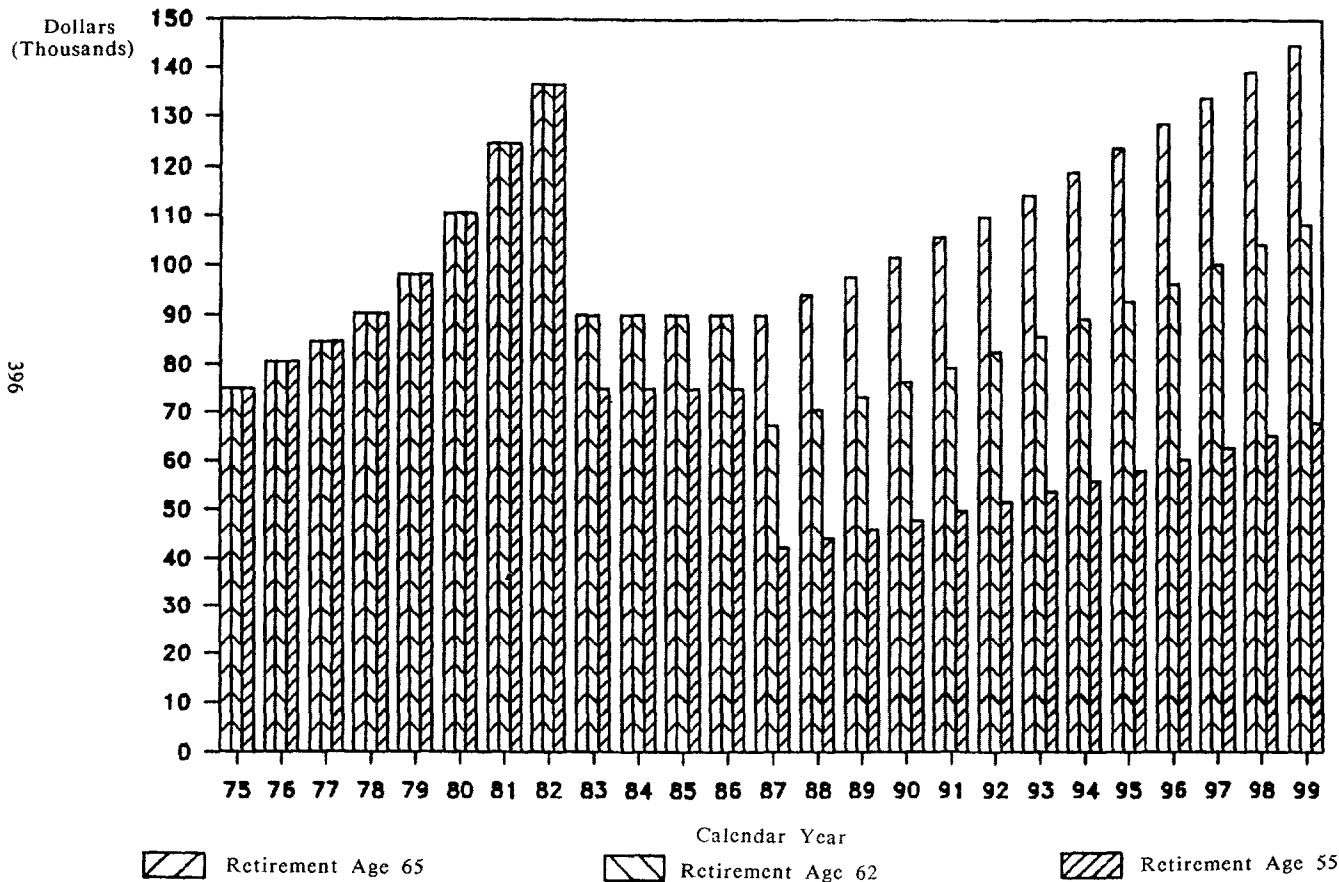
You will notice that Graph 1 has what may appear to be a linear increase in those limits from 1988 on, but in fact they are slightly escalating. Another way of saying it for you mathematicians is that the second derivative is positive. Graph 2, on the other hand, has a second derivative which is negative. In other words, it's a convex curve, tapering off.

Now, the next question is going to be, "Well, what kind of contributions are going to result from those changes?" I assumed typical level funding using an individual aggregate funding method and the postretirement assumptions that I already mentioned to you. I assumed a 7% preretirement return over that entire period just so we could get some numbers to look at. On Graph 3 we have the contributions for this retirement age 65 individual. It's about \$13,000 starting in 1975, gradually increasing to a little over \$30,000 in 1982. There's no contribution at all in 1983 because of TEFRA, and a very minor one in 1984. In 1985, the full funding limitation leaves us alone again, and it's back up around \$16,000 - \$17,000 through 1987. Then, due to the COLA, contributions start escalating again in 1988.

As I pointed out to you earlier, in doing these calculations, I assumed that those increases in the dollar limits would be phased in over 10 years. So, one that

