Benefits and Taxes

Individual accounts accrue in the form of an account balance, but retirees need to receive a steady flow of income to finance their consumption over a number of years. Thus, a decision must be made as to how the account will be converted to an income stream for the retiree—the form in which benefits will be paid. In establishing individual accounts, difficult issues arise concerning payout options and whether, for example, participants should be required to fully annuitize their individual account balances. Public policy also must determine the qualifying conditions for receiving benefits. The structure of pension benefits and the taxation of pensions are closely related—the tax treatment of benefits can have an important effect on the form in which benefits are paid and the amount of benefits received. This chapter also discusses the accrual of benefits.

Pension participants in individual accounts face interest rate risk at the point of retirement if they wish to annuitize their account balances. In defined benefit plans, the plan sponsor bears that risk; the risk is nearly always borne by participants in individual accounts.

To provide examples of ways benefits are paid from individual accounts, the chapter first discusses forms of benefit payment in Sweden and Chile. It then discusses various issues in the determination and payment of benefits. The chapter concludes with a discussion of the tax treatment of individual accounts.

Benefits in the Swedish Premium Pension System

The mandatory individual account system in Sweden, called the Premium Pension system, allows participants considerable flexibility as to when they can begin to receive benefits. Individuals must file a separate claim for the benefit from the notional account plan that provides the majority of social security benefits in Sweden, and for the additional benefit from the Premium Pension (PPM 2003).
Individuals can claim benefits from the mandatory individual account Premium Pension at age 61. There is no maximum age by which benefits must be claimed. Countries often set age limits for workers to start receiving benefits from individual accounts to ensure that the benefits are claimed for retirement purposes, rather than used by high-income earners as a tax-advantaged way to accumulate inheritable wealth. A worker can claim benefits at the same age as he or she initiates benefits from the notional account plan, or that worker can claim benefits from the Premium Pension separately, starting at a different age.

Facilitating semiretirement by permitting partial receipt of benefits, the program allows workers to claim one-quarter, one-half, three-quarters, or full benefits. They can continue working while they draw benefits, in which case they would still contribute to the system (Palmer 2001).

Flexibility for workers as to when they start receiving benefits can be important for reducing the interest rate risk associated with benefit annuitization. However, this flexibility may be of little consequence for older workers who are forced to retire because of ill health or because of losing a job. Interest rate risk in Sweden is limited by a guarantee. The interest rate used to determine the annuity varies with the market, but with a promised minimum of 3 percent. The guarantee is given by the PPM as part of its provision of annuities.

When interest rates are low, the annuity resulting from a given account balance is also relatively low, because the expected income generated from the account is low. A worker can begin receiving benefits from the notional account plan, but if the individual believes interest rates will rise, making it more favorable to annuitize Premium Pension benefits later, the worker can postpone annuitization of the Premium Pension. Once participants have claimed Premium Pension benefits, they can suspend payment or change the percentage of a full payment they receive.

The PPM, the government agency that oversees the Swedish system, is the sole provider of annuities for participants in the Premium Pension. Sweden is the only country where the government is the sole provider of annuities for participants in mandatory individual accounts (World Bank 2000). Typically, in individual accounts, workers who desire to annuitize their account balances must purchase annuities on their own from private-sector life insurance companies.
Although Sweden allows considerable flexibility as to the timing of the initial receipt of benefits, it mandates that, starting from the date the worker first claims Premium Pension benefits, the account balance in the Premium Pension be paid out fully as an annuity. Participants cannot take lump sum payments of even a portion of their account; thus, once they begin collecting benefits, they cannot bequeath any of their account balance.

Participants can choose a fixed or variable annuity. If the person selects a fixed annuity, the PPM guarantees a set monthly payment for life. The monthly amount may be increased by a bonus, however, depending on the PPM’s investment experience. If a worker chooses a variable annuity, the Premium Pension benefit may change, because the worker’s benefit will be affected by the value of the underlying funds. Benefits workers receive from the Premium Pension are taxable under the personal income tax at the same rate as labor earnings.

The PPM uses unisex life tables, and it uses different life tables for each birth cohort. Because women and higher-wage workers have, on average, longer life expectancies than men and lower-wage workers, the system redistributes money in a complex way from men to women and from lower-wage to higher-wage workers. Consequently, the criticism that traditional defined benefit social security programs redistribute income in a complicated manner also applies to individual accounts that mandate annuitization.

Married workers are not required to provide survivors benefits for their spouses. Participants may voluntarily choose the Premium Pension’s survivor benefit, which is primarily used as protection for widows. It is available on a separate basis for the preretirement and retirement periods. Preretirement, participants pay the cost of purchasing a survivor benefit from the funds in the individual worker’s account, so it is only available to workers with a sufficient balance to cover the cost of buying the option. This choice first became available in 2005, five years after the start of the system. If the participant elects a survivor benefit and then dies before retirement, the benefit pays a fixed amount (without regard to the participant’s account balance) for five years (PPM 2001). Beneficiaries include children under age 20 and a spouse, registered partner, or cohabitant, including same-sex partners.

