The Evolution of Japanese Employer-Sponsored Retirement Plans

by David Rajnes

The author is with the Division of Program Studies, Office of Research, Evaluation, and Statistics, Office of Retirement and Disability Policy, Social Security Administration.

Summary

This article examines the development of Japanese voluntary employer-sponsored retirement plans with an emphasis on recent trends. Until 2001, companies in Japan offered retirement benefits as lump-sum severance payments and/or benefits from one of two types of defined benefit (DB) pension plans. One type of DB plan was based on the occupational pension model used in the United States before the adoption of the Employee Retirement Income Security Act of 1974 (ERISA), but lacked the funding, vesting, and other protective features contained in ERISA. The other type of DB plan allowed companies to opt out of the earnings-related portion of social security, commonly referred to as "contracting out."

Landmark laws passed in 2001 introduced a new generation of occupational retirement plans to employers and employees. One law increased funding requirements and enhanced employee protections for employer-sponsored DB plans, while a second law introduced defined contribution (DC) plans for several reasons, chiefly to increase retirement savings and help boost Japanese financial markets. These laws complemented earlier changes in the tax code and financial accounting standards already affecting employer-sponsored retirement plans. As a result, new retirement

plan designs will replace most prereform era company retirement plans by 2012.

In 2001, the experience of 401(k) plans in the United States, where 42 million participants had accumulated more than \$1.8 trillion in assets over 20 years, attracted considerable attention among Japanese lawmakers finalizing provisions of the DC pension law. Even with government support and encouragement from the financial services industry, Japanese companies have not adopted these new DC plans in large numbers. As a result, occupational retirement plans in Japan have remained predominantly DB—a surprising development in light of the shift in a number of countries from DB to DC plans observed in recent decades. However, recent proposals to make DC plans more attractive to employers in Japan are likely to be implemented in the near future.

This article

- summarizes the Japanese retirement system, with an emphasis on private-sector employees, and the complementary role played by voluntary employer-sponsored retirement plans;
- describes the financial pressures that faced retirement plan sponsors in the late twentieth century and the factors motivating the reform of Japanese voluntary retirement plans;

- examines the 2001 legislative changes that have transformed company retirement plans; and
- concludes with a review of trends and recent developments in employer-sponsored retirement plans since the implementation of the 2001 pension laws.

Japan's Retirement System

A combination of low birthrates (1.26 children per woman of child-bearing age in 2005, well below the 2.1 needed to maintain population size) and gains in life expectancy at birth (rising from 76.9 years in 1980 to the current 82.6 years) has made Japan one of the world's oldest societies. According to government estimates, the percentage of Japanese aged 65 or older will climb from the current 20 percent of the population to nearly 36 percent by 2050, while the working-aged population, aged 15 to 64, will decrease from roughly 66 percent to about half the population (Dow Jones International News 2006). If these trends continue, the population will decline from its peak of 128 million in 2005 to 101 million persons by 2050. To counteract effects on social security finances from these projected demographic developments, the country initiated a series of major reforms in 1994, 1999, and 2004 to limit social security retirement program expenditures.

Japan's retirement system is largely comprised of a social security system and employer-sponsored retirement plans. Under the social security system, private-sector employees and the self-employed are treated differently (U.S. Social Security Administration 2007; Yamamoto and Fukawa 2003; Kabe 2006).

The National Pension (NP), a partially funded compulsory system, covers the self-employed, farmers, and others, aged 20-60, who are not full-time employees. These individuals contribute a flat-rate monthly contribution, which was 13,860 yen (US\$128) in April 2006. The NP system provides a pension benefit proportional to the number of years of contribution. The full monthly NP benefit, available after 40 years of contributions, amounts to about 66,000 yen (US\$611). The eligible age for full NP benefits, currently age 62, has been increasing by 1 year every 3 years since 2001, targeted to reach age 65 by 2013. All NP administrative costs and one-third of NP benefits are subsidized by tax revenues.

For full-time private-sector employees in Japan, there is a two-tiered social security system, known as the Employees' Pension Insurance (EPI). The EPI includes a flat-rate first tier, with contribution and

benefit features identical to the NP program, and an earnings-related second tier. The overall EPI contribution rate (combined employer and employee) is 14.29 percent of employee pretax earnings. Since October 2004, this contribution rate of 13.58 has been rising in increments of 0.35 percent each year and will reach 18.30 percent in 2017. Contributions are levied and benefits are calculated based on monthly earnings ranging from a minimum of 98,000 yen (US\$822) to a maximum of 620,000 yen (US\$5,197). The earnings-related benefit equals 0.55 percent of the employee's average monthly wage indexed over his or her working career multiplied by the number of covered years (Sakamoto 2005).

Under the EPI system, the average replacement rate for male employees with a contribution record of 40 years (taking into account the flat-rate first tier and the earnings-related second tier and assuming average earnings during that time) is approximately 43 percent. The average EPI household replacement rate for a male employee with the same earnings profile, but with a nonworking spouse, is approximately 59 percent. These replacement rates are projected to decline gradually to 36 percent by 2023 for male employees and to about 50 percent by 2023 for households (Sakamoto 2005).²

The current eligible age for full EPI benefits will rise from age 60 to age 65 in the coming decades. For men, the earliest age to receive retirement benefits will increase by 1 year every 3 years from 2013 until it reaches age 65 in 2025; for women, the earliest age to receive benefits will rise by 1 year every 3 years starting in 2018 until it reaches age 65 in 2030 (Kabe 2006).

Voluntary employer-sponsored retirement plans in Japan complement the country's two-tiered social security system. Historically, companies have generally rewarded departing employees for their long service to the firm with lump-sum severance payments. After that employee benefit lost its tax advantages in 2002, the popularity of employer-paid lump-sum severance payments declined. Since the 1960s, employers began to offer defined benefit (DB) pension plans in addition to or as a substitute for, their lump-sum severance programs. In 2005, about 14 million of 37 million salaried employees were covered by employersponsored DB plans. These pension plan assets accounted for 60 trillion yen (US\$517 billion) out of a total 266 trillion yen (US\$2 trillion) for all private and public pension funds that same year (Y. Watanabe 2006-2007).

Employer-Sponsored Plans Before the 2001 Reform

Before 2001, Japanese employers generally used three types of voluntary retirement arrangements for departing employees: an unfunded book-reserve plan providing lump-sum payments and two DB plans, a Tax-Qualified Pension Plan and an Employee Pension Fund. Both DB plan designs received preferential tax treatment and required that third party administrators manage the plan assets. Table 1 indicates the major characteristics of these retirement plans.

Book-Reserve Plans (BRP)

Changes to the tax code in 1952 provided incentives for firms to establish an internal account or BRP for their severance pay program, enabling firms to make periodic tax-favored contributions to their BRP plan.³ However, since firms were under no legal obligation to set aside funds to offset the firm's accumulating liabili-

ties to employees, nearly all BRPs have been unfunded (N. Watanabe 1998).