415 DOLLAR LIMITS

Retirement in the Year 2000



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GRAPH 1

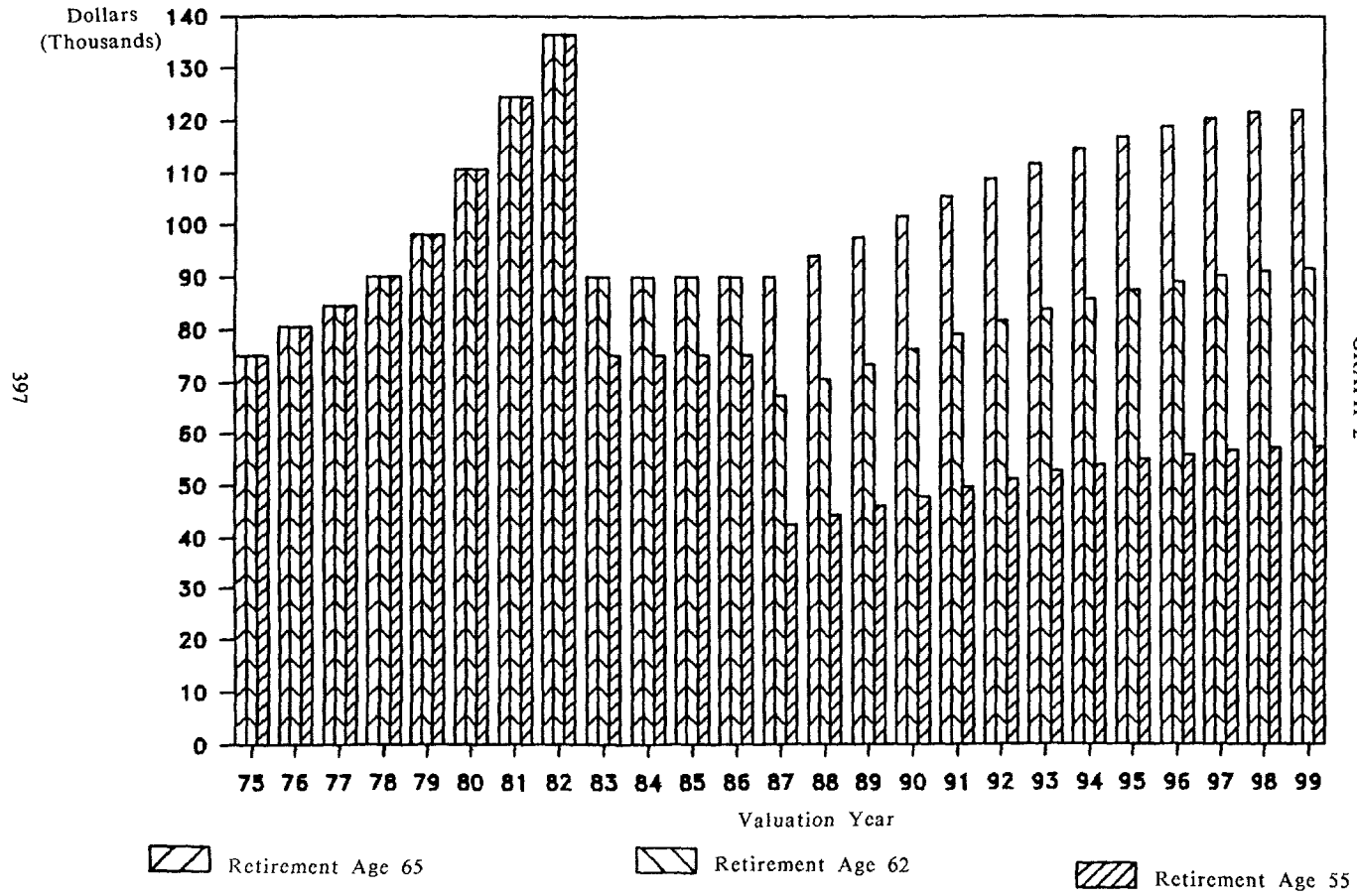
PANEL DISCUSSION

MAXIMUM ANNUAL PROJECTED BENEFITS

Projected to the Year 2000

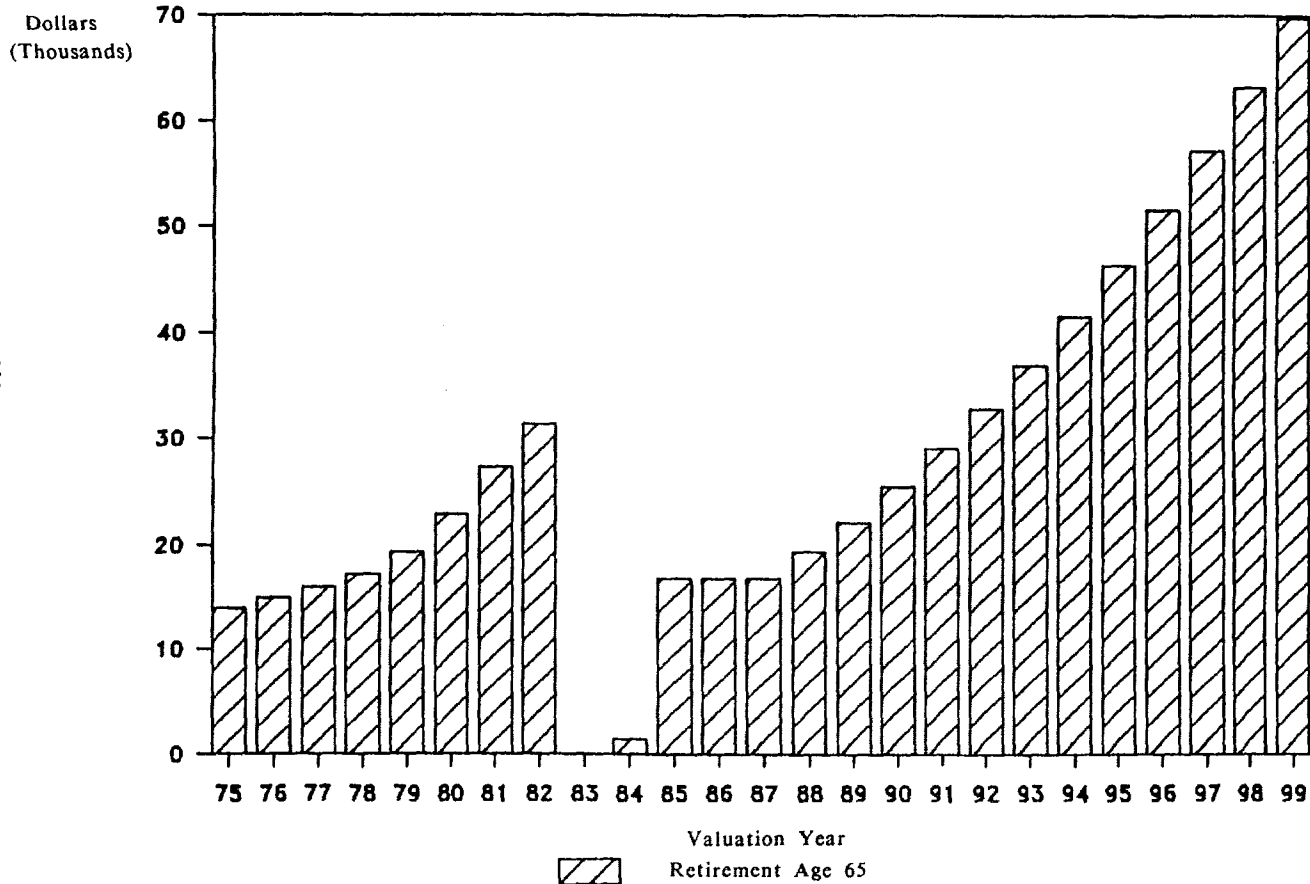
INTERNAL REVENUE CODE SECTION 415 LIMITS

GRAPH 2



MAXIMUM ANNUAL CONTRIBUTIONS

Retirement in the Year 2000



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GRAPH 3

PANEL DISCUSSION

INTERNAL REVENUE CODE SECTION 415 LIMITS

only occurred in the last year would only be given one-tenth weight. If you assumed that if you had a plan which said we'll just pay out the maximum benefit whatever that is, and the IRS were to tell us we can have the whole thing without a phase in because that's not a plan amendment, what you would see is a greatly enhanced upward curve on these contributions. I would suspect that in most cases the small plan sponsor may not be able to make those final payments and you would end up having to cut them back by amending the plan somewhat anyway.

Graph 4 shows what would happen to the contributions for the age 62 retiree; it's a little more interesting. You see the same kind of a curve starting in 1975 at about \$15,000, up to about \$35,000 in 1982. Once again there's nothing in 1983 and a very minor contribution in 1984. Contributions are around \$18,000 in 1985 and 1986, but zero for 1987, 1988, and 1989 with only a minor one in 1990. Then in 1991, when the full funding limitation allows us, we start escalating again. I assumed for the purposes of these calculations that I had enough service that the 150% of current liability full funding limit would not impact us. It was simply a simplifying assumption in order to not complicate the projection process too much.

Now let's see what happens to our age 55 individual on Graph 5. This will give you a real clue as to what's going to be happening to these guys. We see the same kind of a curve, increasing dramatically from 1975 to 1981 and then not another contribution to the plan until the year 1997, and those in 1997 and 1998 are only very modest and barely reach the level of the 1975 contribution.

In summary then, with that typical level funding, an age 65 retiree would have one year of no funding at all, and 10 years to return to the pre-TEFRA funding level. An age 62 retiree would end up with 4 total years of making no contributions and 14 years to return to that level. An age 55 retiree would have 14 years of making no contributions at all, and would never return to the pre-TEFRA funding level. I don't mean this critically about any individual, but I think that this points out that we need some kind of a national pension policy that gives us more reasonable results than what I've shown you. While obviously this applies to small plans, you're going to see the same kind of results in larger plans. It's just that they are going to be masked by the fact that you've got a lot of people all mixed in. We need to look seriously, if that's the kind of contribution levels that will be experienced over the long term.

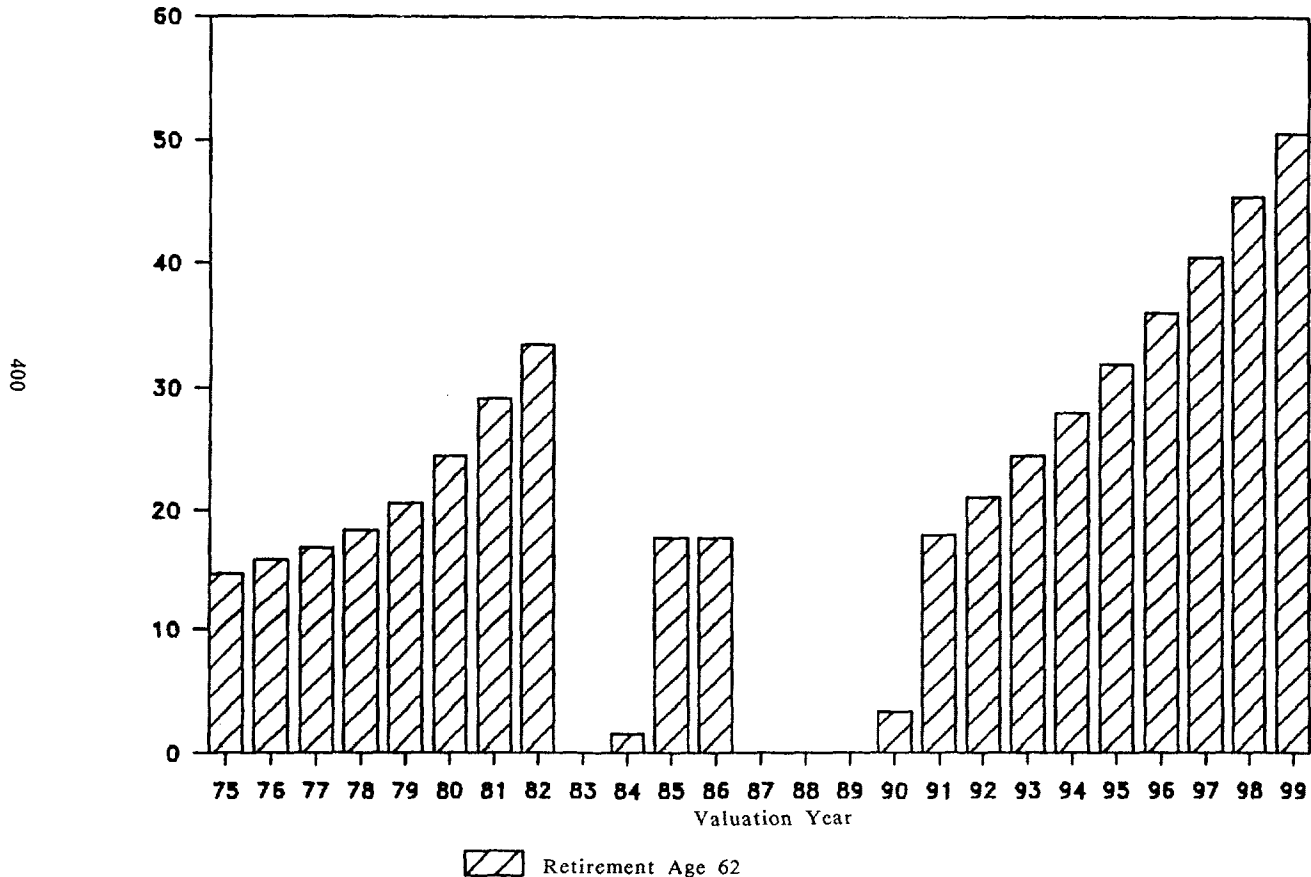
Graph 6 puts all three together so you can compare. While the age 55 retiree initially has a higher contribution and does through the end of 1982, the age 65 retiree ultimately has the higher assets in the year 2000 at \$1.4 million, whereas the age 62 retiree has assets of \$1.1 million and the age 55 retiree has assets of around \$800,000. That can't be generalized to a case of a person now deciding whether to go retirement age 55, retirement age 62 or retirement age 65. Also, I am not making any kind of a comment as to the advisability of just picking a retirement age, because obviously that assumed retirement age has to be reasonable, but I think it does give you an idea of what's going on with these people.

