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PRIVATE PENSIONS

Impact of Vesting and Minimum Benefit and Contribution Rules in Top-Heavy Plans

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The Honorable William L. Clay
Chairman, Subcommittee on Labor-Management
Relations
Committee on Education and Labor
House of Representatives

The Honorable Marge Roukema
Ranking Minority Member
Subcommittee on Labor-Management Relations
Committee on Education and Labor
House of Representatives

On May 3, 1989, you requested information on how certain rules for top-heavy pension plans affected participants' pension benefits. Top-heavy pension plans are those in which more than 60 percent of the benefits or contributions go to company owners or other key employees. Your request in part reflected your ongoing interest in whether the top-heavy rules contained in the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) are necessary in light of changes made to the rules governing pension plans included in the Tax Reform Act of 1986 (TRA). In response we agreed to provide information comparing the proportion of participants in top-heavy plans with no legal right to receive earned benefits (i.e., those who were not "vested") under the top-heavy and TRA vesting rules. You also asked for information on the effect of TEFRA's top-heavy minimum benefit and contribution rules. We agreed to identify top-heavy plans and participants that were not affected by TEFRA's rules. This briefing report summarizes information presented in our May 11, 1989, briefing to the Subcommittee.[1]

Background

Top-heavy rules were enacted to curb perceived inequities in small business pension plans where key employees were the primary beneficiaries.[2] Among other things, the top-heavy rules reduced the time a worker can be made to wait to gain a legal right to receive earned benefits or "vest," and stipulated minimum benefits or contributions that participants who are not owners, officers, or other key employees must receive.

[1]The vesting status information updates preliminary data presented in Pension Plans: Vesting Status of Participants in Selected Small Plans (GAO/HRD-88-31, Oct. 30, 1987).

[2]Generally, the smaller the plan, the more likely it is to be top-heavy.

The continued need for accelerated vesting for top-heavy plans has been a topic of debate since the passage of TRA, which significantly lessened the vesting period for plans that are not top-heavy. As originally enacted in 1974, the Employee Retirement Income Security Act (ERISA), provided that the longest a plan could require a participant to wait before fully vesting was 10 to 15 years. In 1982, TEFRA lowered this requirement to 3 to 6 years, but only for top-heavy plans. In 1986, TRA amended ERISA and changed the maximum period to 5 to 7 years for plans other than top-heavy ones. Some argue that the accelerated vesting periods for top-heavy plans and those that are not top-heavy are similar enough to make the special rules for top-heavy plans unnecessary. However, groups concerned with protecting workers' and retirees' pensions have argued that retaining the top-heavy rules is necessary. They note that small businesses generally have highly mobile workforces that would be less likely to vest in any pension benefits under the less stringent vesting requirements of TRA.

Approach and Methodology

Our data were drawn from GAO's pension database, which we created to respond to the mandate in the Retirement Equity Act of 1984 (P.L. 98-397, Sec. 304) that GAO study the effect of federal pension rules on women. The database contains information on a nationwide sample of plans in operation in 1984 and 1985 sponsored by small employers (fewer than 100 employees). The sample was selected from a universe of the four most prevalent types of pension plans in the five industry groups with most of these types of plans.[3] (See app. I.) This universe included 67 percent of small employers' plans otherwise eligible for our study.

About three-fourths of the small employers' plans represented in our database were top-heavy and were included in our analysis of participants' vesting status under TEFRA and TRA.[4] This represented about 55,000 top-heavy plans with about 346,000 participants. Because of time and data constraints, our analysis of the minimum benefits and contributions included only non-key participants in those cases where the employer sponsored one top-heavy plan. This represented about 26,000 top-heavy plans with about 142,000 participants.

[3]The universe also only included plans that (1) were sponsored by a single employer, (2) contained more than one participant, and (3) were not Keogh plans for self-employed people.

[4]The database also contains information on a nationally representative sample of plans sponsored by large employers (100 or more employees). None of these plans were top-heavy.

We compared participants' vesting status under TEFRA and TRA using two different scenarios. In Scenario 1, which some pension experts think is the most likely scenario, we assumed that plans using top-heavy vesting schedules used TRA's 5-year cliff schedule instead.[5] In Scenario 2, thought to be a less likely alternative, we assumed each plan retained its type of vesting (graded or cliff) using the longer TRA time limits. For both scenarios, we assumed employers sponsoring plans that allowed full vesting sooner than TEFRA's top-heavy rules continued to give participants vested benefits sooner under TRA rules.

To identify top-heavy plans and non-key participants that were not affected by the top-heavy minimum benefit or contribution requirements ("minimums"), we compared each non-key participant's total accrued benefit or annual employer contribution with the applicable minimum, as defined under law (see app. II). In some cases, the participant's accrued benefit or contribution was equal to the minimum. Because of time and data constraints, we could not determine whether this was due to the plan formula or the minimum rules. Therefore, we categorized these cases as "may be affected." The top-heavy minimum rules differed for defined benefit and defined contribution plans, so we performed separate analyses for these two types of plans.[6]

Principal Findings

Many more participants, men and women alike, would have had smaller or no vested benefits if TEFRA's top-heavy vesting rules had been repealed and replaced with TRA's vesting rules in the 55,000 top-heavy plans in our study population. However, the effect of this change in vesting status on participants' retirement income would likely have been small and would only have occurred if these participants left their jobs before becoming fully vested. This is because these participants probably would have been vested in a relatively small pension benefit at that point in their careers.

Over one-half of the 26,000 plans and over two-thirds of the 142,000 participants represented in our analysis were not affected by the top-heavy minimums. However, short-service participants (fewer than 3

[5]Under a cliff schedule, participants move from nonvested to fully vested status after a specified length of service. Under a graded vesting schedule, vesting begins after a specified length of service and increases by a fixed percentage each year until full vesting is achieved. (See pp. 8-9.)

[6]In a defined contribution plan, each participant has an individual account and the retirement benefit will depend on the amount of contributions and the investment experience of the account. In a defined benefit plan, the retirement benefit is determined through a formula based on a worker's years of service, earnings, or both.

years' service) appeared to be more likely than those with longer service to be affected by the defined benefit minimums after just 2 years under the top-heavy rules. Only about one-third of short-service non-key participants—compared with over two-thirds of longer service participants—had accrued benefits greater than the minimum benefit and so were not affected.