Tax-Qualified Pension Plans (TQPPs)

TQPPs were introduced in 1962 and were based on the DB pension model then used in the United States. A company with 15 or more employees could establish a TQPP with the approval of the National Tax Administration, an agency of the Ministry of Finance. Employer contributions, either a specified amount or percentage of payroll, are deductible as a business expense. TQPP benefits are based on years of service, using a flat benefit or an earnings-related formula and may be offered as either a monthly annuity or a lump sum. Eligible employees select lump-sum payments over annuities more than 80 percent of the time (Katsumata 2005). In addition, TQPP plans must be managed by an outside financial contractor—either a trust bank or a life insurance company.

Table 1.

Major Japanese employer-sponsored retirement plans in 2001, by year started and plan characteristics

Type of plan or fund	Year started	Plan characteristics
Book Reserve Plan (BRP)	1952	Traditional way of providing severance payment to departing worker Benefit in the form of a lump sum Unfunded pay-as-you-go method financed by employers alone Earmarked reserves as a liability on company balance sheet Loss of tax-deductible status beginning in 2002
Tax-Qualified Pension Plan (TQPP)	1962	Based on U.S. Defined Benefit model Plan must be externally funded and assets managed by contract with life insurance companies and trust banks Employer's contributions are 100 percent tax deductible as a business expense Plan must contain a provision for annuities, although a lump-sum option is provided No tax on investment earnings Used primarily by small and medium-sized firms with more than 15 employees Regulated by the Ministry of Finance
Employees' Pension Fund (EPF)	1966	Defined Benefit plan contracted out from social security Must be established as a legal entity independent from the employer In return for a lower social security contribution, firms must provide benefits equivalent to the earnings-related portion of social security and a supplementary benefit (lump sum or annuity) financed by the employer Plan must be funded and assets held outside the firm in a trust fund or in an insurance contract Life annuities must be provided Tax treatment virtually the same as TQPP Used by large companies and by multiemployer groups Regulated by the Ministry of Health, Labor and Welfare

SOURCE: Compiled by author.

Employees' Pension Fund (EPF)

A second DB plan design, and one closely linked to the earnings-related portion of the EPI system, is the EPF plan. Since October 1966, companies could partially "contract out" of social security by setting up an independent EPF corporation to manage the earnings-related (EPI) portion of social security. The phrase "contract out" means that a firm—provided that its union members (if any) agree and both the Ministry of Health and Welfare and the Ministry of Finance approve—may pay a reduced social security contribution in exchange for providing a pension benefit that replaces the earnings-related EPI social security benefit. The EPF plan must also provide an overall pension benefit higher than the earnings-related portion of EPI (Hewitt Associates 2003). This additional EPF benefit originally equaled 30 percent, but the government reduced the additional EPF benefit from 30 percent to 10 percent in 2001 to discourage companies from terminating their EPF plans.4

The EPF plan must achieve at least the government-specified annual nominal yield. Initially, the government set a guaranteed rate of 5.5 percent, but allowed this rate to decline in the 1990s to match the fall in Japan's interest rates. The government reduced the guaranteed nominal rate for EPF plans to 4.5 percent in 1994 and then to 1.5 percent in 1999 as the economy weakened (Dai-Ichi 2006). Should an EPF plan become over-funded, plan sponsors could either reduce their employer contribution or improve plan benefits (Clark 1991).

Because of concerns about the financial stability of EPF plans, the Japanese government required a minimum number of participants in an EPF plan based on whether the plan sponsor was a single company or a group of companies. The volatility of plan finances is larger for plans composed of small companies since these small companies have a greater risk of bankruptcy than do large companies. For that reason, EPF plans composed of small companies must have a higher minimum number of employees than that required of EPF plans where only larger companies participate (Turner and Rajnes 1995). In 2005, the government raised the minimum number from 500 to 1,000 employees for a single-employer sponsor from 800 to 1,000 employees for jointly affiliated sponsor companies and from 3,000 to 5,000 employees for a group sponsor of smaller companies (categorized by industry, occupation, or region). Given this size requirement, the number of employees in EPF plans

tends to be larger than in TQPP plans (Japan Ministry of Health, Labor, and Welfare 2005b).

Due to the contracted-out nature of these liabilities, the government treats EPF plans as quasi-public entities with very detailed administration and management rules (Usuki 2003). For example, EPF rules require plan sponsors to distribute at least half of the retirement benefit as an annuity unless a pensioner requests a lump sum. Originally, EPF investments were restricted to a list of approved investments managed by trust banks and insurance companies, but those restrictions were abolished in 1997 (Watanabe, Y. 2006-2007).

EPFs also are required to participate in the national association of EPF plans, known as the Pension Fund Association (PFA). The PFA serves two major purposes. First, it insures against loss of benefits in the event of a plan sponsor's bankruptcy. Second, it assures there is no loss of benefits for employees who switch employers, since the accumulated contributions of departing employees are transferred to the PFA to manage, thus providing a portable pension system for those changing jobs (Turner and Rajnes 1995; N. Watanabe 1996).

By 2000, employee coverage for firms with at least 30 employees using one of these three types of occupational retirement plans was close to 90 percent, although coverage by a TQPP or EPF plan offering an annuity was only around 50 percent. Table 2 shows the percentage of firms with 30 or more employees offering a retirement plan in 1997 and 2003. These data indicate that larger firms were more likely to offer a retirement plan than were smaller firms. Comparable data are not available for firms with fewer than 30 employees.

Table 2 also shows the type of retirement plan offered—BRPs, EPFs, or TQPPs—and percentage change by firm size from 1997 to 2003. Retirement benefits offered by smaller firms were more likely to consist only of a BRP plan. Overall, the percentage of firms offering a retirement plan decreased slightly from 1997 to 2003, as did the percentage of firms offering an annuity-based (EPF or TQPP) retirement plan. No consistent pattern by firm size was evident regarding either the BRP or the combination (BRP/annuity) retirement plans. While the use of BRP plans declined overall, the percentage of firms with more than 300 employees offering these plans actually increased slightly. Nearly half of the firms with less than 100 employees offered a BRP as the only retire-

Table 2.

Japanese employer-sponsored retirement plans, 1997 and 2003 (in percents)

	Pe	Percent of firms with—				Type of retirement plan offered					
Number of	Retirement plans No plans		olans	BRP lump sum only		Annuity (EPF or TQPP)		Both (BRP/Annuity			
employees in firm	1997	2003	1997	2003	1997	2003	1997	2003	1997	2003	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
30-99	85.7	84.7	14.3	15.3	48.1	45.8	15.6	15.5	22.1	23.5	
100-299	95.9	89.5	4.1	10.5	33.8	31.1	22.9	19.3	40.0	39.1	
300-999	97.7	95.7	2.3	4.3	17.2	21.7	30.5	25.3	50.1	48.7	
1,000 or more	99.5	97.1	0.5	2.9	9.5	10.7	22.5	18.5	67.4	67.9	

SOURCE: Japanese Ministry of Health, Labor, and Welfare (2003, 2004).

