

# Retirement Systems in Japan

**Robert L. Clark**

Department of Economics and Business  
*North Carolina State University*

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# Private Pension Plans

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The development of private pensions in Japan was stimulated by legislation passed in the 1960s that granted preferential tax status to the funding of pensions. During the past 25 years, pension coverage has expanded throughout the Japanese economy. Pensions have become an increasingly important source of retirement income, especially among retirees from large firms.

In general, Japanese pension plans are either tax-qualified pension plans or employees' pension funds. Employees' pension funds are coordinated with the social security system. Employees' pension funds must accept responsibility for paying the earnings-related social security benefit and then must provide an additional or supplemental benefit. They can only be offered by large employers or groups of employers. Tax-qualified plans are more prevalent among smaller firms. These plans have lump-sum options, and almost all retirees select a lump-sum payment instead of an annuity. Tax-qualified plans are not coordinated with social security, and these plans do not allow the contracting out of any portion of social security.

The characteristics of these two types of pensions are examined in this chapter, along with a brief history of their development. This analysis will relate these systems to the aging of the population, changes in social security, and other emerging policy changes. Issues relating to benefit design, funding methods, and investment policy are reviewed and compared to prevailing policies in the United States.

## TAX-QUALIFIED PENSIONS

Tax-qualified pension plans were introduced in 1962 with the amendments to the Corporation Tax Law and the Income Tax Law. These changes provided a favorable tax treatment for pension contributions and the reserve funds for tax-qualified pension plans meeting requirements specified in the 1962 laws. Specifically, employer contributions are treated as a business expense and, therefore, a deductible expense in calculation of corporate income tax liability. Neither these contributions nor plan earnings are considered current compensation to employees. When retirees receive a pension, these funds are treated as retirement income for personal income tax. In contrast to pensions in the United States, the assets in the reserve fund itself are taxed at a rate of 1.173 percent per year; 1 percent is a national tax, and 0.173 percent is a local tax.

These tax-qualified plans were designed on the model of defined benefit pensions in the United States. A company with 15 or more employees can establish a tax-qualified pension with the approval of the director general of the National Tax Administration, Ministry of Finance. All employees of the firm, except company directors, must be eligible to participate in the plan. These plans are not allowed to discriminate among employees with respect to coverage, qualifications for benefits, benefit formula, or contribution rates. Tax-qualified plans are managed by the sponsoring employer.

### Benefit Determination

Benefits must be based on years of service using either a flat benefit or an earnings-related formula. Benefits are based on regular earnings, excluding overtime pay, bonuses, and contribution by the company to benefit plans. The benefit factor usually increases with respect to years of service up to 30 years of tenure. After 30 years of service, the increase in the pension benefit for continued work is often reduced. For example, benefits may be equal to 1 percent of final salary for each of the first 20 years of service plus 2 percent of salary for service between 20 and 30 years. For service after 30 years, the benefit formula would fall back to 1 percent. Credited service is typically defined as continuous service, although authorized absences are not held against the worker in determining benefits.

Benefits must be paid in the form of an annuity or a lump sum. Benefits are payable only on retirement or involuntary termination. The annuity may be a single life annuity without refund features, a single life annuity with certain payments, or payments for a fixed

period of 5, 10, or 15 years. Most plans do not offer life annuity options.<sup>1</sup> In virtually all plans, the retiree can select a lump-sum payment in place of an annuity. The lump-sum conversion from the annuity uses an interest rate specified by the Ministry of Finance. For some time, this rate has been 5.5 percent. These plans rarely offer joint and survivor options when the benefit is taken as an annuity.

Workers who leave the firm prior to normal retirement receive a lump-sum payment as there is no practice of providing a vested deferred annuity. Benefits cannot be integrated with social security. Larger companies tend to set lower ages of eligibility for pensions than do smaller firms.

### **Tax Status of Benefits**

Prior to 1988, pension benefits received as an annuity were taxed as salary income. A revision in the Income Tax Law in 1988 altered this tax treatment, and annuities are now taxed as miscellaneous income. In addition, the level of deductible pension income was raised. The minimum deduction for annual pension annuities received from a company pension plus social security benefits was increased in 1989; retirement annuities are now tax free up to 2.9 million yen (\$22,304 at an exchange rate of 128.5 yen per dollar, which prevailed in the first quarter of 1989) for a couple age 65 and older, and 1.8 million yen (\$14,008) for a couple younger than 65. For single persons age 65 and older, the tax-exempt amount is 2.1 million yen (\$15,953), and for a single person younger than age 65, 0.95 million yen (\$7,393). A detailed review of deductions in 1988 for annuities is provided in Chapter 4.

Tax-qualified pensions were established to permit the payment of retirement annuities from pension funds accumulated using tax-deferred contributions. However, given the availability of the lump-sum option, these plans have become, in practice, a means of funding lump-sum payments. Of the total benefits paid through tax-qualified pensions from April 1987 to March 1988, only 10 percent were in the form of annuity payments, while 90 percent were in lump-sum settlements.<sup>2</sup> To encourage more workers to accept annuities, some firms are offering a greater present value in the form of annuities than as a lump sum. Some firms are beginning to allow employees to select part of their pension as an annuity and part as a lump sum.<sup>3</sup>

The decision to select a lump-sum distribution depends on the tax treatment of the two payments, the interest rate used to convert annuity payments into a lump-sum payment, and inflationary expectations. The 5.5 percent interest rate used for conversion is greater

than the yield on government bonds that has prevailed since 1986; bond yields ranged from 3.6 to 5.2 percent during this period.<sup>4</sup> A higher-than-market interest rate lowers the lump-sum value and should tend to discourage retirees' use of lump-sum payments. The low and stable rates of inflation that characterized the Japanese economy in the 1980s should make fixed annuity payments more appealing.<sup>5</sup> Despite the advantages of selecting an annuity option, retirees overwhelmingly continue to select lump-sum distributions.

### **Financing of Pensions**

Employer contributions to a tax-qualified plan must be either a specified dollar amount or a specified percentage of payroll. Contributions are determined using a reasonable actuarial method to determine liabilities. Past service liability must be amortized according to one of three approved methods: a flat amount of unfunded liabilities, a certain percentage of total earnings, and a certain percentage of unamortized liabilities at the end of the previous year. Employee contributions are typically not required in tax-qualified pensions, with one estimate showing that only 2 percent of the plans required employee contributions in 1980.<sup>6</sup>

Liabilities are determined using service-to-date and a projection of future earnings. The earnings projection is based on the tenure-earnings relationship prevailing in the company at that time. Future earnings growth due to inflation and productivity increases is ignored in the calculation of liabilities. Liabilities are calculated using an interest rate set by the Ministry of Finance. For some time, this rate has been 5.5 percent. Funding is limited to 100 percent of these liabilities.