More Participants Would Not Have Been Vested Under TRA

Our analysis showed that, had top-heavy rules been repealed and replaced with TRA rules, many more participants in top-heavy plans would not have had vested benefits under either TRA scenario. In Scenario 1, where we applied TRA's 5-year cliff vesting schedule to most participants, the proportion of participants not vested in their pension benefits would have about tripled—increasing from 13 percent to 40 percent. In Scenario 2, where we assumed plans retained their form of vesting but used the TRA time limits, the proportion of participants not vested would have increased from 13 to about 23 percent. (See app. III.)

Men would have been disproportionately affected if top-heavy rules had been replaced by TRA's rules under either scenario. Under top-heavy rules about 18 percent of women and 8 percent of men were not vested. In Scenario 1, 4.4 times as many men would not have been vested compared with 2.4 times as many women. In Scenario 2, 2.4 times as many men would not have been vested compared with 1.5 times as many women.

Many Plans and Participants Not Affected by Top-Heavy Minimums

Many top-heavy pension plans and non-key participants were not affected by the top-heavy minimums. However, participants with short service appeared more likely than those with longer service to have total accrued benefits equal to the defined benefit minimums, and, therefore, may have been affected.

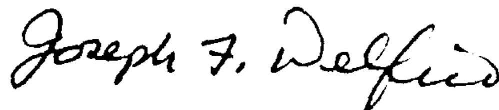
Among defined benefit plans, we estimated that 58 percent of the plans used benefit formulas that gave every non-key participant accrued benefits greater than the minimum. In other plans, some non-key participants may have been affected but others were not. In total, about 70 percent of all non-key participants in our study population had benefits greater than the minimum 2 years after the rules had been in effect. Only about 33 percent of non-key participants with fewer than 3 years of service had accrued benefits greater than the minimum, compared with about 66 percent of those with 3 or 4 years of service and about 91 percent of those with 5 or more years of service.

Some long-service workers may not be affected by the minimum benefit rule because any benefit accruals, whether or not attributable to years for which the plan was top-heavy, may be used to satisfy the defined benefit minimums. For example, a worker who entered the plan in 1985 must accrue benefits at least equal to the minimum for that year. However, a worker who joined in 1982 may accrue less than the minimum for 1985 if his or her total accrued benefit (for 1982 through 1985) is at least equal to the minimum required for 1985.

We estimated that in 61 percent of defined contribution plans employer sponsors made contributions greater than required by the minimum contribution rules. About 85 percent of all non-key participants in defined contribution plans where contributions were made received contributions above the minimum.

We did not obtain written comments on this briefing report because we were not reviewing specific agency functions or programs. However, we discussed our methodology with the Chief, Pension Actuarial Branch, of the Internal Revenue Service, and he agreed that it was appropriate. We are sending copies of this briefing report to other interested congressional committees. Copies will also be made available to others upon request.

If you have questions about information contained in this briefing report, please call me on 275-6193. Other major contributors to this briefing report are listed in appendix IV.



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Abbreviations

ERISA	Employee Retirement Income Security Act of 1974
GAO	General Accounting Office
TEFRA	Tax Equity and Fiscal Responsibility Act of 1982
TRA	Tax Reform Act of 1986

Private Pensions: Impact of Vesting and Minimum Benefit and Contribution Rules in Top-Heavy Plans

Objectives

On May 3, 1989, the Subcommittee on Labor-Management Relations, House Committee on Education and Labor, requested information about the impact of vesting and minimum benefit rules in top-heavy pension plans. We agreed to provide information (1) comparing participants' vesting status under the top-heavy rules and vesting rules included in the Tax Reform Act of 1986 (TRA) and (2) identifying plans and participants not affected by the top-heavy minimum benefit and contribution rules.[1]

Background

A plan is top-heavy when more than 60 percent of the benefits or contributions go to company owners, officers, or other key employees.[2] Top-heavy plans must comply with different rules than other pension plans, such as shorter vesting schedules and minimum benefit and contribution rules in any year in which the plan is top-heavy.

Explanation of Vesting Rules

Vesting standards for private pension plans were first established by the Employee Retirement Income Security Act of 1974 (ERISA). These standards governed how long an employer could make a plan participant wait before the participant had earned a right to receive pension benefits.

Cliff vesting and graded vesting are two common types of vesting. Under a cliff schedule, participants move from nonvested to fully vested status after a specified length of service. Using a graded vesting schedule, vesting begins after a specified length of service and increases by a fixed percentage each year until full vesting is achieved. The longest vesting schedules first allowed under ERISA included 10-year cliff and 5- to 15-year graded vesting.

The Congress added special rules for top-heavy plans as part of the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA). Among other things, TEFRA reduced the maximum time top-heavy plans could require for vesting, increasing the likelihood of shorter-tenured workers receiving pension benefits. As described below, top-heavy rules prescribe either 2- to 6-year graded vesting or 3-year cliff vesting.

[1] The vesting status information updates preliminary data presented in Pension Plans: Vesting Status of Participants in Selected Small Plans (GAO/HRD-88-31, Oct. 30, 1987).

[2] A key employee is an officer, an employee owning more than a 5-percent interest in the firm, an employee owning more than a 1-percent interest in the firm and earning over $150,000, or one of the 10 employees owning the largest interest in the firm.

Under the 2- to 6-year graded vesting schedule, a participant is 20-percent vested after 2 years of service. The vesting percentage of the participant increases by 20 percent each year until the participant is 100-percent vested (fully vested) after 6 years. Under the 3-year cliff schedule, participants are fully vested after 3 years of service but not vested at all before that time.

TRA amended ERISA to reduce the vesting schedules allowed for plans that are not top-heavy. The vesting schedules provided as a result of TRA are: 3- to 7-year graded vesting or 5-year cliff vesting.[3] TEFRA's rules, which still apply to top-heavy plans, provide shorter vesting periods than TRA's rules.