NOTE: BRP = Book Reserve Plan: EPF = Employee Pension Fund; TQPP = Tax Qualified Pension Fund.

ment plan, and this percentage decreased as the firm size grew. While the percentage of firms with both an annuity-based (EPF or TQPP) plan and a BRP retirement plan increased somewhat, this change occurred only among the largest (1,000 or more employees) and the smallest (from 30 to 99 employees) firms studied.

Company Retirement Plans Encounter Problems in the 1990s

Following a period of high investment and employment growth beginning in the late 1980s, the Japanese business sector entered a prolonged slump in 1992 that lasted for more than a decade. Lower profitability prevented many plan sponsors from increasing contributions to their retirement plans to offset the shortfall in plan investment earnings needed to maintain retirement plan benefits. As economic stagnation persisted throughout the 1990s, many companies took cost-cutting steps, including employee layoffs, the increased use of part-time employees, and the reduction or elimination of retirement plans.

Defined benefit plans (EPF and TQPP) and membership peaked between 1994 and 1997 before declining thereafter. For example, the number of TQPP participants declined from a high of 10.8 million in 1995 to 9.2 million in 2001. The number of TQPP plans (referred to as "contracts") exhibited a similar pattern, increasing to 92,467 plans in 1993 before declining to 73,582 plans in 2001. The number of EPF plan participants declined from its highest level of 12.2 million in 1997 to 10.9 million in 2001. The number of EPF plans increased to 1,883 in 1996 before declining to 1,737 in 2001 (Table 3).

In contrast to the general decline in the number of DB plans and DB plan members, total assets

under management for both TQPP and EPF plans grew throughout the period from 1991 to 2001. Total assets managed by EPF plans expanded steadily throughout the 1990s and reached 58.3 trillion yen (US\$482.1 billion) in 2001, while TQPP plan assets rose to 22.7 trillion yen in 2001. Much of the explanation for the continued rise in asset values stems from the fact that plan sponsors recorded higher book values on their financial statements instead of the lower market values, as reflected by declining financial markets at that time. Therefore, one must exercise caution in interpreting the steady rise in managed plan assets for both EPF and TQPP plans throughout the 1990s.

Before 1990, EPF plans earned roughly 8.0 percent to 10.0 percent in nominal terms each year on their assets, well above the 5.5 nominal target rate of return required by the government, while inflation-adjusted rates of return remained well below those yields much of the time. After inflation dipped below 3.0 percent after 1981, the spread between nominal and real yields narrowed significantly. Both nominal and real yields fell dramatically with the decline in Japan's economy around 1989 and remained below 5.0 percent in the 1990s except for 1995 and 1999. Chart 1 shows the variability in nominal and real asset returns from 1975 to 2005 for existing EPF plans and from 1990 to 2005 for former EPF plans managed by the Pension Fund Association.

By the late 1990s, with declining asset values and a rise in employer contribution holidays, the estimated underfunding of employer-sponsored (EPF and TQPP) pension plans reached roughly between 40 trillion yen (US\$404 billion) and 60 trillion yen (US\$485 billion) (Clark and Mitchell 2002). At the same time, the unfunded liabilities of BRP plans

Table 3.

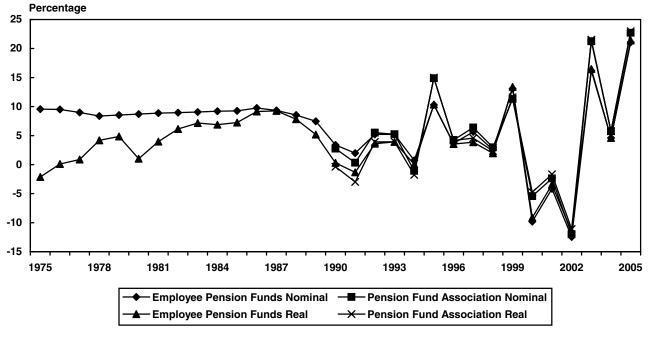
Japanese employer-sponsored pension plans, by number of participants, and assets prior to pension reform, 1991–2001

	Emp	loyees pension fu	nds	Tax-qualified pension plans			
		Number of	Assets under		Number of	Assets under	
	Number	participants	management	Number of	participants	management	
Year	of funds	(in thousands)	(in billion yen)	contracts	(in thousands)	(in billion yen)	
1991	1,593	10,678	28,800	90,434	9,770	14,100	
1992	1,735	11,571	32,184	92,082	10,400	15,029	
1993	1,804	11,919	35,416	92,467	10,600	16,071	
1994	1,842	12,051	38,426	92,355	10,751	16,957	
1995	1,878	12,130	41,775	91,465	10,776	17,801	
1996	1,883	12,096	44,959	90,239	10,626	18,466	
1997	1,874	12,254	48,695	88,312	10,432	19,156	
1998	1,858	12,002	51,281	85,047	10,297	19,988	
1999	1,832	11,692	55,486	81,605	10,011	21,137	
2000	1,801	11,396	58,017	77,555	9,656	22,358	
2001	1,737	10,871	58,297	73,582	9,167	22,719	

SOURCE: Usuki (2003) for Assets under management, 1992-2001; remaining data taken from the Japanese Ministry of Health, Labor and Welfare (2005a).

NOTE: Data are as of the end of the fiscal year. Japanese fiscal years run from April 1 to March 31.

Chart 1. Investment performance for Japanese corporate pension plans, 1975–2005 (nominal and real yields)



SOURCE: Pension Fund Association, *The Basic Statistics about Company Pension Plans*, various years. Pension Fund Association, *Annual Report of Employees' Pension Funds*, various years.

NOTE: Annual data reflect yields for fiscal years specified. The Japanese fiscal year runs from April 1 to March 31.

represented another US\$324 billion to US\$404 billion (Goldman Sachs 1999). The funding levels of retirement plans worsened when both nominal and real investment yields turned negative during 2000-2002. By 2001, 96 percent of corporate pension funds were underfunded (Nakamoto 2003).

In 2000, Japan adopted new accounting rules that exposed the extent of pension underfunding in many company plans (Usuki 2003; Nakada 2004). Under the old accounting rules, corporate pension plan shortfalls did not appear on corporate financial statements as a liability. The new rules, however, require companies with 300 or more employees to disclose unfunded pension and retirement obligations on their balance sheets (Takahashi 2006). At the same time, the government allowed the discount rate pension plans used for calculating pension liabilities to float according to the nominal yield of less risky long-term investment vehicles, such as government bonds, effectively increasing the amount required to make employer-sponsored pension funds solvent (Shimada 2002).