In general, the Japanese view the assets of the pension fund as belonging to the participants of the plan. Thus, in the case of termination, the plan assets are divided among current workers and retirees. Tax-qualified pension plans must be actuarially evaluated at least every five years. At the time of the review, all excess reserves must be returned to the employer. Excess reserves cannot be recaptured by the employer at any other time. Given the withdrawal of excess funds at each review, it seems more appropriate to view these pension funds as an irrevocable trust, with the liability being what is necessary to pay currently promised benefits. Since excess funds can be removed at the time of an actuarial review, we would expect firms to remove all excess funds prior to any termination of the plan.

These techniques imply that plans will be underfunded on an ongoing basis, as firms are not allowed to make contributions to fund expected future salary increases due to real productivity growth. For

TABLE 5-1 Number of Tax-Qualified Pension Plans\*

Year	Firm Size (number of employees)				Total
	15-99	100-299	300-999	1,000+	
1980	48,724	8,077	2,261	420	59,482
1983	51,598	9,198	2,592	620	64,008
1985	53,116	10,098	2,911	716	66,841
1986	53,933	10,520	3,050	765	68,268
1987	56,352	10,857	3,186	808	71,203
1988	59,099	11,173	3,298	853	74,423
1989	62,552	11,622	3,502	879	78,555

\*All data are for March of the indicated year. Prior to 1986, minimum firm size in survey was 20.

SOURCE: 1980-87 data are reported in Kiyoshi Murakami, "Retirement Benefits and Pension Plans in Japan," Sophia University Business Series Bulletin no. 118, 1988, p. 14. 1988 data are reported in Nippon Dantai Life Insurance Company, *Recent Studies on Severance and Retirement Benefit Plans*, August 1988, p. 8.

the most part, firms are limited to funding at a termination value of pension liabilities. By comparison, firms in the United States are allowed to continue to make tax-exempt contributions as long as the fund is less than 150 percent of its termination liability. If the fund exceeds this limit, no new tax-exempt contributions can be made, but there is no requirement that excess funds be removed. In the United States, liabilities are determined using the average 30-year Treasury bond rate for the last four years.

### Growth of Coverage

In 1966, four years after tax-qualified pensions were first allowed, only 8,150 such plans were in existence. These plans spread throughout the Japanese economy during the following two decades. Table 5-1 shows that the number of tax-qualified plans has increased in the 1980s from 59,482 in 1980 to 78,555 in 1989. Eighty percent of these plans are operated by firms with fewer than 100 employees. The number of participants in tax-qualified pension plans increased from 5.4 million in 1980 to 8.5 million in 1989.

Plan assets must be administered by either a trust bank, an insurance company, or the National Mutual Insurance Federation of Agricultural Cooperatives (Zenkyoren). At least 100 employees are necessary for the plan to be operated by a trust bank. Life insurance companies can manage plans with as few as 15 employees. Authority to manage tax-qualified pension plan assets was granted to Zenkyoren in 1982. Currently, these agricultural cooperatives manage less than 1 percent of plan assets. Given the size distribution of plans, it is not surprising that most tax-qualified pension plans are managed by life

**TABLE 5-2** Tax-Qualified Pension Funds Invested in Insurance Companies and Trust Banks

<i>As of March 31</i>	<i>Insurance Companies (million yen)</i>	<i>Trust Banks (million yen)</i>
1976	454,658	585,445
1977	563,295	751,544
1978	700,121	932,687
1979	872,334	1,135,853
1980	1,101,268	1,377,137
1981	1,384,523	1,667,766
1982	1,722,477	1,984,133
1983	2,120,019	2,335,607
1984	2,582,538	2,694,631
1985	3,311,702	3,087,644
1986	3,688,095	3,499,534
1987	4,297,261	3,959,950
1988	4,975,113	4,456,588
1989	5,549,280	4,909,897

SOURCE: Ministry of Finance, Tax Bureau, *Tekikaku Taishoku Nenkin no Shojin Jokyo Shirabe*, as reported in Kiyoshi Murakami, "Retirement Benefits and Pension Plans in Japan," *Sophia University Business Series Bulletin* no. 118, 1988, p. 15. Data for 1988-1989 are from unpublished materials supplied by Kiyoshi Murakami.

insurance companies. Of the 74,423 plans operating in 1988, 66,891 are operated by insurance companies and 7,532 by trust banks.

Assets in tax-qualified pensions totaled 10.5 trillion yen in 1989 (\$75.8 billion at an exchange rate of 138 yen per dollar), almost equally divided between plans operated by insurance companies and those operated by trust banks (see Table 5-2).

## EMPLOYEES' PENSION FUNDS

The employees' pension fund system was established with the amendment of the Employees' Pension Insurance Law in 1965. Beginning in October 1966, employers could establish an employees' pension fund after having the plan approved by the Ministry of Health and Welfare. To establish an employees' pension fund, a firm must have 500 or more employees for a single-employer plan or 3,000 or more for a multiplan, and the plan must receive the approval of company unions. The minimum number of employees required for adoption of an employees' pension fund was initially 1,000 for a single-employer plan and 5,000 for a multiemployer plan. To encourage greater use of these plans, the minimum plan size has been lowered. As of March 1989, there were 1,259 employees' pension funds.

In addition to this size requirement, the Ministry of Health and Welfare only approves the establishment of an employees' pension

**TABLE 5-3** Size Distribution of Employees' Pension Funds (March 1988)

		<i>Single-Company and Allied Company</i>	<i>Multicompany</i>	<i>Total</i>
Less than	2,000 members	349	1	350
	2,000- 2,999	165	12	177
	3,000- 3,999	104	29	133
	4,000- 4,999	55	42	97
	5,000- 9,999	112	141	253
	10,000-19,999	48	77	125
	20,000-29,999	12	15	27
	30,000 or more	15	17	32
	Total	860*	334	1,194

\*These plans were divided into 405 single-company funds and 455 allied company funds.

SOURCE: Pension Fund Association, *Corporate Pension Plans in Japan* (Tokyo: 1989), p. 17.

fund by firms that are earning profits. Specifically, the sponsoring firm must not have incurred losses in any of the last three years. The Ministry also must approve the design of the plan and all funding requirements.