Explanation of Top-Heavy Minimums

TEFRA established minimum benefit and contribution rules ("minimums") for all non-key participants in top-heavy plans, but not for other plans. The rules apply to all years in which the plan is top-heavy, beginning in 1984. Before TEFRA, some plans provided participants a minimum benefit independent of the normal benefit formula. But other plans, by coordinating their benefits with social security, provided some participants with little or no pension benefits.[4]

For defined benefit plans,[5] TEFRA requires that each non-key participant receive a total accrued benefit of at least 2 percent of average annual compensation for each year in which the plan is top-heavy.[6] After a non-key participant's accrued benefit reaches 20 percent (2 percent times 10 top-heavy years), the minimum no longer applies. For example, if the plan had been top-heavy in both 1984 and 1985, each non-key participant would have to have a total accrued benefit at the end of 1985 of at least 4 percent of average annual compensation (2 percent times 2 top-

[3]Multiemployer plans satisfy TRA's vesting requirements if benefits are fully vested after 10 years of service.

[4]The Tax Reform Act of 1986 eliminated methods of coordination that resulted in some lower-paid workers receiving no pension benefits. For more information about pension plan coordination with social security, see Pension Integration: How Large Defined Benefit Plans Coordinate Benefits With Social Security (GAO/HRD-86-118BR, July 21, 1986) and Private Pensions: Plan Provisions Differ Between Large and Small Employers (GAO/HRD-89-105BR, Sept. 26, 1989).

[5]In a defined contribution plan, each participant has an individual account and the retirement benefit will depend on the amount of contributions and the investment experience of the account. In a defined benefit plan, the retirement benefit is determined through a formula based on a worker's years of service, earnings, or both.

[6]Average annual compensation is calculated over a period of consecutive years, not exceeding 5, when the participant had the highest aggregate compensation.

heavy years) to meet the minimum. If the plan had been top-heavy only 1 year, the applicable minimum would be 2 percent of annual average compensation (2 percent times 1 top-heavy year).

In determining whether a participant's benefit is above the minimum, any accruals of employer-derived benefits, whether or not attributable to years for which the plan is top-heavy, may be used. Thus, longer-service participants may not be affected by the minimums if their plans have been top-heavy for a relatively short period. For example, a participant with 20 years of service and a total accrued benefit of 5 percent of average annual compensation would exceed the top-heavy minimum as long as the plan had been top-heavy for no more than 2 years.

In top-heavy defined contribution plans that make contributions in a given year,[7] non-key participants must receive a contribution for the year at least equal to 3 percent of their annual compensation when key employees receive 3 percent or more. However, if no key participant receives a contribution of 3 percent or more of annual compensation, the top-heavy rules stipulate that all non-key participants must receive a contribution equal to the highest percentage contribution for any key employee in the plan.

Scope and Methodology of GAO's Vesting Analysis

Our data were drawn from GAO's nationwide sample of pension plans sponsored by small employers (fewer than 100 employees) in operation in 1984 and 1985. This sample was selected from the universe of the four most prevalent types of pension plans in the five industry groups with most of these types of plans.[8] (See app. I.) This universe included about 67 percent of small employers' plans otherwise eligible for our study.

Our analysis of vesting status used data from the plans in our survey that were top-heavy. This represented about 346,000 participants in about 55,000 top-heavy plans.[9]

[7] In a defined contribution profit sharing plan, the employer's contribution is a function of profits. The employer may not make a contribution each year.

[8] The universe also included only plans that (1) were sponsored by a single employer, (2) contained more than one participant, and (3) were not Keogh plans for self-employed people.

[9] We excluded about 4 percent of the top-heavy plans who reported vesting schedules that were not in compliance with the top-heavy rules.

We performed the comparison of vesting status under the two acts for all participants and separately for men and women. Specifically, we compared (1) the percentages of participants not vested and (2) the average vesting percentages. The vesting percentage is the fraction of total accrued benefits that are vested. The average vesting percentage equals the sum of the participants' vesting percentages—0, 20, 40, 60, 80, or 100 percent—divided by the number of participants.

We used two scenarios to evaluate the possible effects on participants' vesting status of using TRA's vesting rules instead of the top-heavy rules. Some pension experts think that the first scenario described below is the most likely scenario of how top-heavy plans would change their vesting schedules should the top-heavy rules be repealed. The second scenario is thought to be a less likely alternative. These scenarios assumed different TRA vesting schedules depending on what type of top-heavy vesting schedule the plan used. About 73 percent of the participants in our study population were in top-heavy plans that used 2- to 6-year graded vesting schedules. About 3 percent of the participants were in top-heavy plans that used 3-year cliff schedules. About 24 percent were in top-heavy plans with other, faster schedules.

TRA Scenario 1

Under Scenario 1, for participants in plans using TEFRA's 2-to 6-year graded vesting schedule or 3-year cliff vesting schedule, we estimated the number of participants that would not have been vested had the plans used TRA's 5-year cliff vesting schedule instead. Participants who were not vested under the top-heavy rules would not have been vested in this scenario. Similarly, participants with fewer than 5 years of service who may have been partially or fully vested would not have been vested. However, participants with 5 or more years of service who were partially vested under the top-heavy rules would have been fully vested under this scenario.

We assumed no change for plans using schedules with full vesting sooner than the top-heavy schedules; for example, immediate vesting, 1- to 5-year graded vesting, or 2-year cliff vesting. We assumed employers sponsoring these plans would continue to give participants vested benefits at a rate faster than required.

TRA Scenario 2

In Scenario 2, we assumed each top-heavy plan's type of vesting (graded or cliff) remained the same, but the TRA time limits were used. For participants in plans using 2- to 6-year graded vesting, we assumed TRA's

3- to 7-year graded vesting. Among these participants, those who had been partially vested and some who had been fully vested would have had 1 year less of vesting credit. Those who were not vested would have remained not vested. Those who were fully vested and had 7 or more years of service would have remained fully vested.

For participants in plans using the 3-year cliff schedule, we assumed TRA's 5-year cliff schedule. Among these participants, those with fewer than 5 years of service who had been fully vested under the top-heavy rules would not have been vested in this scenario. Those who had not been vested would have remained not vested. Those who had been fully vested and had 5 or more years of service would have remained fully vested. As with Scenario 1, we assumed faster schedules did not change.