2001 Reform of Employer-Sponsored Retirement Plans

Recognizing the growing financial pressures on retirement plan sponsors and their problems funding those plans, the Japanese legislature passed two pieces of legislation in 2001 that significantly affected what retirement benefits employers could offer employees. One law changed the rules governing DB plans, included an option for EPF funds to return their assets related to social security contributions to the government, introduced hybrid plans and other new DB plan designs, and scheduled a date for the elimination of TQPP plans. A second law introduced defined contribution (DC) plans as a new pension plan option for employers.

Defined Benefit Corporate Pension Law (2001)

The objectives of the Defined Benefit Corporate Pension Law of 2001 were to unify the regulations and tax provisions of DB plans while enhancing the retirement income security of DB plan participants (Urata 2001). Specifically, the law provided for a greater variety of DB fund designs than was available with the existing EPF system and imposed stricter funding rules for employee benefits than those under TQPP plans. In addition, the DB law defined fiduciary duties of pension plan sponsors for the first time, including greater disclosure requirements of plan operations to plan participants. The law also introduced rules for transferring

rights and obligations from one type of pension fund to another, including the conversion of a DB plan to a DC plan. Table 4 summarizes the key provisions of the law outlined in the text below.

The DB law permitted some EPF plan sponsors to transfer their EPF obligations for contracted out benefits back to the government. In addition, the law created a fund-type DB plan with a design similar to an EPF plan but lacking the contracting out option. Also, the law specified that no TQPP plans could be created after April 2002; existing TQPP plans must eventually, and transfer their assets to another fund type or distribute them to employee participants within 10 years. For that reason, the DB law created a contract-type DB plan, which resembles the TQPP type, but has stricter rules on reporting, disclosure, vesting, and funding.

Finally, the 2001 DB law permitted companies to create the cash balance plan, a hybrid pension which combines features of a DB and a DC plan design. Under the cash balance design, each employee has a notional account into which the employer credits a fixed percentage of the basic salary and an annual interest payment. The periodic interest credited to the employee account must be one of the following:

(a) fixed rate; (b) national bond rate or another common index such as the consumer price index (CPI); (c) an interest rate combining (a) and (b); or (d) a floating rate using a national bond rate as a floor and a combined fixed/notional rate as a ceiling (Endo 2002, Fujiwara 2006).

Additional changes in the 2001 DB law affected funding, benefits, and plan termination. First, funding levels for new DB plans must satisfy EPF plan requirements, including the requirement that plans issue a statement of vested benefits and a present-value calculation of vested benefits. If a pension plan is underfunded, plan sponsors must develop a schedule to restore plan assets to the minimum funding level through increased contributions and/or accelerating the amortization of unfunded liabilities. Plan sponsors may use a funding surplus to take a contribution holiday.

Second, regulations specify that a minimum benefit and the benefit formula must be considered "reasonable" after taking into account an employee's years of service, salary, and so forth. A plan must pay old-age benefits as an annuity, although a portion may be paid as a lump sum. Survivor and disability benefits are not required but may be available to participants at

Table 4.

Defined Benefit Corporate Pension Law 2001, by key provisions and affected areas

Affected areas	Key Provisions						
Choice of Plans	Three new Defined Benefit (DB) plan types created with differing features: (1) Contract-type DB plan Similar to Tax Qualified Pension Plan (TQPP) but more tightly regulated (funding standards, fiduciary duties, and disclosure) No minimum number of employees required Plan sponsor establishes a plan by contracting with trustee companies Employer contributions paid to trustee Pension assets transferrable to another plan Trustee responsible for management of pension assets and payment of pension benefits No contracting out feature						
	(2) Fund-type DB plan Similar to Employee Pension Fund (EPF) plan but no option to "contract out" of social security system Minimum number of employees required to establish a plan is 300 Employer or a group of employers can establish a plan to manage contributed assets or contract with trustee companies Plan is a separate legal entity independent of firm Employer contributions paid to trustee who pays benefits Trustee responsible for management of pension assets and payment of pension benefits Plan is administered by a board of directors and an assembly of delegates						
	(3) Cash balance plan Each participant has a hypothetical account balance The two amounts credited to the account each year are contributions based on the participant's wage or salary and guaranteed interest with the rate specified by the plan Plan sponsor bears investment risk and must pay additional contributions if managed assets do not outperform guaranteed rate						
Contributions	Employer-only contributions (tax-deductible) unless plan regulations specify otherwise Additional contributions required to make up for any plan underfunding						
Plan establishment	Plan sponsor needs assent of at least half of employees or union approval to establish the plan Approval needed from the Ministry of Health, Labor and Welfare (MHLW) to establish the plan according Converting plan assets to another type of corporate DB plan permissible						
Plan conversions	TQPPs must be converted by March 31, 2012 to ensure employer contributions remain tax-deductible Conversion options include EPF plan, mutual aid plan, or one of the three new plan types (see above)						
Employee Pension Fund	EPF plans contracting out of social security given opportunity to transfer assets for that liability back to the government 4-step process established with rules for steps 1 and 2 included in the 2001 law and rules for steps 3 and 4 implemented in 2003: Step 1-employer gets approval from employees and then applies to MHLW for exemption from future contracting-out obligations Step 2-establish payment of social security contributions by employer and employees at the full (non-contracted-out) rates Step 3-data reconciliation for past EPF service with the government and the Pension Fund Association Step 4-final government approval for the separation of assets and their transfer back to the government						

SOURCES: Freshfields (2003), Mizuho Financial Group (2001), Morito (2001), and Hewitt Associates (2003).

the plan sponsor's discretion. The law defined a cash balance benefit formula for plans converted from a traditional DB plan to a cash balance plan.

Finally, a plan sponsor may terminate a plan only with the consent of the relevant labor union or employee representatives and approval by the Ministry of Health, Labor and Welfare (Japan MHLW). At termination, the plan sponsor is required to make up any funding shortfall.

Defined Contribution Plan Law (2001)

The Japanese government supported passage of the Defined Contribution Plan Law in 2001 for several reasons (Katsumata 2005; Fujiwara 2003; McLellan 2004). First, unlike DB plans, the DC law gave employers more retirement plan choices, including limiting their pension obligations under the new DC plans. Second, Japan's increasingly mobile labor force appeared compatible with the portability of individual accounts. Third, DC plans, it was thought, would encourage individuals to focus on retirement planning in anticipation of the scheduled reduction of social security benefits previously approved in 2000.

Finally, the Japanese government hoped the introduction of DC plans might stimulate the flow of individual retirement account assets into Japanese financial markets. To many observers in Japan at that time, the expanding U.S. economy and stock market boom of the 1990s appeared driven, in part, by the growth of DC plans, primarily 401(k) plans, so the introduction of a 401(k)-style pension plan surfaced as a potential remedy to boost the weak Japanese stock market by raising the demand for Japanese stocks.

Provisions under the new DC law established two types of DC plans: a corporate DC plan and an individual DC plan. Details on both plan types are contained in Table 5.