If the individual at retirement has selected the survivor benefit option, he or she will receive a reduced benefit, and the survivor benefit
will be paid as a life annuity to the spouse, registered partner, or person previously married to the deceased or with whom the deceased had children. Workers can also transfer benefits to their spouse or partner by electing to have the contributions they make while working deposited into that person’s account instead of their own.

In some individual account systems, the possibility of accumulating bequeathable wealth is considered to be a desirable feature. This opportunity allows lower-income workers to amass funds that they might pass on to their heirs. If a worker dies before having annuitized his or her account balance, the Swedish pension system does not permit the bequest of the remaining sum. That amount is redistributed among all of the participants in the system. A survivors benefit would only be provided if the worker has purchased one.

**BENEFITS IN THE CHILEAN PENSION SYSTEM**

In Chile, women may claim old-age pension benefits at age 60, and men may claim benefits at age 65. However, the system is flexible in that it allows workers to take benefits at younger ages if they have saved enough in their individual accounts to qualify. They must have sufficient savings so that the annuitized benefit would be at least 50 percent of their average indexed earnings over the previous 10 years, or at least 110 percent of the legal minimum wage, whichever is lower. Workers who have satisfied these requirements can stop contributing and begin withdrawing their money. They need not stop working to collect benefits. This feature allows workers to take partial retirement or phased retirement and to combine employment with the receipt of pension benefits.

Workers may take their benefit as a price-indexed annuity, as a phased withdrawal, or as a combination of the two. With a phased withdrawal, the funds that remain at death become part of the worker’s estate. Participants may also take out a lump sum benefit from their individual accounts if the remaining amount is sufficient so that they meet one of two conditions: they purchase an annuity at least equal to 120 percent of the minimum guaranteed pension, or they take scheduled withdrawals of at least 70 percent of the participant’s price-indexed covered wages.
The option of a price-indexed annuity in the Chilean system is an unusual feature. While price indexation of benefits occurs frequently in social security defined benefit systems, in individual account systems it is uncommon because most countries do not have price-indexed assets in which to invest to fund price-indexed benefits. Chile, however, has a well-developed market in price-indexed bonds.

With phased withdrawal, the worker receives a benefit each year that is based on his or her remaining life expectancy and on the amount in the person’s individual account. With the phased withdrawal, the retirement benefit is recomputed each year, taking into consideration the fund’s investment performance and whether the worker’s spouse or other beneficiaries have died. Thus, the benefit provided with phased withdrawal differs each year. Pensioners may begin taking their benefits as a phased withdrawal and later switch to a price-indexed annuity.

Chilean pension fund management companies (AFPs) do not provide annuities. At retirement, the participants who choose an annuity must contract with a private insurance company to purchase it. If a married man chooses an annuity, he must provide a survivors annuity for his spouse and minor children. A married woman must do so only if her husband is disabled.

ACCRUAL PATTERN OF BENEFITS IN INDIVIDUAL ACCOUNTS

The accrual pattern in individual accounts determines how much a worker is gaining in future benefits. This pattern depends on four factors: the worker’s age, the worker’s earnings, the rate of return, and the accumulated account balance. The earnings of younger people have a larger effect on ultimate account balances than would the same level of earnings at an older age because of interest compounding (Box 7.1).

The time pattern of rates of return can have a large effect on individual accounts. A negative rate of return on a small account early in life has a much smaller effect on balances at retirement than a negative rate of return on a large account near retirement. Thus, different cohorts of workers will receive differing generosity of benefits depending on the
pattern of high and low rates of return over their working lives, which raises the issue of intergenerational equity.

Making contributions to an individual account nearly always requires that the individual is working. However, the Swedish mandatory individual accounts require that persons who receive unemployment, disability, or child-rearing benefits contribute a part of these benefits to their individual account.
REGRESSIVITY

Retirement income systems may affect the distribution of income among the older population. In some countries, the citizenry has a strong desire to use the retirement income system to redistribute income toward lower-income retirees, often women, who have higher rates of elderly poverty than men. Regressivity is redistribution from lower- to higher-income groups.

Individual accounts can be designed to redistribute income, for example, through government subsidies to the accounts of workers with low earnings, but this is rarely done. Individual accounts are usually considered to be neutral in their effects on the distribution of income, being neither progressive nor regressive. This is indeed the case when the rate of return received on workers’ account balances, net of expenses and taxes, is constant across income classes. That situation would occur if administrative costs were allocated equally across dollars invested in the same portfolio, and if annuitization of benefits recognized differences in life expectancy associated with different income classes. While plans could be designed with those features, frequently none of them are present.

In actual practice, individual accounts may be regressive (Turner 2000). Some regressive aspects of these plans affect the accrual of account balances, and others result from the annuitization of account balances. Other issues arise for voluntary carve-outs because of the relationship between social security and individual accounts. The following discussion considers causes of regressivity and possible remedies.