More Participants Would Not Have Been Vested Under TRA

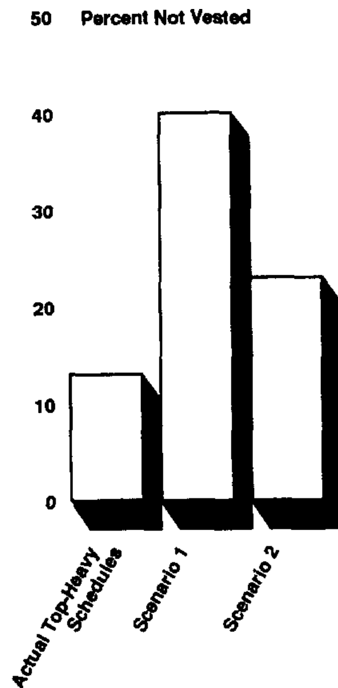
Many more participants would not have had vested benefits if TEFRA's top-heavy rules had been repealed and top-heavy plans had adopted the changes assumed in either TRA Scenario. In Scenario 1 (where we assumed most participants were under TRA's 5-year cliff schedule), the estimated percentage of participants not vested in their pension benefits would have about tripled (from 13 percent to 40 percent), as shown in figure 1. If top-heavy plans kept the same type of schedules (graded or cliff) and used TRA's time limits (Scenario 2), the percentage of participants not vested would have increased from 13 percent to about 23 percent, according to our analysis. (See app. III.)

Under top-heavy rules participants were vested in about 66 percent of accrued benefits on average. Without top-heavy rules, this average vesting percentage would have been about 57 percent.

For a participant who would have lost vesting status had top-heavy rules been replaced by TRA's rules, the effect on retirement income would likely be small, and would occur only if she or he left the job before fully vesting.[10] Consider the 27 percent of participants in Scenario 1 who had at least partially vested benefits under the top-heavy rules and would have had no vested benefits under TRA's 5-year cliff schedule. If these participants left their jobs before fully vesting (in this case, with fewer than 5 years of service), they would have had no vested benefits for retirement using TRA rules. But this would compare

[10]For more information on how job mobility can adversely affect workers' pension incomes in retirement, see Private Pensions: Portability and Preservation of Vested Benefits (GAO/HRD-89-15BR, Feb. 3, 1989).

Figure 1: More Participants Would Not Have Been Vested Under TRA



Note: Total 346,000 participants

with a relatively small vested benefit under the top-heavy rules. Even with the top-heavy rules on minimum benefits and contributions,[11] pension benefits for shorter-tenured participants in the early years of participation are likely to be relatively small. This is because these participants have few years of service and tend to have lower salaries than they would at retirement.

[11]The top-heavy rules that specify minimum benefits and contributions for non-key participants are discussed on pp. 9-10 and 15-22.

Rate of Increase in Proportion Not Vested Greater for Men Than Women Under TRA

Men would have been disproportionately affected if top-heavy rules had been replaced by TRA's rules under either scenario. Although the absolute percentage point increase in the proportion not vested was similar for men and women, the proportion of men who would not have been vested increased at a greater rate than the proportion of women. Consequently, although a greater proportion of women than men were not vested under both the top-heavy rules and the TRA scenarios, the differences between women and men were less under TRA.

Comparing top-heavy and TRA rules under Scenario 1, 4.4 times as many men would not be vested (35 percent versus 8 percent) compared with 2.4 times as many women (43 percent versus 18 percent). (See fig. 2.) Likewise, under Scenario 2, 2.4 times as many men would not be vested (19 percent versus 8 percent) compared with 1.5 times as many women (27 percent versus 18 percent).

The average vesting percentages for both men and women would have been less if TRA's vesting rules had been applied to top-heavy plans under either scenario. Men were vested in about 72 percent of accrued benefits under top-heavy rules and would have been vested in about 63 percent using TRA's vesting rules. For women, this average vesting percentage would have dropped from about 62 percent under top-heavy rules to about 53 percent.

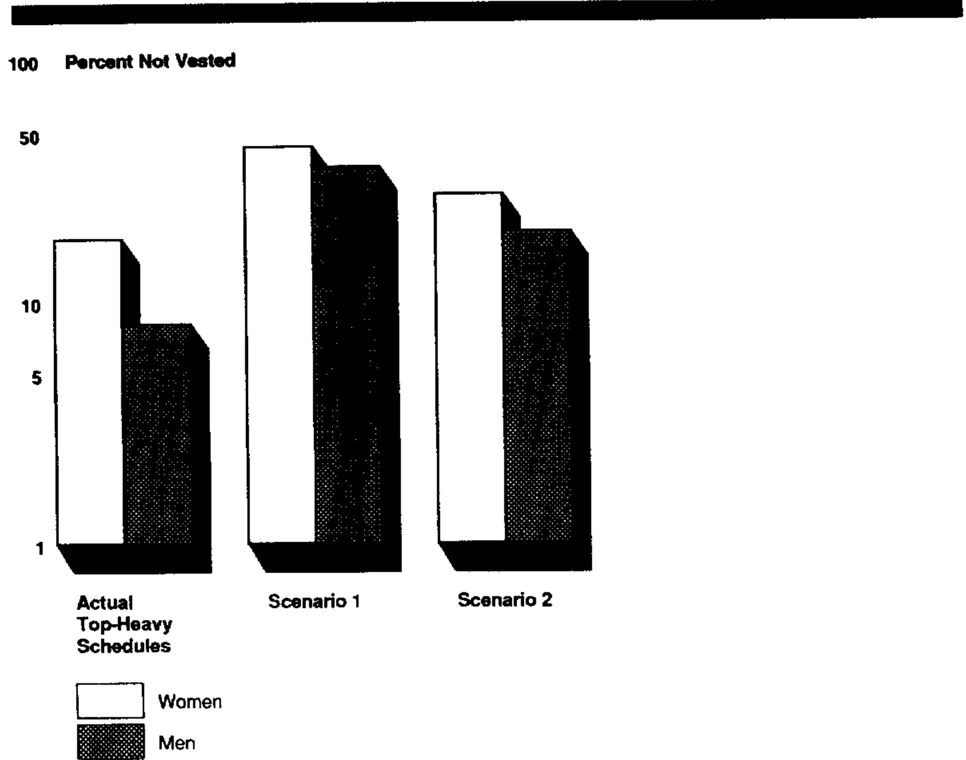
Scope and Methodology of GAO's Analysis of Top-Heavy Minimums

Top-heavy minimum rules differed for defined benefit and defined contribution plans, so we performed separate analyses for these two types of plans. Our analysis of the defined benefit minimums represented about 9,000 plans with about 42,000 non-key participants.[12] Our analysis of the defined contribution minimum represented about 17,000 plans with about 100,000 non-key participants.