What do we do about overfunding? As you saw pretty dramatically both in 1982 and 1987, we have either reduced contributions or no contributions for some time. And that's even assuming that there are no gains that may accumulate and drive the full funding limits down. Obviously, if we had started out with that 7% assumption from 1975 to 2000, which in my opinion is a good assumption over that entire period of time, with the actual returns on assets that most of your

MAXIMUM ANNUAL CONTRIBUTIONS

Retirement in the Year 2000

Dollars
(Thousands)

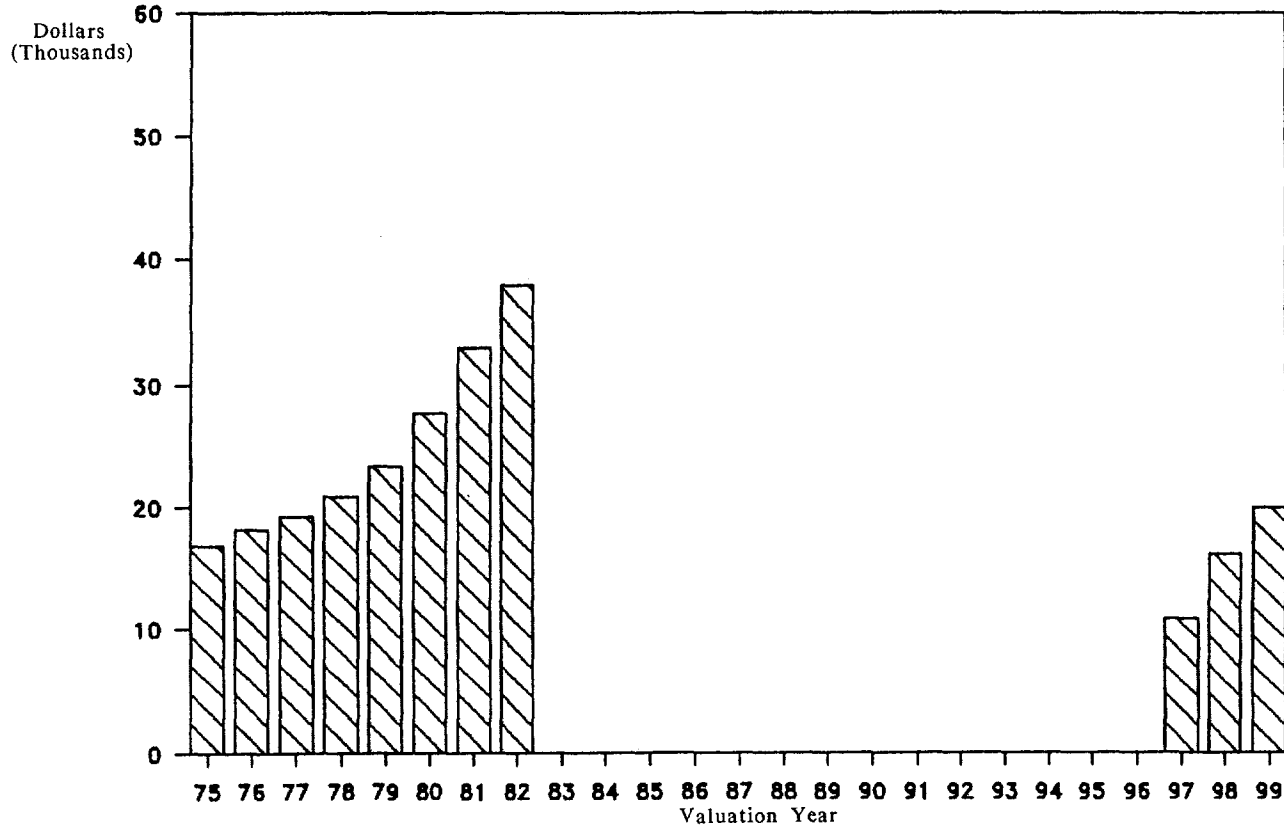


GRAPH 4

PANEL DISCUSSION


MAXIMUM ANNUAL CONTRIBUTIONS

Retirement in the Year 2000



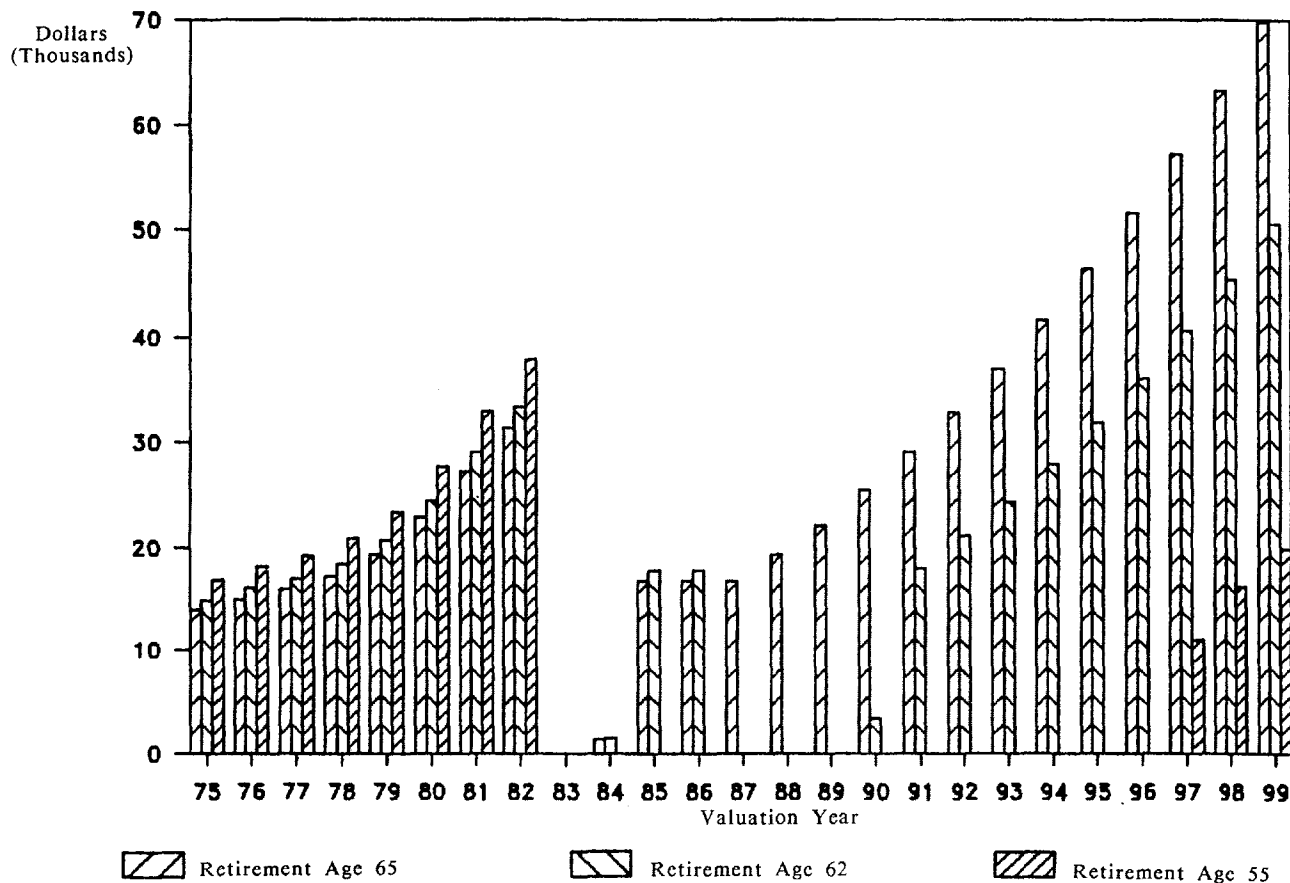
GRAPH 5

INTERNAL REVENUE CODE SECTION 415 LIMITS

 Retirement Age 55

MAXIMUM ANNUAL CONTRIBUTIONS

Retirement in the Year 2000



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GRAPH 6

PANEL DISCUSSION

INTERNAL REVENUE CODE SECTION 415 LIMITS

plans would have seen, those full funding limits would have driven down contributions for an even longer period of time, except perhaps until last October. Well anyway, what can you do about an overfunded plan? First thing I would advise you to do is to check the grandfathered accrued benefit under the TRA 86. As I said before, that would be an accrued benefit based on the pre-TRA 86 law, the plan provisions as of May 5, 1986, and on the service and accrual to the end of the 1986 limitation year. If you had the foresight, after TEFRA came along, to take your sole proprietor plans and fully accrue them to the extent permitted under 415, you may end up with a higher accrued benefit under pre-TRA 86 law than you have as a maximum limitation under the TRA 86 law. You can use that as your dollar limit until the normal limit with COLAs exceed it.

Another suggestion for the overfunded situation is to look at the possibility of a change in funding method, although that will probably have only a limited effect in terms of the number of years that it will impact your contributions. If you have a plan which accrues benefits over ten years, you can use a reasonable projected unit credit funding method over a ten-year period and accelerate your contributions. You could change your asset valuation method or the valuation date. All those things are ways to perhaps solve a problem, at least in the short term. Another thing that may do it for you is Black Monday, which caused the assets in your plan to go down to the point where you can just start funding again. I guess that's the ultimate good news, bad news joke.

Finally, you may consider terminating the plan, rolling those assets over either to another plan or to an IRA, and starting a defined contribution plan. Then, of course, you would need to deal with 415(e).

Let me tell you what doesn't work. I have seen this over the last several years and I am really surprised that people thought they could get away with it. The proposed regulations indicate that it is not allowed. That's to terminate the plan, sit low for a couple of years, start up a new plan, and pretend like nothing ever happened, just start from scratch. The regulations make it very clear that for purposes of aggregating under any of those provisions under 414, the fact that the plans did not exist contemporaneously does not mean that they do not have to be aggregated. If they would have to be aggregated had they existed at the same time, then you have to aggregate them anyway. The other thing that has been going around lately is a so-called springing cash value contract. I find myself oddly agreeing with the IRS on this one issue. It's a bad deal. It's abuse, in my opinion, to the worst extent and I have a pretty liberal idea of what you ought to consider abuse. The idea is, in an overfunded plan, for the sole proprietor or the principal owner to receive a distribution partly in terms of a life insurance policy that has an extremely low cash value, but which will rise very rapidly in the next three to ten years depending on the terms of that particular contract. It appears that you have automatically reduced the market value of the assets to the point where the plan is not overfunded, then you can go ahead and terminate the plan, distribute it, and the person apparently pays much less tax.

The problem is that the cash value in this particular situation is not really a reasonable indicator of the true market value of the contract. If it were possible to sell that contract to someone else for the cash value, most would jump at the chance to buy it and the person who had it in his possession wouldn't want to sell it for that. So the cash value is not a realistic indicator of what the contract is worth. Besides, you get all sorts of problems of tax

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avoidance with regard to the excise taxes and perhaps even 415 limit and so forth. Although the Service hasn't come out with anything other than just a warning about this, I have been in contact with an attorney who tells me that these kinds of low cash value life insurance policies do not satisfy the requirement of the prohibited transaction exemption regarding distributing insurance policies to participants. A distribution of a life insurance policy to a participant is really considered by the Labor Department to be a sale of an asset to a party in interest. We have an exemption from that on a general basis. One of the requirements of that exemption is that the amount of the distribution be a reasonable measure of its value. If you try to distribute a contract that is really worth \$500,000, but are going to pretend it's only \$100,000, then it would fail that prohibited transaction exemption.