Employers establishing a corporate DC plan, after obtaining employee approval, usually contract out responsibility for administering the plan to a third-party administrator (such as a qualified bank or insurance firm). These employers contribute a fixed monthly tax-deductible contribution on behalf of their employees. Initially, the maximum allowable (nontaxable) annual contribution for each employee was set at 216,000 yen (US\$1,880) if the company established a DC plan in addition to an existing DB plan. If the company had no DB plan it was set at 432,000 yen (U.S.\$3,759). As part of the 2004 social

security reform, these contribution limits increased to 276,000 yen (US\$2,344) per year for employees with access to a qualified DB plan and to 552,000 yen (US\$4,690) per year for employees without access to a qualified DB plan. Employees may not contribute to a corporate DC plan.

An individual DC plan is available to self-employed workers and employees who do not have access to a company pension plan. These individuals may apply to join the National Pension Fund Association, which contracts on behalf of its members with trustee companies to manage their members' DC assets. Self-employed workers pay a tax deductible monthly contribution up to an annual limit of 816,000 yen (US\$6,866), while employees without access to a company retirement plan may contribute up to an annual limit of 180,000 yen (US\$1,515). The contribution limit of employees in companies without a retirement plan was raised in October 2004 to 216,000 yen per year (US\$1,773).

Below are provisions introduced by the 2001 DC law.

Eligibility. To be eligible for coverage by a DC plan, workers aged 60 or younger must participate in the social security system. Government workers and spouses of company employees are ineligible.

Vesting. After 3 years of service with an employer, an employee's corporate DC plan account is non-forfeitable.

Investments. Participants may select from among three or more investment alternatives that must contain at least one capital guaranteed product. A registered company (third party administrator) provides the range of investment products, information to improve financial literacy, and administration of participant investments.

Benefit Distribution. Funds can be withdrawn beginning at age 60 with 10 years of contributions, but must begin no later than age 70. Benefits may be claimed either as an annuity or as a lump sum. For those contributing less than 10 years, the withdrawal date may be delayed, but must occur no later than age 66.

Portability. Employees must transfer their accumulated assets to their new employer's DC plan after changing jobs or to an individual DC plan if the new employer does not offer a corporate DC plan, unless the worker is older than age 60.

Table 5.
Defined Contribution Corporate Pension Law, effective October 1, 2001

Affected areas	Key Provisions						
Plan establishment	Two new Defined Contribution (DC) plan types created: (1) Corporate DC plan Empoyees eligible if employer sponsors plan Requires assent of majority of employees or union representative as to plan rules No minimum number of employees required Employer appoints trustees (usually trust banks or insurance companies) to administer pension assets Plan sponsor responsible for providing financial education information to participants Employer only pays a fixed percentage of salary or a fixed monthly contribution (tax-deductible) on behalf of employees Maximum allowable contribution for each employee varies (¥216,000 (US\$1,843) for companies also having a Defined Benefit (DB) plan and ¥432,000 (US\$3,684) for companies without a DB plan) Vesting rules vary across plans but plans must have 100 percent vesting after 3 years and may have partial vesting within that time Companies are permitted to convert from a severance pay (book reserve) plan to a DC plan with benefits calculated on the basis of new contributions and/or past service credits from						
	old plan, plus interest (2) Individual DC plan Available to self-employed workers and others not participating in a corporate pension plan, but must be covered by social socurity Individual can apply to join the National Pension Fund Association (NFPA) which acts as trustee on behalf of members Employees have their employer deduct contributions from pay and send them to the NFPA Self-employed persons remit contributions directly to NFPA Individual selects plan administrator who prepares a packaged product containing certain investment options						
	Individual decides how much to contribute and pays it on a monthly basis up to certain annual limits (up to ¥816,000 (US\$6,959) for self-employed workers and up to ¥180,000 (US\$1,535) for employees ineligible to receive pension benefits)						
Benefits	Three types of benefits (old age, disability, and survivors) payable in a lump sum; benefits may vary depending on plan rules						
Taxation	Contributions are fully tax-deductible and investment earnings are tax-deferred						
Investments	Individual participant selects from among at least three investment options products (one of which guarantees principal) Participant can rebalance portfolio as often as once every 3 months Third parties administering employee investments and providing investment information must register with the Ministry of Health, Labor and Welfare						
Age	Eligible persons include those younger than age 60 and covered by the social security system Persons aged 60 or older eligible for old-age benefit with 10 years of participation Persons may start receiving benefits as early as age 60, but must begin receiving them at age 70						
Rollover accounts	Mandatory rollover of plan assets (individual accounts) for those aged 60 or younger upon termination of employment or change of employer to new employer's DC plan or to individual DC plan account The exception to mandatory rollover is loss of eligibility within 3 years of becoming a participant						

SOURCES: Freshfields (2003), Mizuho Financial Group (2001), Takayama (2005), Urata (2001), and Morito (2001).

Postreform Developments in Employer-Sponsered Plans

In the 6 years since Japan implemented its 2001 DB and DC pension laws, the mix of employer-sponsored retirement plans offered in Japan has changed significantly, and overall employee coverage has declined. This outcome can be attributed to post-2001 changes in the tax code and other laws affecting employer-sponsored pensions. Pension experts expect further pension changes based on a government review released in July 2007.

Trends in the postreform era

Since 2001, the number of plans and participants in prereform retirement plans, such as EPF and TQPP plans, have declined as new plan types (DB and DC) were adopted (Table 6).⁷ By 2005, the downward trend in DB plans reversed, while the total number of DB and DC plans being offered by employers increased

slightly. Table 6 presents similar patterns of decline and growth in the number of retirement plan participants beginning in 2004. On balance, employer-sponsored retirement plans have remained largely DB in design.

From 2001 to 2006, the number of EPF plans fell 61 percent (from 1,737 to 672), while the number of plan participants declined more than 50 percent (10.9 million to 5.3 million). Government statistics show that nearly 80 percent of former EPF plans converted to a new type of DB plan allowed under the 2001 law, a small portion of EPF plan assets were transferred to a DC plan, and less than 20 percent of EPF plans were dissolved (Shimizu 2005).

Most of the decrease in EPF plans and plan assets occurred after 2003 when many EPF plan sponsors began to transfer their obligations for the contracted-out EPI (earnings-related) social security portion of the EPF fund back to the government to remove signifi-

Table 6.

Post-reform trends in Japanese employer-sponsored pension plans, 2001–2006

	_			DB contract and fund	DB fund	
Year	Total	EPF	TQPP	type plans	type plan	corporate
			Number of pe	ension plans		
2001	75,319	1,737	73,582			70
2002	68,412	1,656	66,741	15	0	361
2003	60,835	1,357	59,162	165	151	845
2004	54,591	838	52,761	479	513	1,402
2005	47,207	687	45,090	833	597	1,866
2006	47,432	672 ^a	45,090 ^b	1,067 ^a	603 ^a	2,191 ^c
		Nu	mber of participa	ants (in thousand	ls)	
2001	20,038	10,871	9,167			88
2002	18,972	10,386	8,586			325
2003	16,151	8,351	7,770	30		708
2004	14,032	6,152	6,530	1,350		1,255
2005	14,827	5,300	5,687	3,840		1,733
2006	14,810	5,300 ^a	5,670 ^b	3,840 ^b		2,106 ^d

SOURCE: Ministry of Health, Labour and Welfare (2005a) for all EPF and TQPP through 2004 and for other data through 2003; remaining data obtained from sources noted.