### Distribution of Funds

Plans may cover workers in a single company, workers in two or more allied companies, or workers in two or more companies in the same industry or occupation. Revisions to regulations adopted in 1989 liberalized the rules concerning multiemployer plans to permit a plan to cover firms not in the same industry. Table 5-3 indicates the distribution of plans and workers covered by employees' pension funds by plan type and size of employer. Single-company plans plus employees' pension funds with allied companies account for 72 percent of all employees' pension funds. In March 1989, there were 421 single-company plans, covering 1.7 million workers. In addition, there were 2.6 million persons in 480 allied-company employees' pension funds and 4.0 million participants in 358 multiemployer plans.

Due to these governmental requirements, employees' pension funds tend to be larger than tax-qualified pension plans. The size distribution of employees' pension funds in Table 5-3 indicates the existence of a number of very large pension plans. For example, 15 percent of all the employees' pension funds have 10,000 or more members. Table 5-4 shows the distribution of plans across industries. The largest number of employees' pension funds are in the wholesale and retail trade sector, followed by machine manufacturing and finance. In March 1989, there were 8.3 million participants in employ-

**TABLE 5-4** Industrial Distribution of Employees' Pension Funds (March 1988)

<i>Industry</i>	<i>Number of Funds</i>
Fishery	3
Construction	73
Food manufacturing	57
Textile manufacturing	60
Wooden goods manufacturing	10
Chemical	66
Metalworking	41
Machine	213
Other manufacturing	66
Wholesale and retail trade	249
Finance	139
Transportation and communication	90
Services	125
Electricity-gas-water	2
Total	1,194

SOURCE: Pension Fund Association, *Corporate Pension Plans in Japan* (Tokyo: 1989), p. 17.

ees' pension funds (up from 7.6 million in 1988), and these plans had assets totaling 19.4 trillion yen in 1989.

Employer contributions to these funds are treated as business expenses and are deductible from corporate income tax. Employee contributions to employees' pension funds are completely exempt from income tax in the same manner as are the contributions for social insurance programs.

Fund earnings are not subject to personal or corporate income tax; however, there is a 1 percent national tax and a 0.173 percent local tax on the fund itself above a specified minimum level of assets. The exemption of some plan assets from this tax was instituted so the combined Employees' Pension Insurance and employees' pension fund contributions would have the same tax status as the benefits in the public mutual aid associations. When the exemption was introduced, the employees' pension funds had to provide a supplemental benefit equal to 2.7 times the contracted-out benefit to equal the benefits to public workers. Thus, the exemption allows funds to accumulate assets to support benefits at this level without being subject to the tax on fund assets. This deduction results in the funds of most employees' pension funds being tax exempt.<sup>7</sup>

### **Benefit Determination**

Employees' pension fund benefits are composed of two components. The substitutional component is directly linked to the national social

security system. The social security benefit is composed of two parts: a flat benefit from the National Pension paid to everyone and an earnings component based on years of work and earnings throughout one's work life from the Employees' Pension Insurance system (see Chapter 3). In exchange for lower total social security contributions, the employees' pension fund assumes responsibility for paying the Employees' Pension Insurance benefit based on past earnings. In October 1988, the regular social security contribution rate was 12.4 percent for men and 11.75 percent for women, shared equally by the employer and the employee.<sup>8</sup> Adopting an employees' pension fund lowers social security contribution rates to 9.2 percent for men and 8.75 percent for women. These funds support the basic (flat) social security benefit for the worker and his spouse. The difference between the regular social security contribution rate and the rate for participants in employees' pension funds goes to finance the earnings-related, contracted-out benefit, which is now paid by the employees' pension fund. Contributions to pay the substitutional component of an employees' pension fund are shared equally by the worker and the firm.

In addition to this contracted-out benefit associated with social security benefits, employees' pension funds must include a supplementary component. The supplementary component must be not less than 30 percent of the substitutional Employees' Pension Insurance benefit accrued while working for this firm. Employer contributions to support this supplementary component must be at least equal to those required of employees. Any additional contributions to fund past service liabilities are typically paid by the employer. The supplemental benefit is in the form of a life annuity, and retirees are not allowed to select a joint and survivorship option.

Retirement income for retired employees consists of the basic benefit from the National Pension Plan, plus the contracted-out, earnings-related benefit paid the employees' pension fund, plus the supplemental pension benefit. In Chapter 3, the combined social security benefit under the new social security benefit formulas for a married worker with average earnings of 254,000 yen per month was shown to be 176,200 yen per month (see Figure 3-1). This represented a replacement rate of 69 percent. Adding the minimum allowed supplemental benefit of 30 percent of the contracted-out benefit raises the total retirement benefit to 199,060 yen, or a replacement rate of 78 percent of earnings. This calculation overestimates the replacement rate since the social security benefit is based on indexed past earnings while the supplemental pension benefit is based on unindexed salary average.

The supplemental benefit may be determined by one of three formulas. First, plans may provide the contracted-out portion of the social security benefit plus the supplemental benefit, which must be at least 30 percent of the substituted benefit. In these plans, the combined benefit from the employees' pension fund is based on a benefit formula of

$$B = (.0075) (1 + \alpha) \times \text{Average Salary} \times \text{Years Coverage}$$

In this formula, .0075 is the benefit for the contracted-out benefit and  $\alpha$  is the supplemental benefit.

Within a plan, everyone is covered by the same formula; however, the size of the supplemental benefit varies across plans. The benefit formula is typically based on career earnings like the Employees' Pension Insurance benefit, which is being contracted out. Many plans using this benefit formula offer a lump-sum option on the supplemental benefit. The conversion to a lump sum is based on an interest rate set by the Ministry of Finance, currently 5.5 percent. The worker cannot convert the substitute benefit into a lump sum.

A second benefit formula followed from the process of phasing out existing lump-sum severance pay plans. Employers started employees' pension funds and set the benefit formula to hold total pension costs constant. In these plans, the contracted-out benefit is based on indexed career earnings, but the supplemental benefit is often based on a shorter averaging period. Plans offering this type of benefit also offer lump-sum options on the supplemental benefit.

The final type of formula, a final salary benefit, is used only in government-related corporations. There were only 13 plans of this type operating in 1988. These plans do not offer lump-sum options.