Now let's suppose you have a new participant and he's a sole proprietor or 100% owner, and he wants to know what kind of a plan is better for him. I'm sure most of you have had the experience of talking with an attorney or accountant.

All they look at is what's the first-year contribution to the DB plan versus the first-year contribution to a money purchase (MP) plan, and that's what they base their decision on. What I want to do is give you some weaponry to give an alternative point of view on that. Exhibit 1 is a table showing what I call a breakpoint age, the age that produces, for a given salary and retirement age, a

EXHIBIT 1

AGE AT WHICH A NEW DB PLAN
PRODUCES A HIGHER CONTRIBUTION THAN AN MP PLAN

<u>Salary</u>	<u>Maximum MP Contribution</u>	<u>Retirement Age</u>		
		<u>55</u>	<u>62</u>	<u>65</u>
\$30,000	\$ 7,500	28	31	32
40,000	10,000	31	34	34
50,000	12,500	34	36	37
60,000	15,000	35	38	40
70,000	17,500	37	40	41
80,000	20,000	38	42	43
90,000	22,500	40	43	44
100,000	25,000	41	45	47
120,000	30,000	42	46	47

Based on individual aggregate funding and:

Preretirement assumptions:

7% interest
5% salary increases
No mortality

Postretirement assumptions:

5% interest
1971 IAM table, setback 3 years

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comparable benefit between a DB plan and MP plan. Actually, what it shows is the first age at which the DB plan produces a higher contribution than the MP plan. As illustrated in Graph 7, it tends to increase with salary and with retirement age.

The whole thrust of this particular analysis is to look at what happens when the COLAs cause the 415(b) limit to increase while the 415(c) limit doesn't. What I want to do is take an example using one of the breakpoint ages, and show you what the contributions and the accumulation of assets do under the two different kinds of plan.

Let's pick a retirement age of 62, and an attained age of 45, and compensation in excess of \$120,000 and see what the contributions do. Age 45 was the last age for this particular retirement age and compensation that does not exceed the contribution for a MP plan. As shown on Graph 8, although the MP plan has the higher initial contribution, with the cost-of-living adjustors, the DB contribution increases quite nicely compared with the MP contribution. By the time the MP contribution starts escalating at age 52, which is around 1995, the DB contribution is a full 40% higher. In fact, the DB contribution began exceeding the MP contribution in the third year. At age 62 the DB contributions are 38% greater than the MP contributions.

Now the question is, "What's going to happen to the accumulated assets?" Comparisons on Graph 9 show there's very little distinction between the accumulated value of the assets under these two approaches for at least 5 years or more. Notice that I have projected these accumulations to age 65 even though the NRA under the DB plan is age 62, and as such, the last DB contribution we assume would be made at attained age 61. Even with the continued MP contributions until age 64, the DB assets are still 22% greater. You may be interested to know that the total contributions through age 64 in the DB plan are \$138,000 greater than in the MP plan for this particular model and the total interest earned in the DB fund is \$175,000 greater.

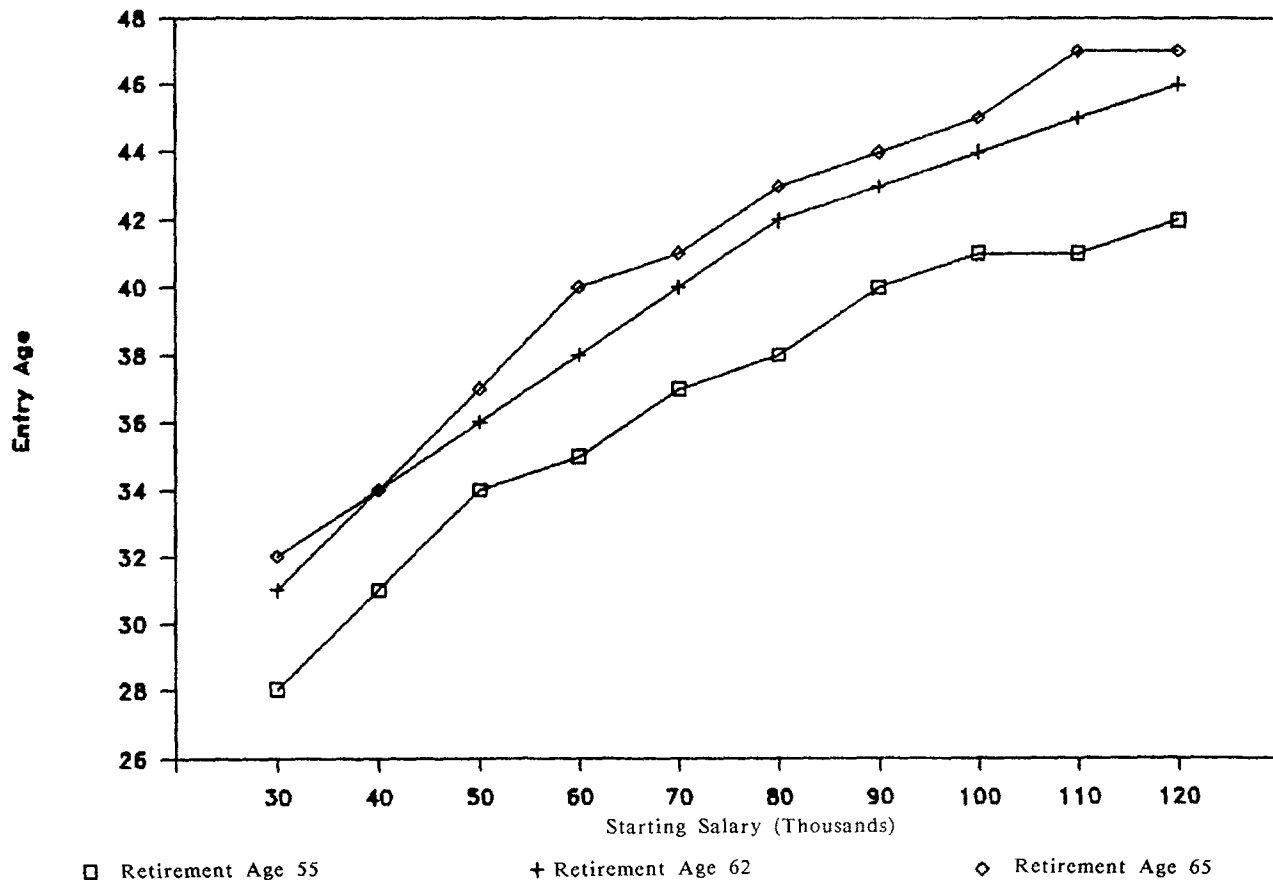
Graphs 10 and 11 show the results if you really earn 9% instead of 7%. The concept is the same although the results are different numerically. We still have a crossover, only it takes a little longer this time. The accumulated DB assets are still greater assuming 9% over that entire lifetime instead of 7%, although again the difference is not as dramatic.

MR. DAVID R. KASS: First of all, I'd like to clarify the difference between small and large plans. I thought I might propose a universal rule that applies regardless of the size shop you work in; perhaps this will be known in the future as "Kass's Rule." A small plan, I submit, is one that we always forget about until the mailing or filing deadline is almost passed. A large plan is one where there are always at least two political factions at the company and the consulting actuary's major roles are, first, keeping the peace, and second, survival, but not necessarily in that order.

I'd like to offer a few thoughts concerning larger plans. Certainly we are all painfully aware of the \$94,023 limit on the annual pension payable under a qualified pension plan. In the large plan environment, of course, we know the "complete" Section 415 language has been put in the plan document.

We are not designing anything, because the plan is in place, it has been qualified by the IRS. But we find out that the president and some of the high-priced

DB/MP BREAKPOINT AGES



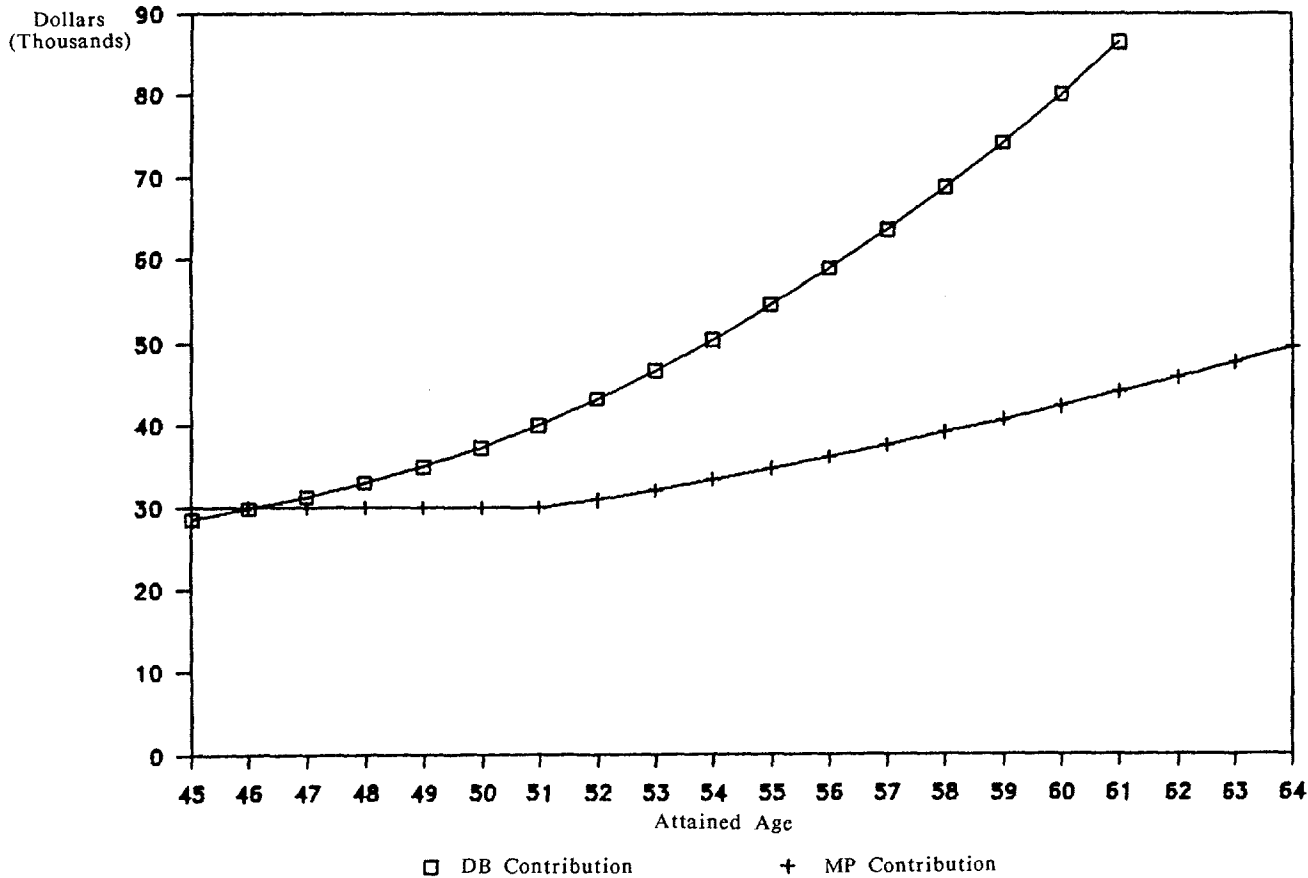
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GRAPH 7