NOTES: Defined Benefit Plans started from April 1, 2002; Defined Contribution Corporate Plans started from October 1, 2001 Data through 2005 reflect figures at end of fiscal year. Japanese fiscal years run from April 1 to March 31.

DB = Defined Benefit plan; EPF = Employee Pension Fund; TQPP = Tax-Qualified Pension plan; DC = Defined Contribution plan; . . . = not applicable.

- a. Data as of September 1, 2006 (Pension Fund Association).
- b. Data as of July 31, 2006 (Pension Fund Association).
- c. Data as of January 31, 2007 (Ministry of Health, Labor and Welfare).
- d. Data as of December 31, 2006 (Ministry of Health, Labor and Welfare).

cant pension liabilities from corporate pension balance sheets and thus improve firm credit ratings (Sato 2005). This process involves several steps. First, the Ministry of Health, Labor, and Welfare must approve an employer's request to return the contracted out portion of social security. Once approved, plan sponsors then transfer the accumulated social security-related funds back to the government. After the transfer, a plan sponsor can convert its remaining DB plan assets to one of the two new DB plans or the new DC corporate plan.

The government's buy-back program was quite generous and nearly all employers with single-employer EPF plans took advantage of this program. For EPFs with multiple plan sponsors, negotiating an agreement to return the contracted-out assets to the government has been difficult because the process often requires protracted coordination and cooperation among participating companies. Thus, these employers cannot withdraw easily from their EPF arrangement since they must receive approval from three-quarters of participating employers as well as their own employees (McGuinness 2003; McLellan 2005; Fujiwara 2006).

The 2001 DB law requires plan sponsors to convert TQPP plans into another type of pension plan by 2012. As evident in the data in Table 6, the decline of TOPP plans has been almost as dramatic as that for EPF plans. However, the relatively smaller firm size associated with most TQPP plans may explain why over 60 percent of these plans still have not converted. Close to 45,100 TQPP plans with around 5.7 million participants were operational in 2006 compared with nearly 73,600 such plans covering almost 9.2 million workers in 2001. Some TOPP plan sponsors have transferred their TQPP contracts to the government-run Mutual Aid Organization for Employees' Retirement Allowances for businesses with less than 300 million yen (US\$2.6 million) or fewer than 300 employees (Freshfields 2003). By November 2005, the number of TQPP contract transfers to the government reached 7,447 plans (Arimori 2006). Some employers converted their TOPP plans, which resulted in 627 additional DC plans by early 2005 and 358 contract-type DB plans by the end of 2004 (Shimizu 2005). Plan sponsors terminated the remaining TQPP plans.

Like TQPP plans, book-reserve plans (BRPs) lost their tax-favored status as a result of changes in the tax law, not the pension laws of 2001. Specifically, amendments to the *Corporate Tax Act* in July 2002 require companies with 300 or more employees to fund any outstanding tax-favored BRP reserves within 4 years;

companies with fewer than 300 employees are allowed up to 10 years to fund these reserves (Dai-ichi 2006). According to some pension experts, BRP plans remain a popular employee retirement benefit despite the loss of their tax advantages (Fujiwara 2003 and 2006).

Data in Table 6 indicate there were 992 new DB plan types in operation by 2004, including 479 contract DB plans and 513 fund DB plans, covering 1.35 million workers. By 2006, the number of employees in these new plans exceeded 3.80 million. Approximately 40 percent of all new DB plans operating in June 2005 were cash balance plans, which often cover several companies (Sugita 2006).

The number of corporate DC plans reached 2,191 by the end of January 2007, representing more than a 50-percent increase over 2004. Firms with fewer than 300 employees, primarily in retail and other industries with high turnover levels, operate approximately 80 percent of these DC plans (Daily Yomiuri 2006; Huh and McLellan 2007). Nearly 7,300 companies sponsored DC plans at the end of August 2006—an increase of almost 50 percent from a year earlier (Nikkei Report 2006b). According to some pension experts, much of the increase can be explained by the higher limit allowed for tax-advantaged employer contributions to DC plans, effective in October 2004, encouraging companies to convert more of their existing DB plans into DC plans to reduce the volatility from pension liabilities on corporate balance sheets (Huh and McLellan 2007; McLellan 2004). At the end of December 2006, corporate DC plans covered more than 2.1 million employees—nearly 70 percent more than in 2004 (Table 6).

Even though the number of workers participating in DC plans has been growing, they covered less than 3 percent of the entire Japanese labor force in March 2006 (with about 12 percent of active participants in private-sector pension plans), and accounted for roughly 2 percent of all corporate pension assets. Smaller firms tend to join multiemployer DC plans, which are administered by financial companies with the expertise and resources to handle the administrative and recordkeeping responsibilities. Participation by the self-employed and others eligible for DC plans has been negligible, covering only about 70,000 persons in July 2006.

Prospects for Employer-Sponsored Private Retirement Plans

Buoyant financial markets and steady economic growth, averaging more than 2 percent since 2003,

marked an end to nearly 15 years of economic stagnation in Japan. Japanese pension funds have benefited from positive investment returns in the improved economic environment (Chart 1), including an average yield in nominal terms of more than 19 percent for company pension funds in 2005 (Nikkei Report 2006a and 2006b). A survey in 2006 of Japanese occupational pension plans found average funding levels have steadily improved in recent years from 62 percent of liabilities funded in 2003, to 83 percent in 2005, and to 96 percent in early 2006 (Pension & Investments 2006b; Greenwich Associates 2006). The improvements in investment performance and plan funding are contributing to an increasingly optimistic outlook among DB and DC pension plan sponsors, according to that survey (Greenwich Associates 2006).

While employers continue to maintain DB plans for most employees, the financial services industry in Japan is projecting significant growth of DC plans in the next several years (Turner 2006; Nomura Research Institute 2006; Pensions & Investments 2006a). Specifically, pension industry experts consider the mandated termination or conversion of TQPPs by 2012 as the primary source of expected DC plan growth. TQPPs, which accounted for roughly 20 percent of the 17.2 trillion yen (US\$164.7 million) managed pension assets in 2005, are popular among small and midsized companies. For smaller companies that lack the scale and resources required to set up and manage a DB plan, the less onerous TQPP plan regulations have worked well. A recent report by Nomura Research Institute (NRI) indicated that many companies with TQPP plans might convert to DC plans. NRI expects larger companies to select DC plans (often alongside their existing DB plans), while smaller firms with fewer than 300 employees will likely switch to the government-run Mutual Aid Organization for Employees' Retirement Allowances. The NRI estimates that these mandated TOPP conversions could triple DC plan assets over the next 5 years.