We focused our analysis on non-key participants in these top-heavy plans because it is these participants that top-heavy rules were designed to help. Because our data did not distinguish between key and non-key

[12]Our analysis of the top-heavy minimums focused on those cases where the employer sponsored only one top-heavy plan. Because of time and data constraints, we did not include cases where top-heavy minimums were more complicated—namely, those where the employer sponsored more than one top-heavy plan.

Figure 2: Rate of Increase Greater for Men Than Women Under TRA



Notes: 182,000 women and 164,000 men. A logarithmic scale was used to illustrate relative rather than absolute changes in the proportions of men and women not vested.

participants using the criteria established under law, we classified participants with reported annual compensation less than $50,000 as non-key participants.[13]

To identify plans and non-key participants that were not affected by the top-heavy minimums, we compared each non-key participant's accrued benefit or employer contribution with applicable TEFRA minimums. (See app. II.) In some cases the participant's accrued benefit or contribution did not exceed the minimum. Because of time and data constraints, we could not determine whether this was due to the plan formula or the minimum rules. Therefore, we categorized these cases as "may be affected."

[13]TRA created a new classification of employees (for purposes unrelated to determining top-heavy status). TRA's "highly-compensated employees" include two categories of TEFRA's key employees—5 percent owners and officers. However, the highly-compensated group also includes employees who earn more than $50,000 but have no ownership interest and so are not considered key employees.

Over One-Half the Defined Benefit Plans Not Affected

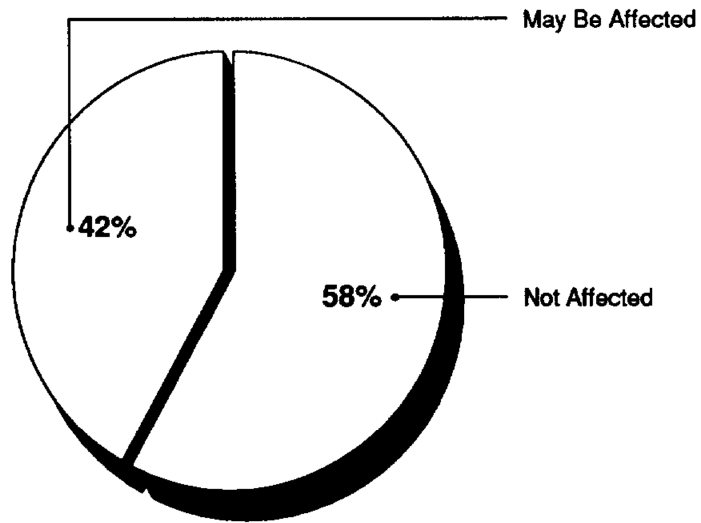
We estimated that 58 percent of the defined benefit plans in our study population were not affected by the minimum benefit rule (see fig. 3). Every non-key participant in each of these plans had a total accrued benefit exceeding the minimum.

Unaffected plans contained about 28 percent of all the non-key participants. On average, they had fewer non-key participants than the other defined benefit plans in our study.

Many Participants in Defined Benefit Plans Not Affected

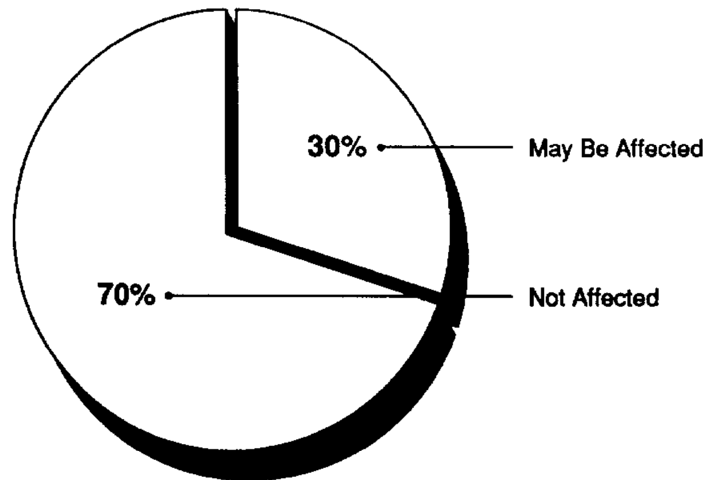
In addition to the 28 percent of participants in plans not affected, many participants in plans that "may be affected" also had benefits above the minimum. In total, we estimated that 70 percent of the 42,000 non-key participants represented in our analysis had total accrued benefits greater than the minimum and so were not affected. (See fig. 4.)

Figure 3: Over One-Half the Defined Benefit Plans Not Affected



Note: Based on 9,000 defined benefit plans for which we had complete information.

Figure 4: Many Participants in Defined Benefit Plans Not Affected



Note: Based on 42,000 non-key participants for which we had complete information.

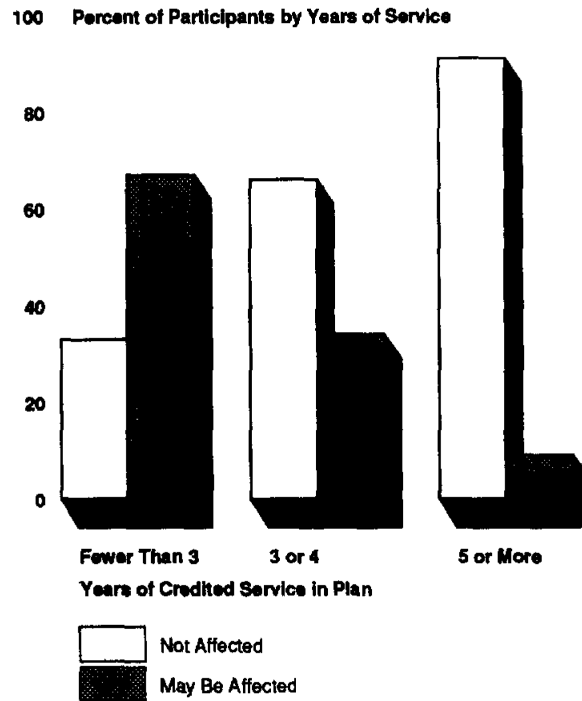
More Short-Service Participants May Be Affected in Short Term

After 2 years of operation, the top-heavy defined benefit minimum appeared mainly to affect short-service plan participants (fewer than 3 years of service) in our analysis. Long-service participants were more likely to have total accrued benefits greater than the top-heavy minimum in the short term. As shown in figure 5,

- about 91 percent of non-key participants with 5 or more years of service were not affected,
- about 66 percent of non-key participants with 3 or 4 years of service were not affected, and
- about 33 percent of non-key participants with fewer than 3 years of service were not affected.