In 1973, an automatic cost-of-living adjustment was introduced for social security. The government takes the responsibility for paying postretirement increases on the substitute portion of the employees' pension fund benefit. Rarely do employees' pension funds award inflationary increases for the supplemental component of the retirement benefit.

### **Vesting of Benefits**

After one month of employment the worker is fully vested in the contracted-out benefit. Vesting standards for the supplemental benefit are set by the Ministry of Health and Welfare. Currently, vesting for an annuity benefit generally occurs after 20 years of service for all

employees' pension funds. The Pension Fund Association is a special judicial person established in 1966 under the provisions of the Employees' Pension Insurance Law. All employees' pension funds are required to be members of the Pension Fund Association. When workers leave firms prior to retirement, assets sufficient to pay the contracted-out benefit are transferred from the specific employees' pension fund to the Pension Fund Association.

The Pension Fund Association assumes the responsibility of the employees' pension fund for paying the contracted-out benefit to workers who leave firms with less than 10 years of service. Thus, the Pension Fund Association serves as a portability center for the contracted-out portion of the pension benefit. In 1987, the Pension Fund Association was paying benefits to 351,000 pensioners who had left their jobs prior to retirement.<sup>9</sup> No participant of an employees' pension fund can voluntarily withdraw from the fund unless his employment is terminated.

Actual vesting standards for the supplemental benefit vary among employees' pension funds; however, the typical plan provides no supplemental benefit to workers who leave with less than three years of insured coverage. Persons with 3 to 20 years of service will receive a traditional lump-sum severance benefit at termination, while retirees with 20 or more years of service are paid a pension annuity.<sup>10</sup>

In summary, a worker who leaves a firm and its employees' pension fund will have his future contracted-out benefit paid by the Pension Fund Association. If the worker receives an additional lump-sum settlement from the employees' pension fund, he has the option of transferring that amount to the Pension Fund Association. The association provides the worker with a life annuity that is actuarially equivalent to the lump sum.<sup>11</sup>

### **Plan Funding and Administration**

Plan funding and administration are supervised by the Ministry of Health and Welfare. Permissible funding methods are the general average premium method and the entry age normal method. Funding requirements are based on acceptable actuarial assumptions as specified by the government. These include an assumed interest rate of 5.5 percent, the same mortality assumptions used for social security, and other needed assumptions based on recent plan experience.<sup>12</sup>

Funds are held and invested by either trust banks or insurance companies, although consideration is now being given to allowing the use of investment advisors and in-house investment management. The proposal under review would allow 127 investment management

companies to manage new investments of employees' pension funds. Existing assets must continue to be managed by trust banks and insurance companies. A maximum of one third of plan assets could be managed by an investment company. To be eligible to use investment companies, the employees' pension fund must have been operating for at least eight years. In addition, employees' pension funds that are at least eight years old and have 50 billion yen in assets can manage up to one third of these funds in-house.<sup>13</sup>

A certified pension actuary is responsible for the financial management of employees' pension funds. The actuary confirms and signs all pension actuarial reports that the fund submits to the Ministry of Health and Welfare. He is also responsible for the settlement of the fund accounts and issues relating to benefit design. Certified pension actuaries must be approved by the Ministry of Health and Welfare.<sup>14</sup>

Past service liabilities recognized at the initiation of the plan or incurred in subsequent years should be amortized within 7 to 20 years. Liabilities are determined by projecting earnings out to retirement based on the current tenure-earnings relationship in the company. Future increases due to inflation and productivity increases are ignored. Funding is limited to 100 percent of these liabilities. An actuarial review of the plan must be conducted at least every five years.

The government determines permissible forms of investments and limits the composition of the portfolio. Fifty percent of the fund must be invested in capital-secured investments (government bonds, government-secured bonds, etc.). At most, 30 percent of the fund can be in stocks, 30 percent in foreign investments, and 20 percent in real estate. Finally, no more than 10 percent of the pension fund can be invested in the sponsoring company. This latter restriction is the same as that used in the United States. This same standard is applied to the investments of tax-qualified pension plans.

Employees' pension funds are organized as public corporations and established by employers and employees. A majority of employees and unions must approve the establishment of an employees' pension fund. The organizational structure includes a representative decision-making body consisting of an equal number of members appointed by employers and employees. These groups usually range from 14 to 68 members. The employees' pension fund also has a board of directors evenly divided between employer and employee representatives. The president of this board is selected from employer directors.<sup>15</sup> While formally these boards must approve various decisions by the fund, in practice they seem to have relatively little actual authority.

Employees' pension funds are not allowed to transfer excess assets from the fund to the sponsoring firm. Plans that are overfunded can consider reducing employer contributions or improving plan benefits. These changes must be approved by the Ministry of Health and Welfare. The Ministry reviews funds annually and may make recommendations for plan changes. Funds may request reductions in the benefit formulas to reduce financial liabilities. Any such changes must be approved by the Ministry. To date, no such requests have been approved.

In May 1988, the Diet passed legislation allowing the Pension Fund Association to be entrusted with some of the administrative responsibilities of small employees' pension funds. Individual funds may transfer to the Pension Fund Association such activities as recordkeeping and benefit payments. Centralizing these activities in the Pension Fund Association is expected to reduce the cost of managing small funds. This change in fund management was part of legislation to encourage the spread of pensions in the Japanese economy.

### **Termination of Funds**

If an employees' pension fund terminates, assets equal to the actuarial present value of benefits of the substitutional component are taken by the government, which then reassumes the responsibility of paying this benefit. The government assumes responsibility for this benefit if assets are not sufficient to pay the substitute benefit.

Prior to 1989, the residual assets of terminating funds were divided among pensioners and current workers according to their pension credits. Firms were not responsible for any unfunded past service liabilities at termination. When a plan was terminated, retirees had their benefits stopped and were given a cash settlement. The sponsoring firm had to receive approval from the Ministry of Health and Welfare before an employees' pension fund could be terminated. Such permission was rarely given to ongoing firms. As of mid-1988, only 18 employee pension funds had been terminated.