MHLW Review

In October 2006, the Ministry of Health, Labor, and Welfare convened a monthly study group to review the corporate pension system every 5 years as required by law. The study group sought to encourage the growth of DC plans and will examine DB plan issues as well. The study group produced its report in July 2007. According to the government, some recommendations for employer-sponsored retirement plans could be implemented as early as 2008.

The study group examined the taxation of DB contributions and the introduction of a guarantee system in case DB pension funds become insolvent (Nikkei Report 2006c). Issues under discussion for DC plans included: permitting employee contributions, increasing contribution limits, and permitting withdrawals from DC accounts before retirement.

Permitting employee contributions

The 2001 DC law prohibited employees from contributing to corporate DC plans. In a U.S. 401(k) plan, by comparison, generally, employees (not the employer) choose to participate if a 401(k) plan is offered by the employer, and the employer may contribute, resulting in a larger pool of tax-deferred savings for participating employees. The typical contribution rate for a 401(k) plan participant is 6 percent of salary, with an employer match of 3 percent (U.S. Department of the Treasury 2006; Munnell and Sundén 2006). There is a maximum limit (indexed for inflation) on the total yearly employee pretax salary deferral for 401(k) plans, which was US\$15,500 (1,673,931 yen) for 2007, and employees aged 50 or older are allowed additional pretax "catch-up" contributions of US\$5,000 (539,931 yen).

Increasing contribution limits

Employees may not contribute to DC plans, and employer contributions are currently limited to 276,000 yen (US\$2,344) per year on behalf of employees with access to a qualified DB plan and 552,000 yen (US\$4,690) per year on behalf of employees without a qualified DB plan. These limitations prevent DC plans from providing a very high level of retirement benefits. According to the Japanese government, the average employer DC plan contribution in early 2006 was about 4 percent of employee salary. By comparison, contribution limits for US 401(k) plans are much higher, as indicated above. 8 In addition, the limitations on Japanese tax-exempt employer contributions discourage many companies from converting more of their entire pension (EPF or TQPP) plan assets into a single DC plan. Similar to the experience in the U.S., employees in large Japanese companies will more likely receive both DB and DC retirement benefits.

Permitting withdrawals from DC accounts before retirement

Existing prohibitions on employee early withdrawals (before age 60) keep the Japanese DC plan account size unavailable to participants until retirement.

Despite the potential threat to income adequacy in retirement, a relaxation of these withdrawal rules for accounts with relatively small asset balances is under consideration.

Other topics being considered

Other topics under review include increasing the eligibility age for receiving benefits from DC plans from age 60 to age 65 and exploring ways to improve investment education for DC plan participants.

Notes

Acknowledgments: Although pension data used in this research come from a variety of sources, the Institute of Pension Research database managed by the Nikko Financial Intelligence, Inc. provided a particularly rich source of information. This online database may be accessed at http://www.nikko-fi.co.jp/modules/pension_e9/. In addition, the help provided by the Japanese External Trade Organization (JETRO) in obtaining data from the Japanese government was a significant contribution toward the completion of this article.

- ¹ According to provisions of the 2004 social security reform law, the government subsidy for the NP will rise to 50 percent by 2009 (Sakamoto 2005).
- ² The Japanese government uses a male employee and non-working spouse as the model household when publishing the average EPI replacement rate. The current average EPI replacement rate for a female employee is approximately 53 percent, which will decline to 45 percent by 2025. This higher EPI replacement rate for women reflects a lower average wage, versus male workers, and the redistributive benefit formula (Y. Watanabe 2006–2007).
- ³ In general, book reserves occur when a voluntary retirement plan's assets are recorded as a liability on the plan sponsor's balance sheet (Yermo 2002).
- ⁴ According to the 2004 social security reform, EPF plans established on or after April 1, 2005, must provide a supplemental benefit equal to 50 percent. However, no EPF plans have been established since April 1, 2005. EPF plans established before April 2005 are not subject to this new rule (Y. Watanabe 2006–2007).
- ⁵ There is an upper limit to the benefit guaranteed by the PFA. If an EPF supplemental benefit is more than 30 percent above the earnings-related EPI benefit replaced, then the guarantee covers 50 percent of the benefit beyond the supplemental 30 percent. A PFA review committee, however, may reduce this extra guaranteed amount for EPF rule violations, such as the failure by trustees to exercise their fiduciary duties. EPF plans support this guarantee system through fees based on the number of plan participants (Clark 1991; Y. Watanabe 2006–2007).

- ⁶ Accounting changes introduced in 2000 did encourage corporations to use market valuation rather than book value to account for pension assets in financial statements. However, the time at which changes in asset values began to be reflected on plan sponsor financial statements was not clear given the continued weakness of financial markets until 2003.
- ⁷ Tables 5 does not show trends in BRP plans. Anecdotal evidence suggests a decline in their use, primarily conversions into newer DB and DC plan types, following the loss of tax advantages in 2002. There are no official figures documenting this decline, however.
- ⁸ This comparison between Japanese and American workers is fair, given that the 2005 hourly compensation costs for production workers in manufacturing are comparable in the two countries: U.S. workers received \$23.65 versus Japanese workers received \$21.76 (US Bureau of Labor Statistics 2006).

References

- Arimori, Miki. 2006. Highlights of results in Japanese pension field 2005. Nikko Financial. Available at http://www.Nikko-fi.co.jp/pension. Accessed April 15, 2006.
- Clark, Robert. 1991. *Retirement systems in Japan*. Homewood, IL: University of Pennsylvania Press.
- Clark, Robert, and Olivia Mitchell. 2002. Strengthening employment-based pensions in Japan. Pension Research Council Working Paper PRC WP 2002-1.
- Dai-ichi Mutual Life Insurance Company. 2006. *IGP* country profile: Japan, 2006. John Hancock Financial Services, International Group Program (IGP).
- Daily Yomiuri. 2006. Defined-contribution pensions top 2 million. 24 September. Accessed through http://www.FACTIVA.com on September 27, 2006.
- Dow Jones International News. 2006. Japan calls for urgent steps to stem population decline. 1 December. Accessed through http://www.FACTIVA.com on December 10, 2006.
- Endo, Takahiko. 2002. New trends in retirement benefits spell massive change for Japan. *Benefits and Compensation International* 32(5): 10–15.
- Freshfields Bruckhaus Deringer. 2003. Corporate pension schemes in Japan. Available at http://www.Freshfields.com. Accessed on August 15, 2006.
- Fujiwara, Kiyoaki. 2003. Traditional severance pay plans and new defined contribution plans in Japan. Unpublished manuscript.
- Manager, Tax and Accounting Affairs Group,
 Economic Policy Bureau, Nippon Keidanren. 2006.
 Discussion with author (August).