Effects on Account Balances

Regressivity in individual accounts can be the result of fees that fall disproportionately on low-wage workers. Alternatively, regressivity can result because low-wage workers invest more conservatively and end up with lower account balances relative to their contributions because of the lower returns (before fees) that they receive.
**Fees**

Individual accounts may penalize low-income workers through the way charges for expenses are allocated. The costs of processing contributions, keeping records, managing investments, and paying benefits are primarily fixed per worker and do not vary by transaction size or account balance. Charges levied by for-profit service providers, when not otherwise constrained by regulation, tend to follow the incidence of costs, with small accounts often having higher charges relative to assets than large accounts. Thus, the regulation of the fee structure may be an important policy issue.

Some individual accounts in Australia and the United Kingdom impose a set entrance fee for opening an account. Individual account providers in Chile charge both fixed and variable costs. In some plans, the fee diminishes as a percentage of the balance for large accounts, or fixed charges are waived for larger balances. Mutual funds in the United States often charge fixed fees for small accounts, with bigger accounts being charged fees that are a lower percentage of assets.

Over the period 1981–1990, the average net rate of return for a worker with the maximum eligible earnings in one of the Chilean pension funds was 10.4 percent, and that for a worker with minimum eligible earnings was 9.2 percent. The difference was due to the fee structure (Habitat 1991). Low-income workers on average actually received only 7.5 percent across funds, compared to 10 percent for high-income workers (Vittas and Iglesias 1991). This is a substantial difference, having a large effect on retirement benefits when compounded over a worker’s career.

Government intervention, however, can eliminate this source of regressivity. The fixed costs of accounts can be borne by the government and spread across workers in proportion to their account balances. This can be done, for example, if the government acts as a clearinghouse by collecting contributions and distributing them to pension fund managers, as in Sweden.

There are other sources of regressivity in both mandatory individual account and defined benefit systems. For example, in both programs, when benefits are annuitized using uniform annuity conversion rates, income is redistributed from low-income to high-income workers because the latter outlive their low-income counterparts.
Progressive taxation

Upper-income contributors benefit proportionately more per dollar of account balance than do lower-income contributors when there is a progressive income tax system—one in which higher-income workers pay higher marginal income tax rates—and when contributions to individual accounts and the investment earnings on those accounts receive preferential tax treatment. The amount of tax subsidy per dollar contributed is the same for low- and high-income workers if a tax credit rather than a tax deduction is offered, but that approach costs the government a lot in lost tax revenue and is rarely used.

Risk preference

People differ in their preferences for risk-bearing. It is sometimes argued that a positive aspect of individual accounts with portfolio choice is that individuals can choose the amount of risk that matches their risk preference. A weakness, however, is that participants are generally poorly informed about investments, and, compared with professional money managers, tend to select portfolios that are lower in risk and in return.

Data from the Thrift Savings Plan for U.S. federal government workers suggest that lower-income workers tend to pick more conservative portfolios and receive lower rates of return (Hinz, McCarthy, and Turner 1996). These data may understate the difference between income classes over workers’ lifetimes because the upper-income work-

<table>
<thead>
<tr>
<th>Annual salary ($)</th>
<th>Average rate of return (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 20,000</td>
<td>11.3</td>
</tr>
<tr>
<td>20,000–29,999</td>
<td>11.9</td>
</tr>
<tr>
<td>30,000–39,999</td>
<td>12.0</td>
</tr>
<tr>
<td>40,000–49,999</td>
<td>11.8</td>
</tr>
<tr>
<td>50,000–59,999</td>
<td>12.3</td>
</tr>
<tr>
<td>60,000–69,999</td>
<td>12.3</td>
</tr>
<tr>
<td>70,000 or more</td>
<td>12.4</td>
</tr>
</tbody>
</table>

ers in the cross-sectional data tend to be older, and their risk aversion may increase as they near retirement. Nonetheless, the difference of 100 basis points (1 percentage point) between the lowest and highest income groups, as shown in Table 7.1, if it persisted over a worker’s career, would make a considerable difference in retirement income. Thus, self-management of individual accounts causes the accounts to be regressive because lower-income workers tend to be less sophisticated in managing their accounts and tend to receive lower rates of return.

**Annuitization**

Annuitization of account balances at retirement insures workers against the risk of outliving their resources. How this is accomplished, however, may add regressive elements to individual accounts. When the accounts annuitize benefits on a uniform basis and do not take into consideration the longer life expectancy associated with higher income, they redistribute toward upper-income workers. When comparing within a gender group, there is a clear pattern of upper-income workers having greater life expectancy. When considering both men and women, however, the connection between income and life expectancy is not as clear. Women have longer life expectancy than men but tend to have lower income.

Insurance companies in Chile, but not in most countries with mandatory individual accounts, consider personal characteristics, including gender, in determining the level of annuity benefits provided by an account balance. This limits regressivity when comparing high- versus low-income workers within a single gender, but at the cost of lower retirement benefits for women than would be the case if unisex life tables were used to calculate annuitized benefits.

The transaction costs associated with an individual worker purchasing an annuity are largely fixed and do not depend on the size of the account balance being annuitized. Thus, these costs have a regressive effect when charged on an individual basis. Annuity charges in Chile are a source of regressivity: larger commissions relative to annuity payments are often charged to lower-income workers (Vittas and Iglesias 1991).