Between 1966 and 1973, there were no employees' pension fund terminations; however, six plans were merged into existing plans during this period. Between 1974 and 1977, 6 plans were terminated, and between 1980 and 1985, another 12 plans were terminated. From the mid-1970s to the mid-1980s, 10 additional plans were merged with other funds.<sup>16</sup> In summary, employees' pension funds have been relatively stable since this pension system was established in 1966. This stability reflects the steady economic growth in Japan and the fact

**TABLE 5-5** Trend in Number of Employees' Pension Funds: Starts, Mergers, and Terminations

Year	Total EPFs	New Funds Started	Merger	Terminations
1966	142	142	—	—
1967	305	163	—	—
1968	453	150	2	—
1969	581	128	—	—
1970	713	134	2	—
1971	811	98	—	—
1972	853	44	2	—
1973	892	39	—	—
1974	917	26	—	1
1975	929	14	—	2
1976	938	12	1	2
1977	945	9	1	1
1978	957	12	—	—
1979	983	26	—	—
1980	991	12	—	4
1981	1,008	20	1	2
1982	1,026	19	1	1
1983	1,043	22	4	—
1984	1,063	23	1	2
1985	1,073	32	1	3
1986	1,134	N/A	N/A	0
1987	1,194	N/A	N/A	0

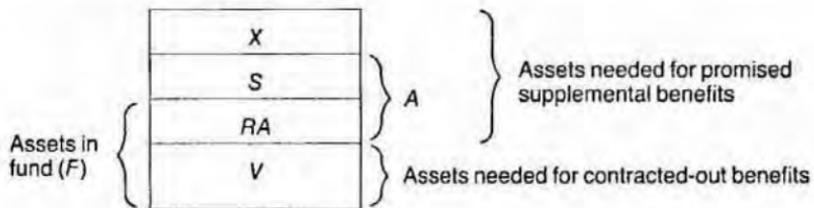
SOURCE: Employees' Pension Fund Association, "Proposal of a Statutory System of Qualified Pension Actuary," April 1986, p. 52; and Katsuyuki Nonoshita and Junichi Sakamoto, "Introduction of the Pension Benefit Guaranty System in Japan," unpublished paper, August 1989.

that employees' pension funds are adopted only by larger successful firms. This pattern of development is shown in Table 5-5.

In mid-1988, the Diet passed pension legislation authorizing the establishment of a pension benefit guaranty system for employees' pension funds. Details of this system were to develop within a year so that the insurance scheme could be in place by mid-1989. This benefit guaranty system applies only to employees' pension funds and does not cover tax-qualified pension plans. The legislation established a system that if an employees' pension fund is terminated as a result of bankruptcy of the sponsoring firm, the Pension Fund Association will guarantee the payment of a certain amount of the supplementary benefit. In addition, the Pension Fund Association will pay the contracted-out substitute benefit.

After a year of negotiations, a pension guaranty system was initiated on April 1, 1989. The system guarantees the payment of a specified part of the supplementary benefit promised by the employees'

**FIGURE 5-1** Amount of Guaranteed Pension Payment to Terminated Employees' Pension Funds



Amount of pension guaranty

$$S = V \times [1 + A] - F$$

Benefits promised but not guaranteed by system - X.

Fund reserves available to pay supplemental benefit - RA.

pension fund. The system is managed by the Pension Fund Association and supervised by the newly established Premium Payment Guaranty Project Steering Committee.

The committee will determine whether a termination of an employees' pension fund meets prescribed guidelines that qualify funds for the guaranty. Reasons for fund termination include bankruptcy of sponsoring employer, deterioration of the performance of the sponsoring firm, and unanticipated market conditions that make it difficult for the firm to maintain the fund.

The aggregate pension guaranty to a fund is a function of plan assets and the benefit that has been promised. The amount of the guaranty to a fund is shown in Figure 5-1 and determined by

$$\text{Guaranteed payment (S)} = V \times [1 + A] - F$$

where  $V$  is the minimum reserve fund necessary to pay the contracted-out benefit,  $A$  is the reserve needed to pay the supplemental benefit based on the fund's benefit formula (limited to 30 percent of  $V$ ), and  $F$  is the amount of reserves in the fund. Therefore,  $S$  represents the amount of additional funds in excess of those currently held by the fund guaranteed to the terminating employees' pension fund. The guaranteed funds are sufficient to allow the Pension Fund Association to pay the substitute benefit and a supplemental benefit equal to 30 percent of the substitute benefit.

**TABLE 5-6** Annual Contributions to Pension Guaranty System

<i>Number of Participants</i>	<i>Contribution per Participant</i>	<i>Maximum Total Contribution (000s)</i>
Less than 3,000	90 yen	255 yen
3,000- 5,000	85	400
5,000-10,000	80	750
10,000-15,000	75	1,050
15,000-20,000	70	1,300
20,000-30,000	65	1,800
30,000 or more	60	3,000

SOURCE: Katsuyuki Nonoshita and Junichi Sakamoto, "Introduction of the Pension Benefit Guaranty System in Japan," unpublished paper, August 1989, p. 19.

To support this system, employees' pension funds are required to pay a contribution that is a function of the number of participants in the fund. The annual contribution equals the number of participants times a unit contribution. As shown in Table 5-6, the unit contribution declines with plan size. For firms with less than 3,000 participants, the contribution is 90 yen per participant (\$.70 at a first-quarter 1989 exchange rate of 128.5 yen per dollar), subject to a maximum contribution of 255,000 yen (\$1,984). For funds with 30,000 or more participants, the contribution is 60 yen per participant (\$.47), subject to a maximum of 3 million yen per year (\$23,346).

The contribution is paid semiannually in May and November. Total premiums are estimated to be 619 million yen for fiscal 1989. The system is to be actuarially evaluated every five years, at which time premiums may be changed.<sup>17</sup>

The contributions are not required by law; however, during the first year of operation all plans contributed to the system. If the fund does not pay the contributions despite reminders by the president of the Pension Fund Association, the amount of the guaranteed payment will be reduced if the fund is terminated. The reliance on voluntary participation in the pension guaranty program differs sharply from the legally required contributions in the United States. The extent of continued participation by employees' pension funds remains to be determined.

## **NONQUALIFIED PRIVATE PENSIONS**

The first corporate pension plans appeared in some industries at the end of the 1950s prior to any legislation providing preferential tax treatment. Some companies retained these plans even though legisla-

tion enacted in the 1960s provided favored tax treatment for approved pensions. Nonqualified, or unapproved, pension plans do not exist widely in Japan. These plans are primarily in large, tax-exempt companies and usually not funded. They are not subject to government regulation.

Benefits from these plans are taxed when received by retirees if the plans are unfunded. If funded, the employer's contribution must be treated as taxable income to someone. When the contribution is fully vested in an employee, the employer's contribution is deductible as a business expense to the firm but is taxable to the employee as current compensation. When the contribution is not vested in an employee, the employer's contribution cannot be deducted as a business expense, but it is not taxable to the employee. The contribution remains a part of company assets.