PANEL DISCUSSION

DB/MP COMPARISONS

7% Contributions to a New Pension Plan



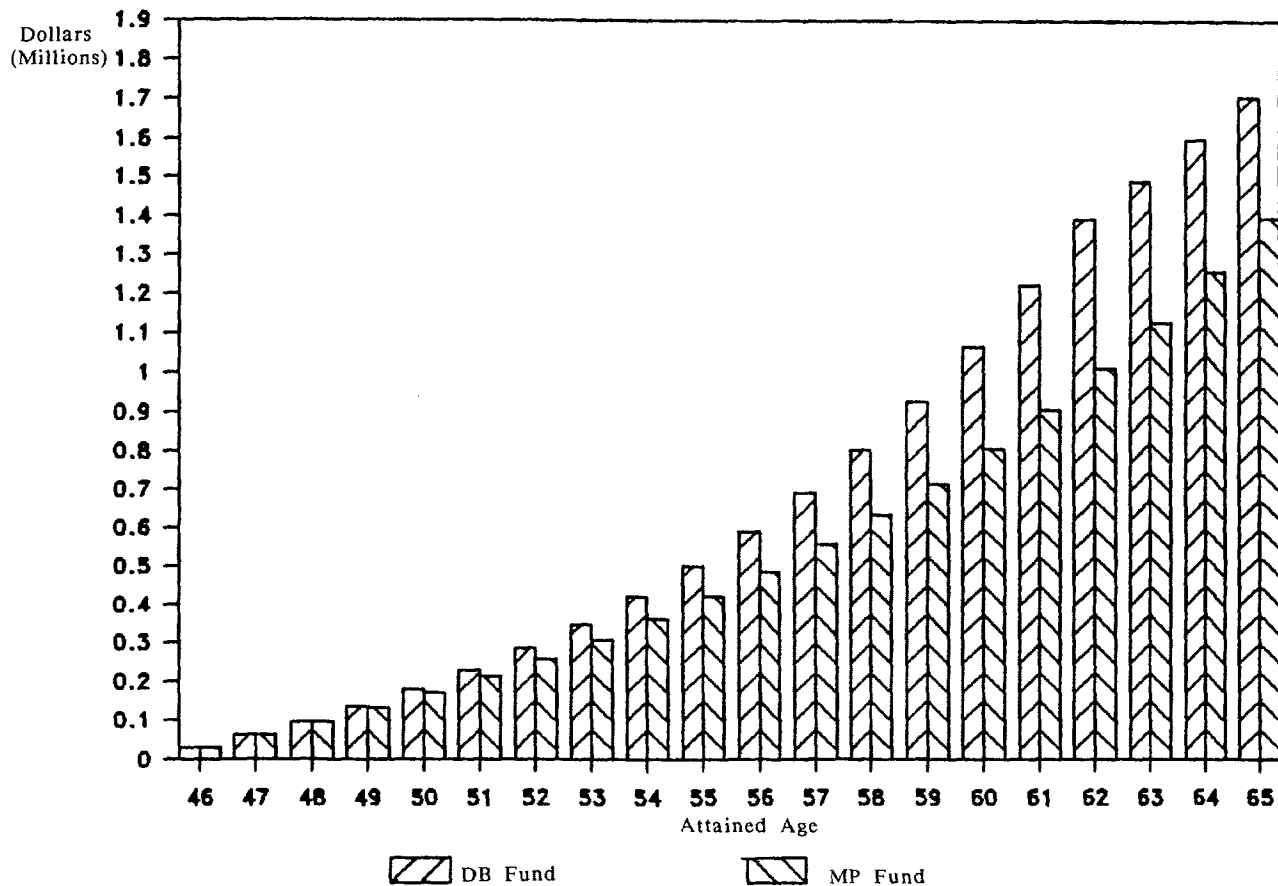
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GRAPH 8