Some long-service workers in our analysis may have accrued benefits greater than the minimum because any benefit accruals, whether or not attributable to years for which the plan was top-heavy, may be used to satisfy the defined benefit minimum. As the top-heavy minimum benefit increases with additional top-heavy years, more long-service workers may be affected.

Figure 5: More Short-Service Participants May Be Affected in Short Term

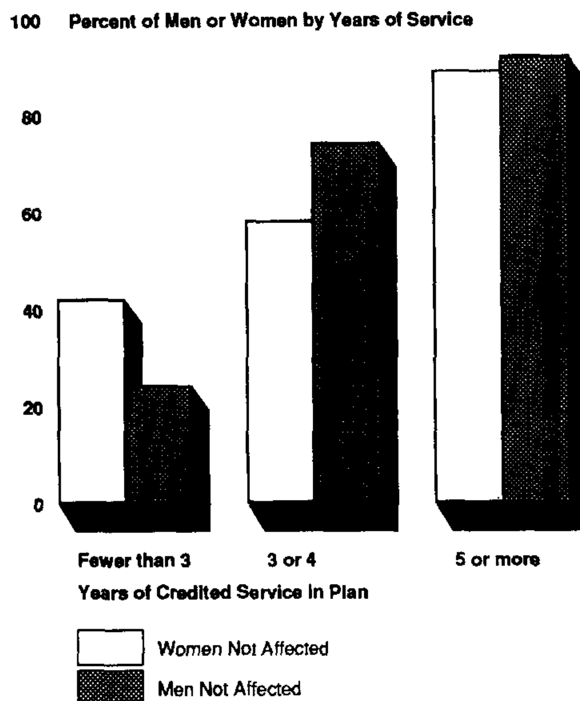


Note: Based on 42,000 non-key participants for which we had complete information.

More Short-Service Men Than Women May Be Affected

The minimum benefit rule appeared to affect more short- service men than women after 2 years of operation. Fewer short-service men than women accrued benefits in excess of the defined benefit minimums and so were not affected by the minimums (24 percent versus 42 percent). (See fig. 6.) Among participants with longer service, the differences in the proportion of men and women who were not affected by the minimum benefit rule were not statistically significant at the 95-percent confidence level.

Figure 6: More Short-Service Women Than Men Not Affected



Note: Based on 20,000 women and 22,000 men in defined benefit plans for which we had complete information.

Most Defined Contribution Plans Not Affected

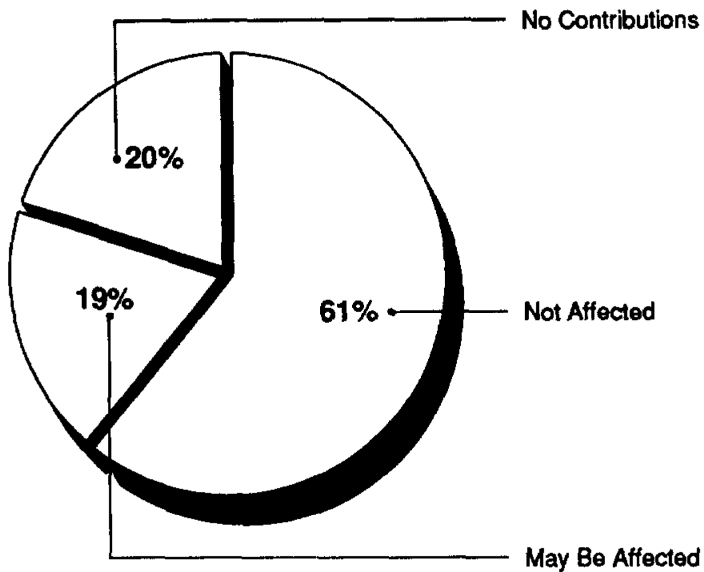
We estimated that in 61 percent of the defined contribution plans in our study employer sponsors made contributions greater than required by the minimum contribution rules. (See fig. 7.) All non-key participants in these plans received contributions greater than 3 percent of annual compensation. About 49 percent of all non-key participants in defined contribution plans in our analysis were in these plans.

Most Participants in Defined Contribution Plans Not Affected

In addition to plans in which every non-key participant received a contribution greater than the minimum, other plans contained some participants that received contributions in excess of the minimum and some that did not. (See fig. 8.) In total, we estimated that 85 percent of participants in plans where contributions were made received contributions greater than the minimum required and so were not affected by the minimum.[14]

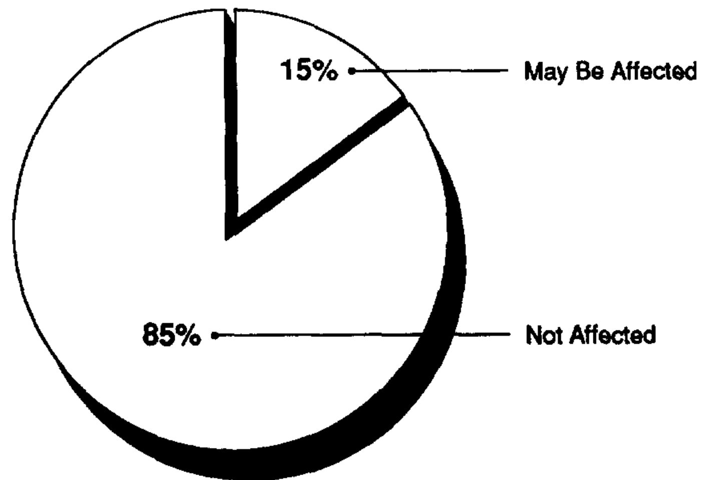
[14]As noted earlier, in a defined contribution profit-sharing plan, the employer's contribution is a function of profits. The employer may not make contributions each year. Employer sponsors made no contributions for about 20 percent of the defined contribution plans containing about 25 percent of the participants.