- Goldman Sachs. 1999. Unfunded liabilities of Japanese corporate pensions. Pension Group Services Report.
- Greenwich Associates. 2006. Press Release for the 2006 *Japanese Investment Management Research Study*.
- Hewitt Associates. 2002. Corporate pension reform (Japan). Legislative updates: Asia & Pacific (May).
- ——. 2003. New option for plan sponsors to contract into social security (Japan). *Legislative Updates: Asia & Pacific* (April).
- Huh, Elmer, and Sarah McLellan. 2007. A tale of two pension reforms: AUS-Japan comparison. Pension Research Council Working Paper PRC WP 2007-1.
- Japan Ministry of Health, Labor, and Welfare. 2003. White Paper FY2002.
- ——. 2004. Total Research of Labor Conditions in 2003.
- ——. 2005a. White Paper FY2004.
- ———. 2005b. *Textbook for the study programme for the senior social insurance administrators* (Chapter 9). MHLW: Social Insurance Agency.
- Kabe, Tetsuo. Counselor, Finance Section, Embassy of Japan. 2006. In discussion with author (May).
- Katsumata, Yukiko. 2005. The relationship between the role of the corporate pension and the public pension plan in Japan. In *Rethinking the welfare state: The political economy of pension reform* edited by Martin Rein and Winfried Schmahl. Cheltenham, UK: Edward Elgar.
- McGuinness, Fergal. 2003. Sitting and waiting for death and other pension-related issues in Japan. *Benefits and Compensation International* 33(4): 3-7.
- McLellan, Sarah. 2004. Corporate pension reform in Japan: Big bang or big bust? Pension Research Council Working Paper PRC WP 2004-05.
- Mizuho Financial Group (MHFG). 2001. Corporate pension funds in Japan. MHFG Fixed Income Research Department. Available at http://www.mizuho-sc.com. Accessed on September 20, 2005.
- Morito, Hideyuki. 2001. Reconsidering Japanese corporate and personal pensions: From a legal point of view. Organisation for Economic Cooperation and Development.
- Munnell, Alicia, and Annika Sundén. 2006. 401(k) plans are still coming up short. Center for Retirement Research at Boston College. Issue Brief 43 (March).
- Nakada, Tadashi. 2004. Recent corporate pensions reform and its consequences in Japan. Paper presented at the annual PBSS and IAAust Colloqium in Sydney on October 31–November 5, 2004.
- Nakamoto, Michiyo. 2003. Japanese pension funds act. *Financial Times*, 27 February.

- Nikkei Report. 2006a. Economic rebound lifted corporate pension fund returns 19 percent in FY 05. 7 April. Accessed through http://www.FACTIVA.com on April 10, 2006.
- ———. 2006b. Participants in Japan 401(k) plans set to top 2 million. 17 August. Accessed through http://www .FACTIVA.com on August 22, 2006.
- ———. 2006c. Welfare ministry to embark on corporate pension reform. 7 October. Accessed through http://www .FACTIVA.com on September 10, 2006.
- Nomura Research Institute (NRI). 2006. *Japan's Asset Management Business*. Japan: NRI.
- Pension Fund Association. 1975-2006. *Annual reports of employees' pension funds*. Japan: Pension Fund Association.
- ——. 1975-2004. *The basic statistics about company pension plans*. Japan: Pension Fund Association.
- Pensions & Investments. 2006a. Japanese DC prepares for takeoff. 13 November. Accessed November 26, 2006.
- ——. 2006b. Japan Looking Forward to the Future. 27 November. Accessed November 27, 2006.
- Sakamoto, Junichi. 2005. *Japan's pension reform*. World Bank Pension Reform Primer Series.
- Sato, Michio. 2005. 2007 problems' loom large. *Daily Yomiuri*. 30 July. Accessed August 5, 2005.
- Shimada, Tooru, Satoshi Sugita, Tadanori Chiba, and Jumpei Saino. 2002. New movements in the Japanese corporate pension system. Paper presented at the XXVIIth International Congress of Actuaries in Mexico.
- Shimizu, Nobuhiru. 2005. Protection of participants and the pension benefit guarantee program of Japan. Paper presented at the annual OECD/IOP Conference on Private Pensions in Bangkok, Thailand on April 27–28, 2005.
- Sugita, Satoshi. 2006. Plan design and investment policy of cash balance pension plans in Japan. Paper presented at the 28th International Congress of Actuaries in Paris on May 28–June 2, 2006.
- Takahashi, Hiroyuki. Visiting Researcher at Employee Benefit Research Institute, International Affairs Division at Japan MHLW. 2006. Discussion with author (September).
- Takayama, Noriyuki. 2005. Pension Reform in Japan. Paper presented at the KDI International Conference on Aging in Seoul, Korea on March 17–18, 2005.
- Turner, David. 2006. US-Style pension plans popular in Japan. *Financial Times*. 6 February.
- Turner, John, and David Rajnes. 1995. Pay or Play Pensions in Japan and the United Kingdom. In *Social Security: Time for a Change* edited by Kevin Stephenson. Greenwich, CT: JAI Press, Inc.

- U.S. Department of Labor, Bureau of Labor Statistics [BLS]. 2007. *International comparisons of hourly compensation costs for production workers in manufacturing, supplementary tables*. http://www.bls.gov/fls/hcompsupptabtoc.htm. Accessed January 29, 2007.
- U.S. Department of the Treasury, Internal Revenue Service. 2006. IRS announces pension plan limitations for 2007, IRS Newswire IR-2006-162. October 18, 2006. Accessed July 5, 2007.
- U.S. Social Security Administration. 2007. Social Security Programs Throughout the World: Asia and the Pacific, 2006. Washington, DC: Office of Policy.
- Urata, Haruka. 2001. New developments in corporate pension schemes in Japan. Paper presented at the Project on Intergenerational Equity at the Hitotsubashi University.
- Usuki, Masaharu. 2003. Pension funds and retirement benefits in the depressed economy and market: Experience and challenges in Japan. Paper presented at the Eleventh Annual Superannuation Colloqium in Wales, July 2003.

- Watanabe, Noriyasu. 1996. Private pension plans in Japan. In *Securing employer-based pensions: An international perspective* edited by Zvi Bodie et al. Philadelphia: University of Pennsylania Press.
- ——. 1998. Special topic-Occupational pension systems in Japan. Japan Labor 37(8).
- Watanabe, Yumiko. (Director, Pension and Welfare Department, Japan External Trade Organization). 2006–2007. Discussion with author (September 2006–May 2007).
- Yamamoto, Katsuyama, and Tetsuo Fukawa. 2003. The future prospects of Japanese employees pension insurance. Paper presented at the Fourth International Research Conference on Social Security in Antwerp, Belgium, May 5–7, 2003.
- Yermo, Juan. 2002. Revised taxonomy for pension plans, pension funds, and pension entities. Organisation for Economic Cooperation and Development.