INTERNAL REVENUE CODE SECTION 415 LIMITS

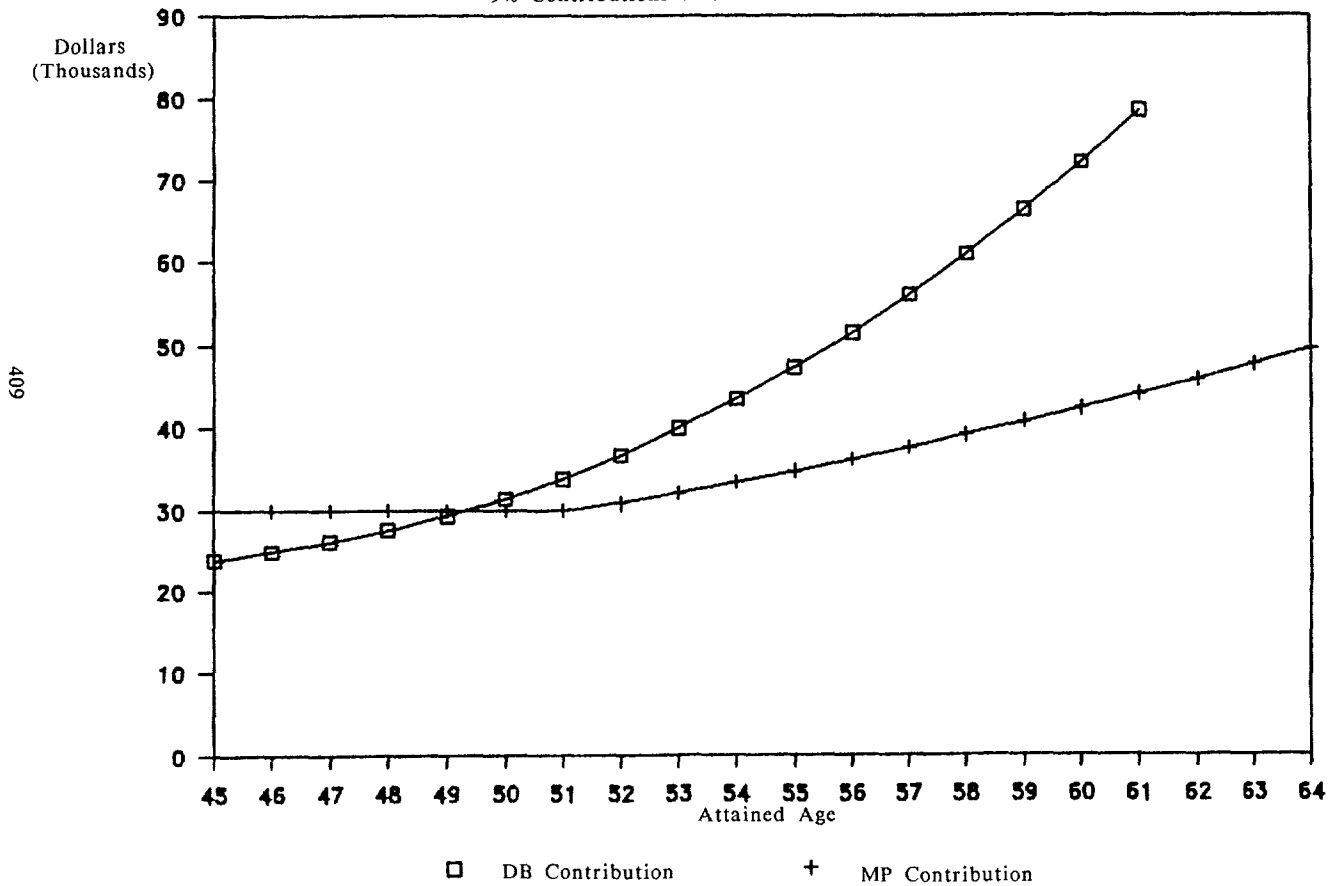
DB/MP COMPARISONS

7% Accumulations in a New Pension Plan



DB/MP COMPARISONS

9% Contributions to a New Pension Plan

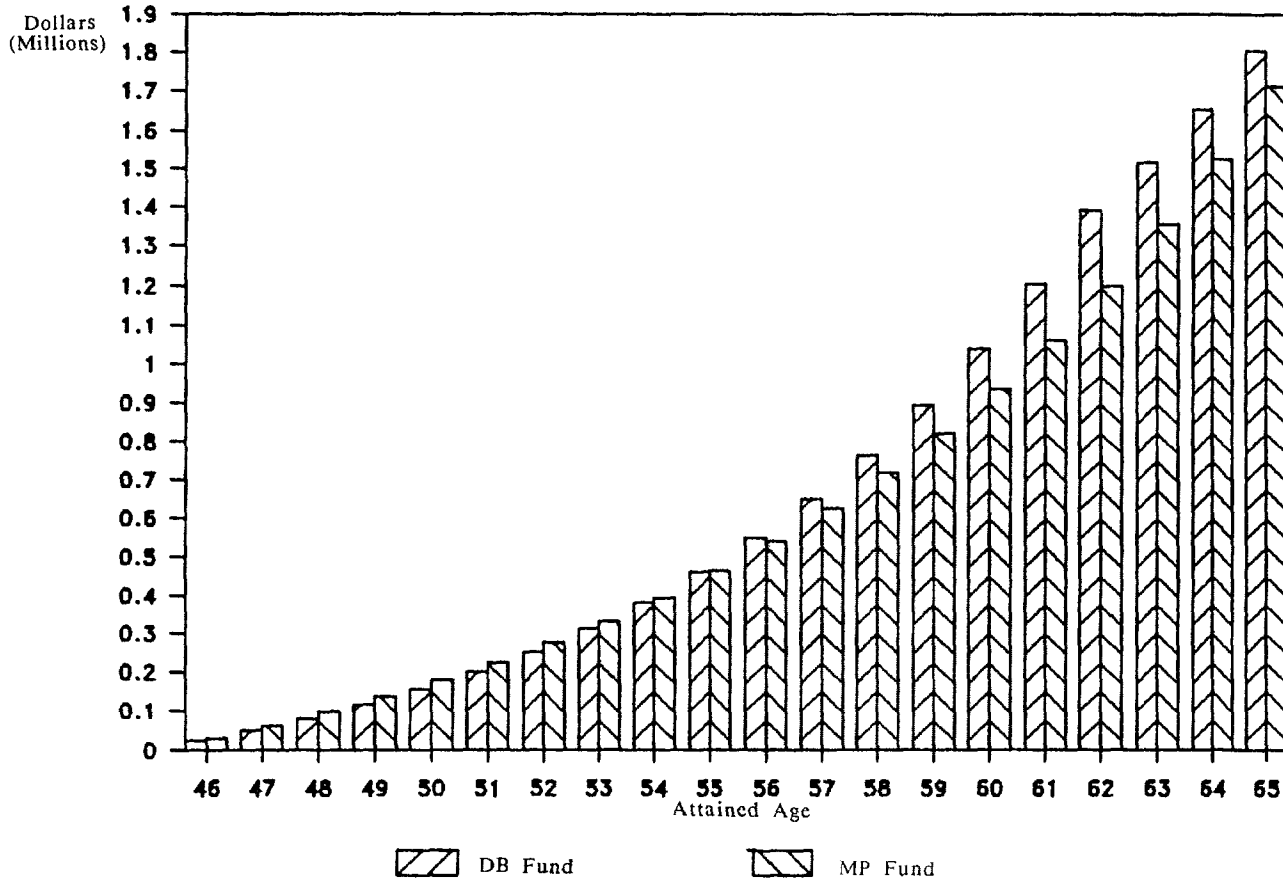


INTERNAL REVENUE CODE SECTION 415 LIMITS
GRAPH 10

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DB/MP COMPARISONS

9% Accumulations in a New Pension Plan



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GRAPH 11

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help who have been earning well over \$200,000 vaguely feel they have been "had" by the Section 415 limits. This is a very critical employee benefit issue to which we must respond -- but our hands are tied; we can't redesign the qualified plan to "restore" the pension benefits that Section 415 takes away. Restoration of benefits can only be accomplished by setting up a Top Hat plan; that's a term we've borrowed from our friends in England, and I think it's quite appropriate. Here is an opportunity to double the number of plans on which you are the actuary (if you haven't done so already):

With a Top Hat plan, fortunately for those of us who are free spirits and like to have some elbow room, we don't have to pay any attention to the IRS: we can absolutely roll our own. If we want to be imaginative, we can increase the pension benefit as a percent of pay or develop a benefit formula which is as discriminatory as plausible -- or implausible.

As a practical matter, if 415 limits curtail executive-level benefits under the plan that we have to come to know and love at a Fortune 500 Company -- which tends to be something like 50% of pay minus 50% of Social Security -- then we've had our wings clipped. The client really wasn't too hassled when the dollar limit was up to \$136,425; but that sudden drop to \$90,000 of annual pension that Steve's graphs have shown so dramatically, that affects the people who approve our invoices. We ought to do something for them. The new, dramatically cut back limits pose a problem for the high-paid executive group; if you can solve the problem and get benefit levels back exactly where they were, you have a chance to be a hero, and that's kind of nice. So you say, "Hey, guess what? Let's supplement the qualified plan with a Top Hat plan."

The first benefit formula to try on for size is 50% of pay minus 50% of Social Security. It's a clone of the qualified plan, but without "Article 11." Article 11 of the qualified plan -- you know that one; that's the one that goes on for 16 pages, that the lawyers had a field day on, and that only lawyers and the IRS ever look at. That's the one with all the Section 415 limitations. The Top Hat plan doesn't have Article 11; it provides "50% minus 50%" minus what the qualified plan provides.

Back to Square One: the combined plans now reproduce the benefit level the qualified plan provided by itself before Section 415 was invented.

Now, we obviously have to deal with the actuarial aspects of the Top Hat plan; but, good heavens, there aren't any IRS contribution limits for us to calculate for a Top Hat plan -- does this mean we don't perform an annual actuarial valuation? Fortunately, we can thank the accounting profession, which has invented something called Financial Accounting Standard (FAS) 87. So, with thanks to Internal Revenue for having created the 415 opportunities, and thanks to the accounting profession that requires us to meticulously measure the accrual of costs, we now have an opportunity to increase our valuation work load by establishing and servicing the Top Hat plan -- at least those of us who have not yet looked to Top Hat plans as a means of overcoming the 415 limits.

Of course, you don't have to bring them all the way back to Square One: you could replace only that part of the participant's benefit that goes down the tubes by virtue of the "combined limits" of Section 415. Consider that rare client that has had ongoing profits and has made large (and continuing) contributions to a profit sharing plan. These may have been sufficient to invade the available 415 limit for the high-priced help. If the client is willing to have

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key employees tighten their belts and retire at the \$90,000 level (or, to bring us up to date, \$94,023) but will be damned if that should be bitten into by the combined limits, then your Top Hat plan could merely replace any combined limit carve-out and make key employees whole for that.

There are two other considerations that Section 415 brings into play in the "large plan environment." We are all well aware that when you determine contributions for the qualified DB plan, you cannot anticipate COLA increases. That means that somebody has to write a couple of lines of FORTRAN or whatever it is, to adapt your computer program that does the valuation calculations. You do this to conform with the single DB limit as it applies to funding.

The standard valuation data do not provide the information needed to calculate the "combined plan" limit for each participant in both a DB plan and also a DC plan. In practice, it can be remarkably difficult to convince a client to furnish the raw material we need to calculate the combined plan limit for participants in the "danger zone" -- i.e., data concerning their historic DCs, so that we can match them up and say, "My goodness, because the DCs have been heavy, we must reduce the projected DB in our valuation calculations." We may not have 100% of the DB limit available for this employee; his Section 415 DB limit may be 90% of what would otherwise be the case (even with the 25% forgiveness inherent in the combined limit).

You look for the individual data to do that and then the dialogue goes "Well, let her mother worry." In this context, let her mother worry means that the valuation calculations for the DB plan reflect the DB plan limitation only. That means "let the poor guy who is tracking the DC plan (typically a profit sharing plan) worry whether the contributions exceed the 415 limits in that plan," where he presumably is testing the "hybrid" limits. As long as the only people we interface with are the people responsible for the care and feeding of the DB plan, we've got no problems. But sooner or later both of them get together over the lunch table; that's the moment of truth -- when the guy handling the DC plan realizes that to do his job properly, he should get an estimate of the DB before he pays a benefit. I would welcome any comment or information volunteered by people who have in fact dealt with the large corporation, swapping information from the right hand to the left hand in this type of circumstance. Perhaps it would be edifying for us all.

Having indicated that there may be some operational issues to be dealt with in implementing the combined limit in the large plan context, it might be useful to consider the combined limit in the small plan context.

In particular, although we are aware that the combined limit of 1.00 is frequently 1.25 (because of the 1.25 multiplier in the denominators of the relevant "DC Plan" and "DB Plan" fractions), the 1.25 factors drop to 1.00 if a plan is topheavy. However, you can deal with a top-heavy situation if the plan is not super top-heavy: you do not have to give up the 1.25 multiplier. That does good things, provided you are willing to upgrade the plan's minimum benefit. Instead of "2% per year of service up to 10 years," be more generous and make "3% per year up to 10 years" your floor. That allows you to retain the very desirable 1.25 factor. It's particularly useful to modify the smaller plan in that fashion. (Note, however, that in a one-life case, if the plan is top-heavy, it is automatically "super top-heavy" and the 1.25 multiplier cannot be retained.)

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In dealing with smaller plans, where getting the maximum mileage out of Section 415 is of interest, I find that my crossover ages tend to be a shade more conservative than Steve's ingenuity has come up with: perhaps this reflects my concern that if the plan sponsor actually earns but 7% for a few years (or if he thinks that the pension arrangement requires tying money up at 7% for the long pull) he would be quite distressed. I don't know what the investment outlook is going to be, but I know a lot of people who think any return they get that isn't in double digits is just plain bad. I know that if we project a first-year contribution based on 7% interest and in point of fact the Plan gets a 9% or 10% return for a number of years, we will find that the contribution under the DB plan is going South for a period of time; by contrast, the DC plan provides stable contributions under these conditions.

If we are fortunate enough to pick somebody to manage the funds successfully, it's going to be horse race under the DB plan, as contribution levels escalate because of future COLAs, but get pushed down as investment gains are reflected. I think Steve is on the right track when he suggests that the impact of COLAs on the DB side of the ledger is important to keep in mind.

Further, short of making an arrangement with South American Airlines to get down there "toute suite," a maturity value based on a 5% interest rate may pose difficulties with the IRS when the time comes to cash out; perhaps "take the money and run" (out of the country, of course) is the right approach. I find, however, that I'm more inclined to look at the crossover age as somewhere in the 50s rather than in the 40s. I am sure many of you have different views on that as well, and I welcome chatting with you on those issues.

Just to take two impossible things and put them together, I took a moment to fuss with small plan integration under Section 415, using the new integration limits. What I found was, if you're looking for a maximum Social Security integration, and we assume that today's Social Security covered compensation limit is in the range of \$18,000, the maximum \$94,023 pension is produced at \$97,750 of pay. You've got about \$5,000 slack between the compensation level and the benefit level. By contrast, if you know full well you're going to have \$200,000 of compensation available to the key player(s) even after the pension contribution is made, then you know that you're dealing with an annual pension of \$94,023. You know that's your benefit, and you know it will be based on \$200,000 of pay; if you go through the rest of the rigmarole, you will find that your pension formula (assuming that we have the 35 years of service needed to validate the full Social Security offset) is a shade under 50% on the excess (.492), and a shade under 25% for pay under the Social Security integration level (.246). So the formula that produces the maximum benefit of \$94,023 turns out to be .246 of compensation up to the Social Security level, .492 on the excess. As you can see, it's remarkably close -- rule-of-thumb to a "25%, 50%" formula.