Figure 7: Most Defined Contribution Plans Not Affected



Note: Total 17,000 plans.

Figure 8: Most Defined Contribution Plan Participants Not Affected



Note: Total 72,000 participants in 13,000 plans with contributions.

GAO's Sample of Plans Sponsored by Small Employers

From Employee Retirement Income Security Act (ERISA) reports for employee benefit plans filed for the plan year beginning during 1984,[1] we drew a sample of private pension plans operating in both 1984 and 1985 sponsored by employers with fewer than 100 employees (small employers). The reports maintained by the Internal Revenue Service were the most up-to-date information available to us on pension plans operating in 1984 and 1985, but did not include plans that began operating in 1985. Consequently, our sample includes only plans that started before 1985.

We estimated from the ERISA reports that 202,299 plans sponsored by small employers met our sampling criteria. That is, the plans were:

1. ongoing plans of the four most prevalent types—fixed-benefit and unit-benefit defined benefit plans, and profit-sharing and money-purchase defined contribution plans;[2]

2. in one of the five industry groups with the most of these types of plans: wholesale trade; retail trade; finance, insurance, and real estate; legal, medical, and health services; and other services;[3]

3. sponsored by a single employer with fewer than 100 employees;

4. plans with more than one participant, and,

5. not Keogh plans for self-employed individuals.

Table I.1 shows the distribution of the universe and sample among the selected plan types and industry groups.

[1] The Form 5500-C for plans with fewer than 100 participants.

[2] A fixed-benefit plan provides a retirement benefit that is not related to the years of service of the plan participant; e.g., a specified percentage of compensation, such as 50 percent of the participant's final pay. A unit-benefit plan uses a formula that provides an explicit unit of benefit for each recognized year of service with the employer; e.g., 1 percent of compensation per year of service. In contrast, rather than fixing benefits by a formula, profit-sharing and money-purchase plans fix the amount of the employer's contribution to each participant's account. In a profit-sharing plan, the total employer contribution to all participants is a function of profits, and the amount contributed to each participant is generally in proportion to the participant's share of total compensation paid to all participants. In a money-purchase plan, the employer is committed to periodic contributions according to a specific formula, usually a percentage of salary.

[3] Omitted industry groups included agriculture; mining and construction; transportation, communications, and utilities; durable and nondurable manufacturing; tax-exempt organizations; and other industries.

Table I.1: The Universe and Sample of Plans Sponsored by Small Employers

Fixed Benefit Plans	Original universe	Original sample	Eligible[a] sample	Adjusted universe	Response rate	Population estimate
Wholesale trade	3,855	31	20	2,487	85	2,114
Retail trade	3,356	17	10	1,974	80	1,579
Finance, insurance, and real estate	4,416	25	10	1,766	60	1,060
Legal, medical, and health services	17,646	119	78	11,566	59	6,821
Other services	11,054	71	39	6,072	54	3,270
Unit Benefit Plans						
Wholesale trade	478	34	27	380	78	296
Retail trade	430	28	24	369	71	261
Finance, insurance, and real estate	984	53	39	724	72	520
Legal, medical, and health services	1,659	82	51	1,032	61	627
Other services	936	56	34	568	65	368
Profit Sharing Plans						
Wholesale trade	10,942	33	23	7,626	61	4,642
Retail trade	11,254	20	15	8,441	80	6,753
Finance, insurance, and real estate	9,902	21	9	4,244	78	3,301
Legal, medical, and health services	44,633	94	61	28,964	70	20,417
Other services	25,605	81	37	11,696	41	4,742
Money Purchase Plans						
Wholesale trade	3,431	16	11	2,359	64	1,501
Retail trade	3,254	15	10	2,169	100	2,169
Finance, insurance, and real estate	4,881	24	12	2,441	67	1,627
Legal, medical, and health services	31,698	153	98	20,303	65	13,112
Other services	11,885	50	22	5,229	55	2,852
Total	**202,299**	**1,023**	**630**	**120,410**	**65**[b]	**78,031**[c]

[a]Originally sampled plans were ineligible if they were (1) Keogh plans for self-employed persons, (2) plans with only one participant, (3) sponsored by employers with 100 or more employees, or (4) terminated during the 1984 plan year

[b]The total response rate is weighted to represent industry and plan types in proportion to their representation in the universe.

[c]Population estimate has total precision of ± 5,471 plans (± 7 percent).

Our original stratified sample included a total of 1,023 plans selected from each of the four plan types. Within each plan type, we sampled from the five selected industry groups, generally in proportion to each group's representation in the universe. We determined the final sample size of 630 and adjusted our universe estimates after we identified 393 cases in the original sample that did not meet our sampling criteria. The adjusted universe included an estimated 120,410 plans (± 7,373).

Among these 630 sampled plans, 65 percent (407) responded across all sampled plan types and industries. We compared respondents and nonrespondents on several characteristics—plan size, top-heavy status, integration with social security, vesting method, industry, and plan type—and found some significant differences. For example, defined contribution plans that did not respond tended to be smaller than those that did. Because of these differences, our estimates apply only to that proportion of the adjusted universe that responded to our survey. As indicated in the final column of table I.1, our respondents represent an estimated 78,031 plans (± 5,471). These plans contained an estimated 700,000 participants (± 100,000).

Additional Information on GAO Methodology for Analysis of Top-Heavy Minimums

This appendix contains additional information on the assumptions used in our analysis of top-heavy minimum benefit and contribution rules to determine which top-heavy plans and non-key participants were not affected by top-heavy minimums.

Analyzing the Impact of Minimum Benefit Rules

To identify defined benefit plans and non-key participants that were not affected by top-heavy minimum benefit rules, we first had to estimate each participant's accrued benefit as a percentage of the participant's average annual compensation and determine the applicable top-heavy minimum. In making these estimates, we

- included participants' accruals before 1984,
- estimated total average annual compensation,
- omitted participants with no reported accrued benefit, and
- assumed plans were top-heavy in 1984.

In determining whether a plan or participant was affected by minimum benefit rules, our analysis included participants' accruals credited to the years before 1984. Under TEFRA, any accruals of employer-derived benefits, whether or not attributable to years for which the plan is top-heavy, may be used to satisfy the defined benefit minimums.