### **COMPARING EMPLOYEES' PENSION FUNDS AND TAX-QUALIFIED PENSIONS**

Since the mid-1960s, pensions have spread throughout the Japanese economy. Table 5-7 shows that the number of employees' pension funds increased from 142 in 1967 to 1,259 in 1989. During this period, the number of covered workers rose from .5 million to 8.3 million. Similar growth is observed for tax-qualified pension plans, which covered 8.5 million workers in 1989. In March 1989, 16.7 million workers were covered by an employer pension. This represented 58.1 percent of workers covered by the earnings component of the social security system, the Employees' Pension Insurance system. This ratio has risen from 42.1 percent in 1977 and 45.3 percent in 1980 to its current level of 58.1 percent.<sup>18</sup>

The incidence of pension coverage is greater among large firms. This is shown by the high coverage rate among Japan's largest corporations. Eighty-seven percent of the 1,895 companies listed on the Tokyo Stock Exchange in September 1988 offered either a tax-qualified pension or an employees' pension fund. Employees' pension funds were more common among these major corporations (see Table 5-8).<sup>19</sup>

Although both plan types offer the option of retirement annuity income, there are substantial differences in these pensions. They are overseen by different governmental agencies: employees' pension funds by the Ministry of Health and Welfare, tax-qualified plans by the Ministry of Finance. Companies with as few as 15 workers can organize a tax-qualified pension, while only companies or multi-employer groups with over 500 workers can establish an employees'

**TABLE 5-7** Participants in Employees' Pension Funds and Tax-Qualified Plans

Year (March 31)	Employees' Pension Funds		Tax-Qualified Pension Plans		Total Participants* (millions)	Workers Insured by EPI	Percentage of EPI-Insured Workers in Private Pension Plans
	Plans	Participants (millions)	Plans	Participants (millions)			
1967	142	0.50	16,224	1.51	2.01	19.19	10.5%
1972	811	4.67	64,747	3.83	8.50	22.51	37.8
1977	938	5.40	57,011	4.64	10.04	23.85	42.1
1978	945	5.44	57,001	4.91	10.35	23.90	43.3
1979	957	5.57	57,786	5.11	10.68	24.18	44.2
1980	983	5.79	59,482	5.41	11.20	24.71	45.3
1981	991	5.97	61,437	5.84	11.81	25.24	46.8
1982	1,008	6.18	62,775	6.26	12.44	25.70	48.4
1983	1,026	6.34	64,008	6.49	12.83	26.03	49.3
1984	1,043	6.56	65,346	6.87	13.43	26.36	50.9
1985	1,063	6.79	66,841	7.24	14.03	26.76	52.5
1986	1,073	7.06	68,268	7.56	14.60	27.07	54.2
1987	1,134	7.26	71,203	7.88	15.15	26.99	56.1
1988	1,194	7.64	74,423	8.21	15.85	27.68	57.3
1989	1,259	8.27	78,555	8.45	16.72	28.77	58.1

\*Some of the members of the employees' pension funds and tax-qualified pensions are counted twice because some companies offer both types of plans.

SOURCE: Pension Fund Association, *Corporate Pension Plans in Japan* (Tokyo: 1989), p. 20. Data for 1989 are reported in Yoshiro Yumiba, "Private Pension Statistics in Japan," in *Pension Policy: An International Perspective*, ed. John Turner and Lorna Dailey (Washington, D.C.: U.S. Government Printing Office, forthcoming).

TABLE 5-8 Pension Coverage among Firms Listed on Japanese Stock Exchange

Date	Number of Companies Listed in Stock Exchanges	Number of Companies Adopting One or Both of the Plans	Percentage of Listed Companies with Pension	Type of Pensions		
				EPF	TQP	Both Plans
Dec. 1975	1,668	1,002	60.1%	365	585	52
Sept. 1978	1,657	1,039	62.7	383	599	57
Sept. 1979	1,674	1,130	67.5	387	675	68
Sept. 1980	1,682	1,170	69.6	391	708	78
Sept. 1981	1,697	1,279	75.4	787	391	101
Sept. 1982	1,716	1,320	76.9	828	376	116
Sept. 1983	1,735	1,365	78.7	861	379	125
Sept. 1984	1,748	1,420	81.2	906	373	141
Sept. 1985	1,778	1,475	83.0	957	361	157
Sept. 1986	1,806	1,511	83.7	990	354	167
Sept. 1987	1,851	1,594	86.1	1,040	374	180
Sept. 1988	1,895	1,649	87.0	1,075	378	196

SOURCE: Mitsubishi Trust and Banking Corporation, "Mitsubishi's Pension Bulletin," as reported in Pension Fund Association, *Corporate Pension Plans in Japan* (Tokyo: 1989), p. 21.

pension fund. To establish an employees' pension fund, workers must be covered by the employee component of social security, the Employees' Pension Insurance system.

In 1987, employees' pension funds paid 1.14 million beneficiaries an average annual pension of 257,000 yen (\$1,777 at an exchange rate of 144.6 yen per dollar). The increase in the number of beneficiaries and average pension is shown in Table 5-9. Tax-qualified plans pay large benefits to fewer beneficiaries. The lower number of beneficiaries is due to the selection of lump-sum settlements by most participants in these plans. The higher average benefit is the result of employees' pension funds paying life annuities, while tax-qualified plans generally allow a fixed number of benefit payments.

Lump-sum options are available with both plan types, and most retirees select a lump-sum payment. A 1985 survey by the Central Labor Relations Board of 226 employers with 1,000 or more workers who have pension plans found that 213 offered lump-sum options. In 42 percent of the firms, 100 percent of employees opted for a lump-sum payment. In another 19 percent of the firms, 80 to 100 percent of employees selected lump-sum payments. This study included both tax-qualified plans and employees' pension funds.<sup>20</sup> The acceptance of lump-sum payments is much more prevalent among tax-qualified pension participants. The Pension Fund Association reported that in 1984, 53 percent of employees' pension fund participants selected annuity options, while only 2 percent of tax-qualified pension participants chose such options.<sup>21</sup>

**TABLE 5-9** Number of Beneficiaries and Average Benefit Amounts\*

Year (March 31)	Employees' Pension Funds		Tax-Qualified Plans	
	Number of Pensioners (000s)	Annual Average Benefit	Number of Pensioners (000s)	Annual Average Benefit
1976	269	48,361 yen	32	159,973 yen
1977	324	57,647	35	164,525
1978	382	69,344	41	182,268
1979	444	84,347	44	257,952
1980	502	98,954	49	312,206
1981	564	115,714	52	349,008
1982	631	143,690	56	392,992
1983	704	154,086	62	421,987
1984	783	175,185	67	465,956
1985	867	197,592	76	501,921
1986	951	223,383	80	580,077
1987	1,051	239,153	91	626,118
1988	1,141	256,868	98	700,975
1989	1,234	280,000	108	752,000

\*Table does not include persons who accepted lump-sum settlements. The average benefit to beneficiaries of tax-qualified plans is much larger because these benefits are typically for a fixed period of time, while employees' pension fund benefits are more often life annuities.