MS. SUSAN M. SMITH: I'm going to look at 415 limits in the single plan environment, which is fairly stable, a little complicated, but I think we can understand it. Then we're going to look at combined limits in a new way that is not prescribed in any law or regulation, but I'm not sure that there's anything out there that helps us calculate them in the first place. So, first we're going to talk about single plan limits and then we're going to talk about combined limits.

To get us all in the same frame of mind, let's look at the single DB limit today. Because of the TEFRA transition and because of the TRA 86 transition, you

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really have three calculations to make for any individual who could potentially have had a grandfathering with respect to the accrued benefits as of either of these two earlier transition dates. First of all, you need to look at the current dollar limit on the actual benefit commencement date (BCD). Under the current rules that would be the \$90,000 adjusted for early commencement, where the adjustment is made from the Social Security retirement age (SSRA) to the actual age at which benefits commence, and the adjustment for a payment form that's not a life annuity or qualified joint and survivor, and for less than 10 years of participation.

However, if the individual was covered by the plan on December 31, 1986, which I'm assuming is a calendar year limitation year, then you can look at the accrued benefit that the individual had under the May 6, 1986 plan, and you can adjust it according to that plan's provisions to find out what that plan would have paid on this individual's actual BCD. But in no event can you give that person more than the \$90,000 under the pre-TRA 86 law, which was only adjusted for early commencement from age 62 on down, and it had its own rules for making adjustments for different payment forms, and it was based on 10 years of service, not 10 years of participation.

All of these adjustments are in any of the calculations that we're going to look at, but, for simplicity, I'm going to drop them from now on. We're going to think of a life annuity, someone who always had ten years of service or participation, and we're also going to assume that there are no compensation limits applicable here. We're only working with the maximum dollar limits under Section 415. So if the person had an accrued benefit on December 31, 1986, you can look to that benefit, but in no event can you give them more than the amount that would have been payable under that particular plan's pre-TRA 86 415 maximum dollar limit.

If the individual was in the plan on December 31, 1982, we have yet a third benefit to look at. That's the accrued benefit under the July 2, 1982 plan with adjustments from that plan's normal retirement date to this individual's actual age on the BCD according to that plan. But you can't give more than the \$136,425 which was the dollar limit on December 31, 1982, adjusted as required for the actual BCD. Now, this is a little complicated admittedly, but it can be done. This is the single plan limit.

Let's just generalize this a little bit so that we can go into a formula. Let's look at these benefits in the order in which they arose. We'll talk about Benefit 1 (BEN1) being the accrued benefit to December 31, 1982, or whatever was the last day of the limitation year before TEFRA was effective. Benefit 2 (BEN2) is the accrued benefit on December 31, 1986. Benefit 3 (BEN3) is whatever the plan is going to try to pay this person on the BCD. That's the amount that we're trying to say, "How much of this can we pay based on looking at the 415 limitations?" To parallel the numbering system, Maximum 1 (MAX1) will be the 415 dollar maximum for a single DB plan based on pre-TEFRA 415 rules, starting with \$136,425. Maximum 2 (MAX2) is going to be based on pre-TRA 86 rules. That one starts with the \$90,000, doesn't get adjusted until 62 for early commencement, and has the \$75,000 floor for early commencement. Maximum 3 (MAX3) is the current, at least so far, 415 limit which was indexed at \$94,023 effective in 1988. That's the one that's adjusted for early commencement from SSRA down to actual BCD. So we have Benefits 1, 2, and 3, and we have Maximums 1, 2, and 3 that correlate with those benefits.

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We can now write a simple formula for our single plan DB limit.

- Limit = Largest of:
- o MAX3
 - o BEN2, but not greater than MAX2
 - o BEN1, but not greater than MAX1

So, at the BCD, we can pay BEN3, but not more than the Limit.

Now, we're going to talk about combined limits. First of all, we have to ask ourselves, "What is the purpose of having a combined limit?" Well, it's simple. If you're only in a DC plan, you can have 100% of the 415 limit there, and if you're only in a DB plan, you can have 100% of that limit. But people can participate in both, and the idea of the combined limit is to not let someone get 100% of each limit. The mechanics for trying to determine how much of which piece you can have is to create the defined benefit fraction (DBF) and the defined contribution fraction (DCF). We're going to focus only on the situation where the DB plan is the one that is going to take the hit. What we mean here is that you're going to make a maximum contribution to the DC plan, keep track of all the information necessary to calculate the DCF, which will then be known at any point in time, and it is only at the point in time when you have to make a benefit calculation at someone's BCD that you ever need to go through the rigmarole to find how much you can pay from the qualified DB plan.

That's the theory behind it. However, we've had some law changes and these law changes have caused discontinuity in the way that these fractions are determined. So we were forced to make a calculation in an unreal situation, when the DB plan took the hit before we really knew when somebody was going to commence his/her benefit. It's these transition calculations that we should look to as saying, "These are a means to an end." They really don't have any bearing. Keep in mind we have accrued benefits on the transition dates, but what we had to do on the transition dates was to go through a calculation that was designed to make our fractions add to whatever they were supposed to add to the day after versus what they had added to the day before. In other words, we calculated and put a negative adjustment into the numerator of our DCF.

If we look at these transition calculations and say that their sole reason for being is to calculate the negative for the DCF numerator, we can go through the mechanics, make the calculation, plop the permanent negative adjustment in, and then walk away from it. This leaves us saying to ourselves, "I know what the accrued benefits were on each of the transition dates. I know there's some form of grandfathering there. I know that to the extent I have continued participation in a DC plan there is a permitted forfeiture with respect to those accrued benefits on those transition dates." Remember, if you've gotten more of the share of the limit through continued participation in the DC plan and the DB plan takes the hit, then something needs to be taken away from the DB plan limit.

The problem we've had is how to go through the calculation. What I'd like to focus on is that we always know the DCF, and we know the DBF, because it's one minus the DCF. We also know that the DBF, by definition, is the maximum DB that we can pay at the BCD, divided by a denominator. The problem is that we don't know what the denominator is. I would like to propose that if you think of the purpose of the combined limits, and if you think of what these fractions really were doing way back in the pre-TEFRA days, then you realize that the DBF should provide you with a proportion of the maximum single DB

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plan limit to which you would otherwise have been entitled had you never participated in a DC plan. That's a big leap that isn't in the regulations. But if we can make this leap, if we can suppose for the moment that that's really what our denominator is, we have a formula for that denominator. Since we always know what the DCF is, we'll always know the DBF and we can then determine the numerator, or the maximum allowable dollar limit payable from the DB plan.

What I'd like to do is to propose, if we could ever convince the powers that be to make a technical correction, that the denominator be defined as 1.25 times the single DB plan limit which, going back to our earlier equation, was the largest of three items.

So in the combined limit scenario, when someone actually retires, we start out with a DBF on the BCD equal to 1 minus the DCF.

$$\text{DBF}_{\text{BCD}} = (1 - \text{DCF}_{\text{BCD}})$$

But
$$\text{DBF}_{\text{BCD}} = \frac{X}{1.25 \times \text{Largest of:}}$$

- o MAX3
- o BEN2, but not greater than MAX2
- o BEN1, but not greater than MAX1

Then solve for X, which is the maximum benefit that can be paid to this individual who has participated in both a DB and DC plan.

This general formula lends itself to the transition calculations, so I'm going to take you through one. There are some assumptions that have to be made on the transition dates because remember this isn't real. The only reason we're having to make these DB calculations on the transition date is because we're calculating the negative that must go in the numerator of the DCF. So it's an unreal world. At this point the BCD is assumed to be the normal retirement date. But we cannot have a numerator here that's any larger than the accrued benefit on the transition date. So, in Example 1, we'll say BEN1, the accrued benefit that this individual had on December 31, 1982 is \$100,000, and let's say that the DCF on that day is .760. We now know on December 31, 1982, the day before TEFRA, the maximum DBF was .640.

Example 1 at TEFRA Transition

NRA	=	65
BEN1	=	100,000
DCF 12/31/82	=	.760
DBF 12/31/82	=	(1.400 - .760) = .640
.640	=	$\frac{X}{136,425}$; X = 87,312
DBF 1/1/83	=	$\frac{87,312}{1.25 \times \text{Larger of:}}$
		o 90,000
		o 100,000 but not greater than 136,425
	=	$\frac{87,312}{1.25(100,000)} = .699$

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We can solve, then, for the most of this person's accrued benefit on December 31, 1982 that we can preserve for the transition calculations. That turns out to be \$87,312. Remember the individual had \$100,000 accrued, but for this purpose we're saying there's only \$87,312. Now we transition to January 1, 1983 and enter the post-TEFRA world. At this point, for the transition calculations, we know what the numerator is. We know now what the new denominator is because it's 1.25 times whatever would have been the single plan limit. At this point, it is the larger of two items. We have the \$90,000, which was the new TEFRA limit and we have \$100,000 which was our accrued benefit on December 31, 1982 but not larger than \$136,425.

The reason to continue making this comparison of benefits and limits at all of these stages is so you can preserve the more favorable treatment for early commencement of payments that was inherent in the \$136,425 415 limit. There may be situations where the pre-TRA 86 treatment of early commencement is more favorable for someone who didn't have participation before 1982. You have to keep going through and adjusting the accrued benefit according to the plan and the maximum dollar limit according to the 415 limit adjustments and making the comparison. If a person left early and had accrued a benefit of \$200,000, you might find the plan would reduce that to something less than \$136,425. You can get a crossover, depending on the BCD and the payment form actually elected.

On the transition date, we assume benefit commencement age is 65 (or the NRA), so we don't have any early retirement adjustments. We come out with a new DBF of .699 the day after TEFRA. The reason we're doing this is that .699 and .760 are certainly going to add up to more than 1, and a negative adjustment must go into the numerator to take the DCF from .760 down to .301, which is what it must be as of January 1, 1983. So you've gone through one transition and what you've done is reset the DCF.

We come to December 31, 1986, and find we've got to go through this rigmarole again. Example 2 shows that at this point the individual has a DCF of .314.