We modeled wage growth for the 5-year period from 1981 to 1985 (or the participant's tenure with the company, whichever was less), to estimate each participant's average compensation for our analysis. The top-heavy rules required a test of the total accrued benefit as a percentage of average annual compensation, and our data contained compensation for only 1 year. We used three different rates of annual wage growth—0-, 4-, and 10-percent—to test the sensitivity of the results to changes in average annual compensation. The results in this briefing report were based on 4-percent wage growth. (See table II.1 for the results of the sensitivity analysis.)

Table II.1: Results of Sensitivity Analysis for Impact of Defined Benefit Minimums

Figures are percentages

	Wage growth assumption		
Estimate of	**0**	**4**	**10**
Plans not affected	58	58	60
Participants not affected	66	70	73

We did not include 4 percent of the participants in our survey because they received no accrued benefit, according to survey responses. We assumed these were family members included in the plan who received no accrued benefits. Under top-heavy rules, family members may be considered key employees, and key employees are not required to receive minimum benefits.

For analysis purposes, we assumed that plans that were top-heavy in 1985 were also top-heavy in 1984. Therefore, some participants and plans that we identified as "may be affected" actually may not be affected. This will occur in the case of a defined benefit plan that was top-heavy in 1985, but not in 1984. In this case, the 4-percent threshold we used (2 percent times 2 top-heavy years) would be higher than the applicable threshold of 2 percent. However, given the relatively small size of plans in our analysis, and the general rule that the smaller the plan the more likely it is to be top-heavy, the effect of this assumption is likely to be small, in our opinion, because most plans were probably top-heavy in both years.

Criteria for Application of Rules

We used the following criteria for identifying plans and non-key participants that were not affected and that may be affected by the minimum benefit and contribution rules for top-heavy plans.

Applying Defined Benefit Minimums

Non-key participants in defined benefit plans were not affected by the minimum benefit rules in our analysis if their total accrued benefits exceeded the minimum. For non-key participants with 1 year of service, if the total accrued benefit in 1985 was more than 2 percent of annual compensation (2 percent times 1 top-heavy year), we concluded the participant was not affected. For participants with 2 or more years of service, if the total accrued benefit in 1985 was more than 4-percent of average annual compensation (2 percent times 2 top-heavy years), the participant was not affected. We used a 4-percent threshold for these participants because the top-heavy rules had been in effect for 2 years, 1984 and 1985, during the period covered by our data, and we assumed the plan was top-heavy both years. (Top-heavy minimum benefit rules have a maximum of 20 percent of compensation; however, this maximum will not affect participants' benefits until a plan has been top-heavy for more than 10 years.)

Table II.2 demonstrates the application of these criteria for three illustrative non-key participants. The total accrued benefits of participants A and B match the top-heavy minimum benefit. Because of time constraints and data limitations, we could not identify the actual plan benefit formula, so we could not determine whether the accrued benefits for these two participants were due to top-heavy minimums or the plan's benefit formula. We concluded that these participants may be affected by top-heavy minimums. We also concluded that participant C was not affected by top-heavy minimums because that participant's accrued benefit exceeded the top-heavy minimum benefit in 1985.

Table II.2: Applying Top-Heavy Defined Benefit Minimums

	Illustrative non-key participants		
1985 Characteristics	**A**	**B**	**C**
Years of service	1	2	3
Total accrued benefit (as percentage of average annual compensation)	2	4	5
Top-heavy minimum benefit (as percentage of average annual compensation)	2	4	4
Status	May be affected	May be affected	Not affected

Defined benefit plans were categorized as not affected by minimum benefit rules if every non-key participant in the plan earned a total accrued benefit in excess of the applicable minimum (2 percent or 4 percent of average compensation, depending on tenure).

Applying Defined Contribution Minimums

In our analysis, we considered a non-key participant in a defined contribution plan to be not affected by the minimum contribution rule if the annual contribution for that participant was more than 3 percent of her or his annual compensation. Defined contribution plans were categorized as not affected by the minimum contribution rule if every non-key participant received a contribution greater than 3 percent of annual compensation.

Impact of Our Proxy Identifying Non-Key Participants on Our Estimates

In about 20 percent of the top-heavy plans in our study population no participant earned $50,000 or more (our proxy separating key and non-key participants). However, by definition, each top-heavy plan must contain at least one key participant, so the results concerning non-key participants reported here included some key employees. Including some key employees in our analysis would result in an overestimate of the

number of participants that were not affected by the minimum rules. However, estimates of the number of plans not affected would remain valid. Even if some key participants were included in our analysis of non-key participants, all non-key participants had to have been "not affected" for the plan to have been categorized as not affected. Therefore, plans categorized as not affected would still be correctly categorized.

Vesting Status of Participants in Top-Heavy Plans Under Top-Heavy Rules and Tax Reform Act Scenarios

Figures are percentages[a]

	Vesting status		
	Top-heavy rules	Scenario 1[b]	Scenario 2[c]
All participants (total 346,000)			
Fully vested	48	57	44
Partially vested	39	4	33
Not vested	13	40	23
Total	**100**	**100**	**100**
Women (total 182,000)			
Fully vested	43	51	40
Partially vested	39	5	33
Not vested	18	43	27
Total	**100**	**100**	**100**
Men (total 164,000)			
Fully vested	53	63	49
Partially vested	39	2	33
Not vested	8	35	19
Total	**100**	**100**	**100**

[a]Totals may not add due to rounding.

[b]Scenario 1: Plans using top-heavy vesting schedules of 2- to 6-year graded vesting and 3-year cliff vesting assumed to use TRA 5-year cliff vesting. Faster vesting schedules assumed to stay the same.

[c]Scenario 2: Plans using top-heavy's 2- to 6-year vesting assumed to use TRA's 3- to 7-year graded vesting; plans using top-heavy's 3-year cliff schedule assumed to use TRA's 5-year cliff. Faster vesting schedules assumed to stay the same.

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Private Pensions: Plan Provisions Differ Between Large and Small Employers (GAO/HRD-89-105BR, Sept. 26, 1989).

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Pension Plans: Vesting Status of Participants in Selected Small Plans (GAO/HRD-88-31, Oct. 30, 1987).

Pension Integration: How Large Defined Benefit Plans Coordinate Benefits With Social Security (GAO/HRD-86-11BR, July 21, 1986).

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