Annuity prices vary across insurance companies. If participants are required to shop for an annuity, as in Chile, low-income workers may...
be adversely affected. If such individuals are less sophisticated in purchasing annuities than people with higher incomes, they tend to receive a less favorable price. Because lower-income workers have less to save by finding the best price, due to their relatively small account balances, and because the investigation may be particularly difficult for them if they lack financial knowledge, they would tend to be less successful in their searches.

Most mandatory individual accounts allow workers to avoid the regressive effects of annuitization by taking a phased withdrawal of benefits. Providing this option, however, increases the problem of adverse selection in the annuity market and works in a regressive way against low-income participants. Because people who expect to be long-lived are more likely to buy annuities, insurers price the product on the assumption that their purchasers are long-lived. These prices may be actuarially fair for upper-income workers with long life expectancies; the problem is that the high price keeps low-income workers out of the annuity market and deprives them of the protection traditional social insurance plans provide against the risk of outliving one’s resources. Not requiring annuitization, however, allows less affluent workers who die relatively young to bequeath some of their retirement income to their survivors, which may be the only form of survivors benefits provided by an individual account system (Box 7.2).

**Voluntary Carve-Outs**

Although voluntary carve-outs can be structured in different ways, they generally are not as favorable for low-income as for high-income workers. With voluntary annuitization, adverse selection occurs because of the longer life expectancy of high-income participants. Social security forms a larger share of retirement income for individuals with low incomes than for those with high incomes, so lower-income workers are more affected by the change in risk-bearing caused by the carve-out accounts. Disability benefits tend to be more important to low-income labor and may be less generous under voluntary individual carve-out arrangements. If primarily upper-income workers establish individual accounts but government general revenues are used to pay transition costs, the benefits of the system would be going to upper-income workers, while all workers would be paying for the transition.
Box 7.2 The Effect of Increases in Life Expectancy on Social Security Benefits with a Voluntary Carve-Out

Increases in life expectancy are a cause of Social Security’s projected insolvency. As people live longer, they receive benefits for more years. When no countervailing changes in the program are made, longer life expectancy eventually leads to financing problems. Sweden deals with this issue by indexing social security benefits to life expectancy, since increases in life expectancy reduce the initial benefit retirees receive.

Private account plans do not face this source of financial insolvency caused by increasing life expectancy. Rather, the monetary burden of greater longevity is typically borne by workers individually. When annuity providers anticipate that people will live longer in retirement, they reduce the annual benefits they provide for a given account balance and retirement age. Workers may then decide to work longer and postpone retirement.

How does an individual account of the type proposed by President Bush deal with increased life expectancy? Under the president’s plan, individuals may voluntarily divert part of their contributions from Social Security into a private account. This account would be invested in the financial markets and yield a balance at retirement.

Diverting part of one’s Social Security contributions to a private account would result in reduced Social Security benefits at retirement. The Social Security Administration (SSA) would calculate the decrease in benefits based on a hypothetical account established for each person who chooses a private account. This hypothetical account would be credited with the actual contributions made by the person to the private account. It also would be credited with a set interest rate on the hypothetical balance, for example, 3 percent above inflation.

At retirement, the hypothetical account balance resulting from the crediting of contributions and interest would be converted into a hypothetical annuity. This would be based on a unisex life table reflecting life expectancy at retirement as of that time. The annuitized monthly benefit calculated for the hypothetical account would be subtracted from the individual’s Social Security monthly benefit.
that the person would have received had he or she not chosen to contribute to the private account. The individual would receive the reduced Social Security benefit resulting from this calculation.

Under this plan, life expectancy increases would be reflected in the life table used to annuitize the hypothetical individual account and would reduce the monthly benefit calculated for the hypothetical account. Then, the hypothetical monthly benefit that has been reduced by the increase in life expectancy would be subtracted from the person’s Social Security benefit, as previously described. Thus, increases in life expectancy would reduce the annuitized benefit from the hypothetical account, but they would augment by an equal amount the Social Security benefit received by the worker taking the individual account. Thus, if an increase in life expectancy before retirement age reduced the benefits calculated from the hypothetical account by $10 a month, Social Security benefits would increase by $10 a month.

The net result is that the person who chooses the private account does not bear the effect of increases in life expectancy—the reduction in the benefit from the hypothetical account is exactly offset by an increase in his or her Social Security benefit. The net impact for the Social Security trust fund, however, is that it bears the higher benefit cost due to increased life expectancy for those persons taking individual accounts.

The president’s plan thus does nothing to solve the problem of increased life expectancy raising Social Security benefit costs. Rather, the cost of greater longevity for individual account participants would be borne by Social Security out of increased benefit payments. Thus, the carve-out private accounts the president has proposed would destabilize Social Security’s financing as life expectancy increases, eventually necessitating further changes in program financing or benefits. This effect would not occur with add-on private accounts. That type of private account does not have the complex problem of determining the amount by which Social Security benefits would be offset (the “claw back”) for participants taking those accounts.
Progressive Features

Individual accounts could be structured so that they are progressive, with, for example, part of the contributions of higher-income workers being used to subsidize the accounts of lower-income workers. Some individual accounts do have explicitly progressive elements. The government can make periodic flat payments to all accounts, as is done in Mexico. That contribution provides a relatively large subsidy for low-income workers with small accounts. The plan can also be structured to have the government offer matching contributions that phase out at higher income levels. In Australia, the government makes a contribution of up to AUD$1,000 per year to low-income workers who make voluntary payments on top of the mandatory ones for their individual accounts (Pensions Policy Institute 2003). In Sweden, the government provides pension contributions out of general revenue on behalf of persons serving in the military, students, and those receiving disability benefits.