Example 2 at TRA 86 Transition

$$\begin{aligned}
 \text{DCF}_{12/31/86} &= .314 & \text{BEN2} &= 120,000 \\
 \text{DBF}_{12/31/86} &= (1 - .314) = .686 \\
 686 &= \frac{X}{1.25 \times \text{Larger of:}} \\
 &\quad \circ 90,000 \\
 &\quad \circ 100,000 \text{ but not greater than } 136,425 \\
 X &= .686 (1.25 \times 100,000) \\
 &= 85,750 \\
 \text{DBF}_{1/1/87} &= \frac{85,750}{1.25 \times \text{Largest of:}} \\
 &\quad \circ 90,000 \times \text{ERF (SSRA to NRA)} \\
 &\quad \circ 120,000 \text{ but not greater than } 90,000 \\
 &\quad \circ 100,000 \text{ but not greater than } 136,425 \\
 &= \frac{85,570}{1.25 (100,000)} = .686
 \end{aligned}$$

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The benefit that has been accrued to December 31, 1986 is \$120,000. Therefore the maximum DBF that we can have on December 31, 1986 is 1 minus .314 or .686. That's smaller than what we had on December 31, 1982 due to continued participation in the DC plan.

Solving our equation here for X, we find out that the largest amount that the DB plan could have paid from what is the December 31, 1986 plan's normal retirement date on this day is \$85,750. Again, this is a number we're going to use solely for the transition calculations. Crossing over to January 1, 1987, we know the numerator, and now we have a new denominator, but only for those people whose SSRA is greater than age 65. You get the new denominator for everybody, but if their SSRA is 65, you'll find out that the DBF on January 1, 1987 is exactly the same as it was on December 31, 1986. So you don't need a negative adjustment in the numerator of the January 1, 1987 DCF unless someone's SSRA is greater than age 65. That's the only time that a new, permanent negative adjustment to the numerator of the DCF should arise.

What happens if this person retires at age 60? Let's just say that at that time the DCF is .380. It's grown again. Example 3 shows the calculations.

Example 3 at Actual BCD

BCD = age 60	DCF _{BCD} = .380
BEN1 = 100,000	MAX1 = 136,425
BEN2 = 120,000	MAX2 = 90,000 x .836 = 75,240
BEN3 = 200,000	MAX3 = 100,000 x .669 = 66,900

$$DBF_{BCD} = (1 - .380) = .620$$

$$.620 = \frac{X}{1.25 \times \text{largest of:}}$$

- o 66,900
- o 120,000, but not greater than 75,240
- o 100,000, but not greater than 136,425

$$X = .620 (1.25 \times 100,000) \\ = 77,500$$

Just summarizing briefly, the accrued benefit at December 31, 1982 was \$100,000, on December 31, 1986 it was \$120,000, and currently it is \$200,000 payable from the normal retirement date. In this case, the benefit must be adjusted to reflect the early BCD. This plan didn't happen to have any early retirement reduction, so these are not only the accrued benefits payable from the NRA, they're also the accrued benefits payable from age 60. The maximums are also adjusted for a benefit commencement age of 60. The \$136,425 required no such adjustment under the pre-TEFRA rules. MAX2 was the \$90,000 under TEFRA which required an adjustment from age 62 down to 60. For this illustration we're saying it's .836, yielding a maximum on the BCD of \$75,240. I've shown MAX3 as starting at \$100,000 because we're assuming that it has been indexed from the current \$94,023 to \$100,000 on this individual's BCD. It's the only one of those dollar limits that can be indexed. It's reduced more for early commencement by a factor of .669. We find that MAX3 is only \$66,900. We go back to our formula which looks the same as we had on our transition dates, except now it's the real world. We're making the calculation for the individual

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on his or her BCD. We know that the maximum DBF is 1 minus .380, or .620. We then can solve for X. In our denominator, we are now looking at 1.25 times the largest of \$66,900, or \$120,000 but not greater than \$75,240, or \$100,000 but not greater than \$136,425. Again, this comparison is how you preserve the favorable treatment for early commencement under the earlier 415 limits. Had the plan had ERFs in them for retirement at 60, these accrued benefit amounts would have been adjusted to show that, because what you're looking for is the benefit attributable to those earlier accrued benefits on the transition dates adjusted to reflect what those earlier plans would have paid from the actual BCD.

We then solve for \$77,500 as the most that can be paid. This is saying that this individual should get, by virtue of having participated in both a DC and a DB plan, only 77.5% of the single plan limit that the individual otherwise would have been able to have. You can see that there has been a permitted forfeiture with respect to this person, from \$87,312 that had been there as of December 31, 1982, to \$77,500 now. And that's only as it should be under the whole purpose of the combined limits.

All I would like to suggest to you is that this procedure can be done and it is rational. I do hope that somehow the powers that be might be able to embrace it, because the current rules, in fact, will adjust by two DBFs if you apply them according to what's in the notices and the law. That was not intended; it produces an irrational limit, because you're adjusting by the fraction on a transition date, then turning around and adjusting it again by the DBF on the BCD.

MR. SEGAL: I just wanted to add a few comments on the combined limits of Section 415. Everyone's mentioned the fractions used in combining a DC plan with a DB plan. I just want to make a few observations.

The TRA 86 limited the 415 limit to years of participation. If you're in a position today of terminating a plan, you might be limited if the participation was less than 10 years, and today there is no relief whatsoever. You get locked into a fraction. Your numerator is limited by years of participation, your denominator is frozen. Your only possible relief is cost-of-living increases in the \$90,000 limit.

Technical Corrections Act (TCA), as introduced last year and as again introduced this year, has a very significant statement. "Section 415(b)(5)(B) of the 1986 code is amended by inserting 'and subsection (e)' after paragraphs (1)(B) and (4)." It's saying, for the purposes of your 415(e) calculation, to use service in calculating the denominator of the DB portion, instead of participation. For example, if you terminated a plan where there were only 5 years of participation but the person had more than 10 years of service, for purposes of your DB fraction you use 10 years of service in the denominator. It opens it up. It permits you to make future contributions to a DC plan and may not lock you into either a zero or a .2 fraction on the DC side. We will have to wait for regulation on this. The IRS is aware of the situation and they confirm the current status.

Under pre-TRA 86 law, if you ever read the regulation on the combined fractions under 415(e), there is a very simple statement. It says when you are developing your DB plan denominator, for purposes of the denominator you assume service to NRA. Period. No limitation whatsoever in the case of death or termination of employment. It says for purposes of making this calculation,

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assume service at NRA, and it's an unqualified statement. In conversations with the IRS, they have confirmed that that's what it says and they're going to address it in regulations.

If you stop to think about what's the purpose of a combined fraction when you're combining a DB and a DC plan, the IRS has a problem in that you're comparing two totally dissimilar items. You are comparing a DB plan, which is based on a projected benefit where you have certain assumptions as to the type of benefit that can be received, with a DC plan, which is really concerned with what's happened to date. There is no real logical connection between the two, so you have to make some assumptions; hence the assumption that you can project service to normal retirement date for purposes of the DB fraction. Without such an assumption it just doesn't make any sense whatsoever. What we will be able to do in the future, we'll see. Hopefully, we will continue to be able to project that service to NRA, but I could understand the IRS saying that in event of the termination of employment, you stop your projection. That's only logical.

The other caution I make is, when doing the calculations, you must get your DC plan history, because when you're doing a calculation of a current accrued benefit, in case it's grandfathered, you're locking that number up in stone, so you really need solid data in order to do it. When you're calculating a transitional adjustment to the DC fraction, again you have to know what the history is, because you're locking that number up in stone.

The problem we're faced with today as practical actuaries is what happens if TCA goes through and is retroactive? That affects the transitional calculation. It could also affect your grandfathered benefit, because when you're putting it together, in the event that the DC fraction would affect "the accrued benefit under the defined benefit plan as of the end of the 86 plan year," it makes a difference as to whether you're counting participation or whether you're counting service. So we may be in the position where, if you have to do a determination now, you have to do two calculations, or if you did the determination last year, you may have to recalculate it if TCA goes through.

MS. MARILYN DUNSTAN: Could you address the \$94,023 and the use of that in a fiscal year valuation for both funding and benefit purposes?

MR. SEGAL: In the code it is quite specific that you cannot project increases in the 415 limit. Revenue Ruling 81-215 said that for purposes of the minimum funding requirement, meaning section 412, if a plan provides for scheduled automatic increases in the maximum dollar benefit, you are permitted to use the 415(b) limit in effect at the end of the plan year, i.e., you can recognize what the 415 limit is at the end of the plan year where you have a fiscal year situation that overlaps the calendar year. Conversations with the IRS have come to the result that their interpretation is that this applies to 404 purposes just as well, because you always have those cross references between 404 and 412, and it must be on a consistent basis. One caution is that the 415 limits are applicable to the limitation year and I hope your limitation year isn't different than your plan year or fiscal year, because if it is, you have to be concerned about the 415 limit for the limitation year.

MS. SMITH: The limitation year is tied to a plan year. The maximum tax limit is determined for a plan year, and then attributed to a fiscal year following the rule adopted for this purpose.

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MR. BRENT MICHAEL MOWERY: I have a question relating to a DB only situation. Let's assume there is no DC and there is a qualified DB plan as well as an excess plan, and a controlled group situation where several plans have covered an individual who has transferred from company to company. Most of the individual's service was under one of the plans, and at age 55 he retires with a right to three different plan benefits, all life annuities at age 65, \$60,000 under one plan and \$5,000 each under the other two. The sponsor wants to plan benefits immediately in the full amount, but the 415 dollar limit at age 55 is reduced to about \$35,000. Could the sponsor defer the commencement date under the plan that pays the largest benefit to a point in time when a higher 415 dollar limit would apply, but commence say the lower two plan benefits? Do you see a problem where they might pay the \$60,000 out of pocket on a non-qualified basis until the qualified plan can pick up the full \$60,000, and they would be done with their nonqualified payments for good?

MS. SMITH: I don't think there's a problem with it. There's another alternative. If your plan so provides, you can automatically reflect indexing of the 415 limit for someone who is in inactive status once the limit pops up. So you could start the individual out with \$35,000, paying the difference out of pocket, and then as the \$90,000 is indexed you could reflect that increase automatically under the qualified plans, assuming that we don't have a ten-year phase-in of those pop ups. (I don't know how you're going to get more participation for an inactive.)