SOURCE: Mitsubishi Trust and Banking Corporation, "Mitsubishi's Pension Bulletin," and Actuarial Department of Pension Fund Association, "Annual Report of EPF Services," as reported in Pension Fund Association, *Corporate Pension Plans in Japan* (Tokyo: 1989), p. 22. Data for 1989 are reported in Yoshiro Yumiba, "Private Pension Statistics in Japan," in *Pension Policy: An International Perspective*, ed. John Turner and Lorna Dailey (Washington, D.C.: U.S. Government Printing Office, forthcoming).

Both employees' pension funds and tax-qualified pensions can be voluntarily terminated under present governmental regulations. The rate of termination of tax-qualified pensions has been very high.<sup>22</sup> In the year ended March 31, 1988, 1,857 tax-qualified plans were terminated. This was 2.6 percent of the plans operating at the beginning of the year. By contrast, only 18 employees' pension funds have terminated since these plans were initiated in the late 1960s.

In 1989, a pension guaranty system was instituted only for employees' pension funds. This system is operated by the Pension Fund Association, an organization composed of the employees' pension funds. At present, there is no comparable program for tax-qualified pensions, and these are the plans most at risk of being terminated.

Both types of pension plans penalize quitting prior to retirement. The pension penalty for quitting is due to the relatively long vesting period and benefit formulas based on final earnings. This penalty for quitting is similar to that imposed on U.S. workers who are covered by defined benefit pension plans. In these plans, the formula used for

workers who quit prior to retirement is typically the same as used for long-term employees who work until retirement. However, early quitters receive lower benefits because their pension is based on earnings when they left the firm, which are much lower than earnings at retirement would have been.<sup>23</sup> In both cases, reduction in retirement benefits can be expected to reduce turnover. These compensation systems are consistent with long-term employment contracts, which attempt to reduce labor costs by reducing turnover.<sup>24</sup>

Pension plans are funded based on projected earnings that reflect only seniority wage increases. Therefore, rising wages due to inflation and productivity continue to create unfunded liabilities, which must be funded along with new pension accruals. The reserve funds of both types of plans are subject to a tax; however, there is a high exemption for employees' pension funds, so most of these plans are not taxed.

The pension financial market is highly regulated. All funds must be invested with either a trust bank or an insurance company. The standard practice in the industry is to bundle all financial services together and to charge a single fee. The government has identified eight acceptable trust banks and 21 life insurance companies that are permitted to handle pension assets. Recently, nine additional foreign trust banks have been approved to manage pension funds. Approved banks include Bankers' Trust Company, Chase Manhattan Bank, Chemical Bank, Citibank, Manufacturers Hanover Trust, J. P. Morgan, Barclays Bank of London, Credit Suisse, and Union Bank of Switzerland. Together, these non-Japanese banks managed about 24.5 billion yen (\$191 million at a first-quarter 1989 exchange rate of 128.5 yen per dollar) of pension assets, or about 1 percent of pension funds.<sup>25</sup>

Tables 5-10 and 5-11 indicate the composition of pension portfolios managed by trust banks and insurance companies. In 1987, pension assets managed by trust banks totaled 14.1 trillion yen (\$97.5 billion at an exchange rate of 144.6 yen per dollar). All trust banks provide separate accounts for each pension plan. Investments can be tailored to the desires of each plan manager subject to approved investment practices. Both types of plans must meet the same limits on the composition of the investment portfolio. Government and other Japanese bonds composed 31 percent of the pension funds portfolio in 1987, while Japanese stocks represented 25 percent and foreign securities, 16 percent.

Pension assets managed by insurance companies are collectively invested with other assets of these companies. The composition of the total assets managed by insurance companies (including the pension

**TABLE 5-10** Pension Fund Assets Managed by Trust Banks in Billion Yen\*

	1985	1986	1987
Contributions to government investment and loans	1,436 (13.6)	1,574 (12.9)	1,311 (9.3)
Loans	1,710 (16.2)	1,857 (15.2)	1,987 (14.1)
Money credit trust	416 (3.9)	294 (2.4)	118 (0.8)
Government bonds	1,718 (16.2)	1,033 (8.5)	633 (4.5)
Other bonds	2,634 (24.9)	3,645 (29.9)	3,792 (26.9)
Personal estate trust	102 (1.0)	93 (0.8)	66 (0.5)
Stocks	1,340 (12.7)	1,951 (16.0)	3,469 (24.6)
Real estate trust	245 (2.3)	239 (2)	201 (1.4)
Real estate	35 (0.3)	77 (0.6)	115 (0.8)
Foreign securities	881 (8.3)	1,160 (9.5)	2,200 (15.6)
Others	63 (0.6)	287 (2.4)	216 (1.5)
Total	10,580 (100)	12,210 (100)	14,108 (100)

\*Data are for March of each year. Values in parentheses are percent of total assets in the year.  
SOURCE: Pension Fund Association, *Corporate Pension Plans in Japan* (Tokyo: 1987), p. 30.

assets) are shown in Table 5-11. Returns on investments are credited to each pension fund against a book value.<sup>26</sup>

David Crawford compared per capita pension assets in the United States and Japan. He estimated that on December 31, 1987, assets in private pension funds in Japan totaled \$207 billion. With 59 million employed persons, this represented \$3,508 per employee. Total pension plan assets in the United States were \$1,460 billion, or \$13,036 for each of 112 million employees. He concludes that "since corporate retirement benefit levels are broadly comparable in the two countries, the overall underfunding in Japan is striking." The underfunding of Japanese plans is attributed to the underrecognition of future retirement benefit costs due to funding that does not anticipate future wage increases. Crawford includes both pensions and lump-sum payment plans in his analysis.<sup>27</sup> As noted earlier, most lump-sum payment plans are not funded.