BENEFIT PROTECTION FOR WOMEN

With individual accounts, issues arise as to the benefits a woman receives as a divorcée, as a spouse of a retired worker, and as a widow. What types of benefit protection are available to women, and are those protections mandatory? Australia and the United Kingdom both permit, but do not require, the splitting of pension assets in divorce proceedings. Sweden allows a husband to assign his pension contributions to his wife’s account, or a wife to her husband’s. Sweden also provides contributions out of general revenue for women who are not working because they are taking care of children.

An issue in calculating annuities concerns to what extent variations in life expectancy arising from factors other than age should be taken into account. Notably, should longevity differences associated with gender be recognized? Not acknowledging this differential can be considered a form of sex discrimination against men (McCarthy and Turner 1993). However, because women have lower average retirement benefits than men, public policy generally determines that annuities should
be provided on a unisex basis. To do otherwise would exacerbate the disadvantage in retirement benefits that women already experience.

Benefit protection for women can also be provided through survivors benefits. Sweden and Australia do not require that such benefits be provided, while Chile does in the case of men for their wives if the men receive their benefits in the form of an annuity.

Individual accounts in Latin America sometimes permit women to withdraw benefits at a younger age than men. Chile is an example: women can take benefits at age 60, while men must wait until 65 unless they have accumulated a sufficient amount to qualify for early retirement. If women’s retirement age were raised five years to equal that of men, their monthly benefits would increase by about 50 percent even if they did not work any more time, simply because of the five extra years of interest accumulation and the five fewer years of benefit payouts (James, Edwards, and Wong 2003).

With voluntary carve-outs, as proposed in the United States, questions have arisen as to whether the account balances of husbands and wives that have accrued during marriage would be split at divorce. With these accounts, however, there is an associated liability, which is the offset against future Social Security benefits. Splitting the liability could result in a divorced wife receiving a liability that exceeded the benefits she received.

**ANNUITIZATION OF BENEFITS**

Returning to the theme of risks in individual accounts, financial market risk affects individual account pensions at three points. The first time is during the accumulation phase, because of the risk in equity and bond markets. The second impact is on the initial annuitized benefit at the stage that the account is converted into an annuity, because of fluctuations in interest rates used for the calculations. And the third is during retirement, when the real value of benefits received is affected because of the risks of inflation and of the bankruptcy of insurance companies providing annuities with inadequate reinsurance. With regard to inflation, defined benefit social security plans frequently provide indexed
annuities, as in the United States, but that is rarely done with individual accounts (Chile being an exception).

Burtless (2000b) examined the first two sources of risk in the United States over the years from 1911 to 1999 and found considerable investment risk stemming from variation in the price of annuities, as well as from financial market risk in the value of account balances. Large fluctuations in income replacement rates for retirees can result from variations in the interest rates used to calculate annuities (Box 7.3).

Some degree of mandatory annuitization may be viewed as desirable to ensure that workers will not outlive their retirement savings. However, it is not required in many countries with mandatory individual accounts (Table 7.2). Among the mandatory individual accounts in Latin America, seven countries allow their retirees to either purchase an annuity or to take programmed withdrawals throughout retirement, while two countries require annuity purchases (Kritzer 2000). The compulsory individual accounts in Hungary and Poland require annuitization with private insurers (World Bank 2000). Sweden mandates annuity purchases through the government but gives workers consider-

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**Box 7.3 Interest Rates and the Conversion of an Individual Account into an Annuity**

The amount of pension benefits paid out annually from an individual account plan that has been annuitized depends on the interest rate at the time the account balance is annuitized. A pension annuity is a series of monthly payments paid until death. Sudden changes in interest rates just before retirement may significantly affect the level of benefits the individual receives. A drop in interest rates will reduce the pension benefit payable from a given account balance. However, the amount of capital to be converted may also be affected by the change in interest rates: for example, a decrease in interest rates causes an increase in the value of bonds. The net effect of a change in interest rates on the level of benefits cannot be determined in the abstract; it depends on the associated changes in capital market valuations of the assets held in the account.
able flexibility as to when those are made (Turner 2004). When annuities are purchased through private insurers, the government may need to provide some form of insurance in case the insurer is unable to meet its benefit commitments.

The United Kingdom permits the gradual purchase over time of fixed annuities. Retirees can take a tax-free lump sum of up to a quarter of their accumulated contracted-out individual account. They can draw down the rest of the fund gradually after retirement, but they must buy an annuity with the remainder by age 75. Australia allows participants to take their mandatory individual account benefit either as an annuity or as a lump sum benefit. Tax laws provide substantial incentives to take it as an annuity, but most people take a lump sum (Mitchell and Piggott 2000).

Workers could be permitted to take a lump sum of part of their account if they were able to provide an annuity of sufficient generosity with the remainder, with that level possibly being tied to average wages in the economy. Exceptions to mandatory annuitization might be offered to the terminally ill (Mackenzie 2002).

Mandatory annuity purchases reduce annuity prices by eliminating adverse selection and expanding the market to cover individuals regardless of health and life expectancy. Compulsory annuities insure that individuals will not spend all of their resources in the early years of retirement. However, mandatory annuities cause redistribution from low- to high-income individuals because of the positive correlation of life expectancy with income within gender groups (Brown 1999).

<table>
<thead>
<tr>
<th>Countries with mandatory annuitization</th>
<th>Countries without mandatory annuitization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolivia</td>
<td>Argentina</td>
</tr>
<tr>
<td>Hungary</td>
<td>Australia</td>
</tr>
<tr>
<td>Poland</td>
<td>Chile</td>
</tr>
<tr>
<td>Sweden</td>
<td>Colombia</td>
</tr>
<tr>
<td>UK (at age 75)</td>
<td>El Salvador</td>
</tr>
<tr>
<td>Uruguay</td>
<td>Hong Kong</td>
</tr>
</tbody>
</table>

SOURCE: Kritzer (2000) and author’s compilation.
It is often argued that benefit levels in individual accounts are less sensitive to demographic change than are defined benefit systems. Actually, both systems are equally sensitive to increases in longevity, which raise the cost of providing a given level of annuitized benefits. In a defined benefit system, this occurs through increased costs, while in individual accounts its direct effect is a reduction in benefits.

ANNUITIZATION AND LONGEVITY RISK: CONVERSION RATE GUARANTEES FOR ANNUITIES

Variations in interest rates can have a large impact on the level of annual pension benefits received. For a 65-year-old, a 4 percent interest rate generates annual payments of $686 per $10,000 annuitized. This amount rises to $830 at 6 percent and to $982 at 8 percent (Ameriks 2002). Higher interest rates increase annual payments because the income produced by the account balance invested at those rates will be greater. Thus, if a 65-year-old had an account balance of $100,000 and the interest rate at the time of conversion was 4 percent, he or she would receive annual payments of $6,860 and monthly payments of approximately $570, which would continue at that level until death.

Under a guaranteed annuity conversion option, a pension plan promises to convert a worker’s account balance to a life annuity at a fixed interest rate, or at an interest rate no lower than a fixed minimum. (See Appendix A at the end of the book for a discussion of rate-of-return guarantees.) A more extensive guarantee would also take into account the mortality table used. If the annuity rates provided under the guarantee are more beneficial to the participant than the prevailing market rates, the plan, employer, or some other entity must make up the difference in the purchase price of the annuity.

The protection of pensioners provided by an interest rate guarantee could be undermined if insurance companies were free to choose mortality tables: the firms could choose a mortality table to offset the effect of low interest rates. Both the interest rates and the mortality tables used in the conversion would need to be regulated. For example, when converting an annuity stream to a lump sum payment, ERISA specifies the discount rate and life table valuation factors in discount-
ing retirement benefits in U.S. private sector pension plans. For distributions in 2001, ERISA established the 30-year Treasury securities interest rate as the maximum discount rate in computing present value. For that year, ERISA also required the use of the 1983 Group Annuity Mortality unisex table in present value computations. Internal Revenue Service (IRS) Revenue Ruling 2001-62, issued on December 31, 2001, requires defined benefit plans to adopt a new mortality table for calculating the minimum present value of lump sum benefits. The new table is the 1994 Group Annuity Reserving Table (94 GAR), which is adjusted on a unisex basis and projected to the year 2002. The present value of the annuity computed using this interest rate and mortality table is the minimum the plan could pay a participant. Annuity conversion guarantees are not an issue with traditional social security plans because those plans specify the benefit level, so the participant does not bear any interest rate risk.

**PLANS PROVIDING AN ANNUITY CONVERSION RATE GUARANTEE**

Although some private sector voluntary individual accounts and some mandatory plans provide a rate-of-return guarantee for converting an individual account balance to an annuity, most do not. The following countries provide an example of the variety of practice.

**Argentina**

Argentine insurance companies are required to use a 4 percent nominal rate for annuity pricing for mandatory individual accounts. The Argentine annuity allows the holder to share in returns in excess of 4 percent (World Bank 2000).

**Latin America**

In all other Latin American countries with individual accounts than Argentina, the interest rate for conversion of the account balance to an annuity varies with the market. Chile provides a government guaran-
tee of annuities in payment, which promises a certain level of benefits against default of the insurance company.

**Sweden**

Workers have a choice between annuitization through the government, with a guaranteed conversion rate of at least 3 percent, or purchasing a variable annuity, with the annuity recalculated annually (Engström and Westerberg 2003). A variable annuity guarantees payment until death, but the level of benefits fluctuates with the value of the underlying investments. Thus, a variable annuity provides insurance against the risk of outliving one’s resources, but it does not provide a guaranteed level of benefits.