TABLE 5-11 Total Assets Managed by Insurance Companies in Billion Yen\*

	1985	1986	1987
Savings	3,045 (6.7)	6,249 (11.6)	7,571 (11.6)
Call loans	114 (0.2)	147 (0.3)	130 (0.2)
Securities (total)	16,051 (35.1)	18,981 (35.2)	26,792 (41.0)
Public corporation bonds	5,014 (11.0)	6,076 (11.3)	8,166 (12.5)
Stocks	6,922 (15.1)	8,114 (15.1)	11,101 (17.0)
Foreign securities	4,029 (8.8)	4,668 (8.7)	7,525 (11.5)
Other securities	87 (0.2)	123 (0.2)	0 (0)
Loans	23,064 (50.4)	24,372 (45.2)	25,637 (39.2)
Real estate	2,741 (6)	3,196 (5.9)	3,777 (5.8)
Others	726 (1.6)	926 (1.7)	1,411 (2.2)
Total	45,740 (100)	53,871 (100)	65,318 (100)

\*Data are for March of each year. Values in parentheses are percent of total assets in the year. Pension fund assets managed by insurance companies are collectively invested with other assets.

SOURCE: Pension Fund Association, *Corporate Pension Plans in Japan* (Tokyo: 1987), p. 30.

Pensions are a relatively recent addition to labor compensation in Japan. Just as in the United States, firms are encouraged to adopt pension plans through tax incentives. If plans are adopted, they are highly regulated by the government. Tax-qualified plans appear to provide preferential tax treatment to firms while providing the traditional lump-sum retirement payment. This conclusion follows from the almost universal inclusion of lump-sum options in these plans and the high rate of selection of the lump-sum payments.

Employees' pension funds are directly linked to the earnings-related social security benefits. These plans privatize this component of social security for covered workers. The long-run implications for national savings and for the reserves of the Employees' Pension Insurance system are now being considered in Japan. To understand the Japanese retirement income system, one must consider employer pensions along with social security, lump-sum payments, and the nature of employment relationships, including mandatory retirement.

## ENDNOTES

1. Hisako Inoue, "A Pension System in Japan," *Otemon Economic Studies*, 1980, pp. 1-27, reports that only 10 percent of tax-qualified pension plans offered life annuities, while 88 percent provided a fixed-term annuity of between 10 and 14 years.
2. Nippon Dantai Life Insurance Company, "Recent Studies on Severance and Retirement Benefit Plans," August 1988, p. 8.
3. Kiyoshi Murakami, "Post-Retirement Benefit Plans in Japan," *Japan Insurance News*, p. 20.
4. Arithmetic average yield to maturity of all government bonds with seven years to maturity. Monthly series are compiled from end-of-month prices quoted on the Tokyo Stock Exchange. See International Monetary Fund, *International Financial Statistics* (Washington, D.C.: October 1989).
5. The accumulated increase in consumer prices between 1982 and 1988 was only 8 percent.
6. Kiyoshi Murakami, "Retirement Benefits and Pension Plans in Japan," Sophia University Business Series no. 118, 1988, p. 16.
7. Shuichi Kubayashi, "Employees' Pension Funds," *Benefits and Compensation International*, April 1989, p. 6. Junichi Sakamoto of the Pension Bureau indicated that only 20 or so employees' pension funds actually paid any tax on fund assets.
8. The rate for females is scheduled to increase annually by .15 percent until the contribution rate for women equals that for men.
9. Pension Fund Association, *Corporate Pension Plans in Japan* (Tokyo: 1989), p. 34.
10. Katsuyuki Nonoshita and Junichi Sakamoto, "Introduction of the Pension Benefit Guaranty System in Japan," unpublished paper, August 1989, p. 9.
11. Shuichi Kobayashi, "Employees' Pension Funds," *Benefits and Compensation International*, April 1989, p. 7.
12. *Ibid*, p. 15.
13. IBIS, February 1989, p. 18.
14. Pension Fund Association, *Corporate Pension Plans in Japan* (Tokyo: 1989), p. 16. As of 1989, there were 109 certified pension actuaries in Japan.
15. Kobayashi, "Employees' Pension Funds," April 1989, p. 6.

16. Employees' Pension Fund Association, *Proposal of a Statutory System of Qualified Pension Actuary* (Tokyo: April 1986), p. 52.
17. Nonoshita and Sakamoto, "Introduction of the Pension Benefit Guaranty System in Japan," pp. 12-13.
18. Some large companies have both types of pension plans. Thus, some workers are covered by an employees' pension fund and a tax-qualified pension plan. This dual coverage implies that somewhat less than 57 percent of all participants in the Employees' Pension Insurance system are covered by at least one of these plans. Yoshiro Yumiba, "Private Pension Statistics in Japan," in *Pension Policy: An International Perspective*, ed. John Turner and Lorna Dailey (Washington, D.C.: U.S. Government Printing Office, forthcoming) estimates that 10 percent of active participants are covered by both plans.
19. Nonoshita and Sakamoto, "Introduction of the Pension Benefit Guaranty System in Japan," p. 21; and IBIS, March 1989, p. 29.
20. Murakami, "Post-Retirement Benefit Plans in Japan," p. 19.
21. Employees' Pension Fund Association, *Proposal of a Statutory System of Qualified Pension Actuary*, p. 7.
22. Nonoshita and Sakamoto, "Introduction of the Pension Benefit Guaranty System in Japan."
23. Richard Ippolito, "Why Federal Workers Don't Quit," *Journal of Human Resources*, Spring 1987, pp. 281-99; and Steven Allen, Robert Clark, and Ann McDermed, "Pension Cost of Changing Jobs," *Research on Aging*, December 1988, pp. 459-71.
24. Edward Lazear, "Why Is There Mandatory Retirement?" *Journal of Political Economy*, December 1979, pp. 1261-84.
25. Barry Burr, "Japanese Door Ajar," *Pension and Investment Age*, February 1989, p. 33.
26. Shoji Yamada, "Decision-Making Process," *Benefits and Compensation International*, April 1989, p. 9.
27. David Crawford, "The Impact of Aging and Cultural Changes on Pensions in Japan and Its Relationship to the U.S.," paper presented at the Employee Benefit Research Institute Policy Forum, "Aging in Japan: Lessons for the U.S.?" July 26, 1989, in Washington, D.C., p. 10.