**Switzerland**

Until recently, Switzerland’s rate for converting account balances to annuities was 7.2 percent if benefits were taken at age 65. This meant that the annual annuity benefit had to equal at least 7.2 percent of the worker’s account balance. Thus, the guarantee, in effect, jointly guaranteed the mortality rates and the interest rates used for calculating annuities. It mandated a sex-neutral conversion. Employers have lobbied the government to reduce this return to reflect low interest rates and diminished mortality rates. In response, the government has decided to decrease the conversion rate at age 65 to 6.4 percent by 2011 to take into account the increase in life expectancy (Hewitt Associates 2002).

**United Kingdom**

The United Kingdom does not have a rate-of-return guarantee for the annuitization of its contracted-out individual accounts. People must annuitize with private life insurance companies that vary the price of annuities based on the market interest rate. To facilitate greater flexibility with respect to interest rate risk for annuitization, people are allowed a window up to age 75 before they are required to annuitize their accounts.

Conversion rate guarantees for annuitizing account balances were popular in the United Kingdom in the 1970s and 1980s when long-
term interest rates were high (Boyle and Hardy 2002). Insurance companies apparently assumed that interest rates would remain high, and thus that the guarantees would never become active. In the early 1990s, when long-term interest rates began to fall, the guarantees became a concern. Two other factors added to the cost of these guarantees. First, strong stock markets meant the amounts to which the guarantees applied increased considerably. Second, the mortality assumption implicit in the guarantee did not reflect the improvement in mortality that was occurring.

**United States**

While conversion rate guarantees are unusual in the United States, the United Methodist Church of the United States since 1982 has guaranteed an interest rate that is the higher of the following two options: either 8 percent, or the market interest rate for annuitizing the account balances of persons in its Ministerial Pension Plan. Participants are required to annuitize at least 75 percent of their account balances. Because of the cost of that guarantee during a period of low interest rates, it is being phased out; starting in July 2003, it was only offered to persons who had at least 35 years of service or who were aged 62 by July 1, 2003. This guarantee is backed by a reserve fund.

**ALTERNATIVE APPROACHES**

Fixed-rate guarantees are vulnerable to falls in interest rates. While they may be maintained for long periods when rates are stable, they may be revised or ended during periods of low interest rates. Alternative strategies can be used to limit the interest rate risk for participants associated with annuity conversions for individual account plans. One approach is to allow workers to partially annuitize in several steps, which reduces the risk associated with completely annuitizing at a single point in time. Another tactic is to permit individuals to initially take phased withdrawals and to later take an annuity, giving workers greater flexibility in picking the point at which they annuitize.
Favorable tax treatment is generally used by countries with well-developed pension systems to encourage worker participation (Reagan and Turner 1997). Such an inducement presumably is not needed for mandatory individual accounts since participation in them is required. Thus, it might be expected that mandatory individual accounts would not receive preferential tax treatment. That is not the case. Other issues that may hold reasons for granting favorable tax treatment include the fairness of the taxation of mandatory pensions versus other forms of retirement income, and the need to provide incentives for participation because of contribution evasion by workers and employers.

Pensions can be taxed at three points in the process of accumulating assets and paying benefits: contributions, investment earnings, and withdrawals. The tax treatment of individual accounts can affect worker participation, the forms of payout, and benefit levels (NASI 2005).

**Contribution Evasion**

One of the reasons for providing favorable tax treatment of mandatory pensions is to address contribution evasion, which is the nonpayment of contributions to compulsory plans. It occurs because of interacting factors affecting workers and employers and because of the failure of government enforcement. Contribution evasion depends in part on whether people view mandatory payments to individual accounts as a tax (Burkhauser and Turner 1985). Consequently, this issue is an important aspect of tax policy toward mandatory individual accounts (Bailey and Turner 2001; see Appendix B).

Contribution evasion is a problem in many social security programs, and favorable tax treatment may reduce the extent to which it occurs. Tax advantages may be provided to encourage participation in mandatory plans and as a matter of tax equity when plans that are voluntary receive preferential tax treatment.

Tax evasion in the mandatory individual account systems in Latin America is a serious problem. Underlying factors appear to be the high level of mandatory contributions and the greater liquidity of other forms of savings (Gill, Packard, and Yermo 2005).
Fundamental Principles of Pension Taxation

Three fundamental principles apply to the taxation of most pensions in the United States and in the majority of other countries providing favorable tax treatment for pensions:

1) Contributions are tax-exempt (excluded from income) or tax-deductible (E, for “exempt”).

2) Pension investment earnings are tax-exempt until withdrawn (E).

3) Pension benefits are taxable (T, for “taxable”).

This approach to the taxation of pensions is sometimes called the EET model. It is used, for example, by Chile for its mandatory individual accounts. This is the most commonly used method for taxing pensions. With this framework, tax payments are deferred until benefits are received in retirement, presumably for consumption.

Consumption Taxation

The tax treatment of pensions where the tax is levied only at the point of benefit receipt moves countries toward a consumption tax system rather than an income tax system, assuming that benefit payments are consumed rather than saved. Under a consumption tax, retirees generally pay higher taxes than under an income tax raising equal revenue nationally. With this approach, consumption expenditures are taxed but savings, including investment earnings, are not. Earnings set aside through a pension are not taxed until received in retirement, when they are presumably consumed, which is how they would be treated under a consumption tax. A consumption tax avoids double taxation of savings (on the initial income that is saved and on the subsequent investment income) and thus does not distort the decision between current and future consumption. This is a desirable aspect of a tax system, given the concern in many countries that people do not save adequately.

With an income tax approach, employer contributions and pension investment earnings would be taxed but benefit payments would not. The consumption tax approach for pensions is not used in all countries. For example, in the United Kingdom, lump sum benefits are not taxed.
Taxation of Social Security

In the United States, Social Security is taxed differently from private pensions. Social Security receives equal contributions from workers and employers. Workers’ contributions are made from after-tax income (they cannot deduct the contributions from their taxable income). Employers’ contributions are from before-tax income (they can deduct them from their pretax income, and the contributions are not treated as taxable income to workers). Lower-income retirees are not taxed on their Social Security benefits, while higher-income retirees must include either 50 or 85 percent of their benefits in taxable income, depending on their income level. The effective income tax rate on the employee’s share of Social Security contributions, and on the portion of the benefits that the employee must include in taxable income, depends on the employee’s income tax rate, which varies across people and is zero in some cases (NASI 2005).

For lower-income retirees, Social Security receives more favorable tax treatment than private pensions, while the opposite holds for higher-income retirees. Tax policy regarding U.S. Social Security benefits complicates the issue of how individual accounts would be taxed as part of the system.

Taxation of Different Benefit Forms

Usually pension benefits are taxed; payments can be received in different forms, however, and tax treatment may be designed to favor one mode over others. Most policy analysts agree that at least a substantial portion of benefits should be paid as an annuity because that insures against the risk of running out of money if the person lives longer than expected. Nonetheless, receiving lump sum payments is popular with workers, and some countries favor that form of receipt by not taxing it.

Taxation of Voluntary Carve-Out Accounts

If contributions from workers to a voluntary carve-out individual account were taken entirely from those workers’ payments to Social Security, the contributions would come solely from after-tax income. The usual consumption tax approach of exempting contributions and
investment earnings, and taxing benefits (EET), is generally equivalent to taxing contributions and exempting investment earnings and benefits (TEE). They are mathematically equivalent if the tax rate is the same in all periods. Thus, if investment earnings and benefits were not taxed under this proposal, the tax treatment would be equivalent to that of the EET tax treatment of pension plans such as 401(k) plans. However, it would not be equivalent to the tax treatment of Social Security benefits. It would mean that lower-income retirees would be taxed more heavily and higher-income retirees less heavily than under Social Security. Thus, the tax treatment of voluntary carve-out individual accounts could encourage their use by high-income retirees and discourage their use by low-income retirees.

**Tax Expenditures**

Tax preferences for pensions and Social Security result in lost revenue to the national government, called tax expenditures. The tax expenditure is the cost side of the tax preferences given to pensions. Tax incentives include exempting contributions and investment earnings from income taxation. This approach provides greater inducements for higher-income workers than for lower-income workers in a progressive income tax system because marginal tax rates increase at higher income levels. With a progressive tax system, there may be little incentive for low-income workers to participate (Reagan and Turner 2000).

With add-on individual accounts, tax expenditures would rise to the extent that those accounts increased total tax-favored savings. With voluntary carve-out accounts, tax expenditure would presumably change little, since tax-favored savings through Social Security would be replaced with tax-favored savings in the individual accounts.

**Conclusions**

This chapter has surveyed issues concerning the payment of benefits and the tax treatment of individual accounts. There are various options for paying benefits. A major issue is the extent to which workers should be required to annuitize their individual accounts. The provision of in-
flation protection for retirees is a related issue. An advantage offered by individual accounts is that they can be easily used in conjunction with a program of partial or phased retirement.

Fluctuations in interest rates are a source of risk at the point of retirement when converting an individual account balance to an annuity. The lower the interest rate, the lower are the annual benefits that result from annuitization. This risk can be dealt with in several ways. Sweden has a guaranteed minimum interest rate for converting account balances to annuities, although at a fairly low level. Offering flexibility in the timing of the conversion is another way of dealing with this risk.

Aspects of individual accounts may result in their benefit structure being regressive. Mandatory annuitization results in regressive redistribution because lower-income workers tend to have shorter life expectancies. The structure of fees may cause regressivity because of the fixed costs of managing individual accounts. That problem can be dealt with by mandating that fees be prorated based on account balances.

With mandatory individual accounts, tax issues need to be considered. These may be complex when, as in the United States, Social Security and pension benefits are not taxed the same way, and the tax treatment of Social Security differs for low- and high-income workers. It may be difficult to achieve neutrality between the taxation of Social Security benefits and the taxation of individual account benefits without affecting the relative desirability of employer-provided individual account plans.

Notes

1. The provision of benefits in Sweden is explained in greater detail later in the chapter.
2. The table lists only five Latin American countries as being without mandatory annuitization; it is meant to present examples rather than a complete listing.