

GAO

Report to the Chairman and Ranking  
Minority Member, Subcommittee on  
Social Security, Committee on Ways and  
Means, House of Representatives

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February 1999

# SOCIAL SECURITY REFORM

## Experience of the Alternate Plans in Texas



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**Health, Education, and  
Human Services Division**

B-279337

February 26, 1999

The Honorable E. Clay Shaw  
Chairman  
The Honorable Robert T. Matsui  
Ranking Minority Member  
Subcommittee on Social Security  
Committee on Ways and Means  
House of Representatives

In 1981, the employees of three Texas counties—Galveston, Matagorda, and Brazoria—withdraw from Social Security.<sup>1</sup> The counties replaced Social Security with a system of individual accounts that provided retirement, survivor, and disability benefits. Social Security faces a long-term financing shortfall, and some reformers have suggested that the experience of these three counties demonstrates the advantages of individual accounts as an element of Social Security financing reform.

Under a system of individual accounts within the Social Security program, participants would be either required or allowed to build up savings, depending on the reform proposal. The accounts and the earnings they accrued would belong to the individuals at retirement. In contrast, under the current system, employees and their employers pay into the program, and benefits are calculated using a formula that takes into account lifetime earnings, age, number of years worked, marital status, and other factors. Social Security is largely financed on a pay-as-you-go basis under which payroll tax revenues collected from today's workers are used to pay benefits for today's retirees. While individuals have "claims" on Social Security in the sense of promised benefits, under the current program design, changes to the program's revenues, benefits, or both will be necessary to ensure the program's future financial balance and sustainability.<sup>2</sup>

At your request, we studied the benefits provided by the plans—known as the Alternate Plans—created for the employees of the three Texas

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<sup>1</sup>Before the Social Security Act was amended in 1983, state and local governments that had previously participated in Social Security were permitted to opt out.

<sup>2</sup>The Social Security trustees estimate that either revenues will need to be increased or benefits reduced by an amount equal to 2.19 percent of taxable payroll (above the current 12.4 percent rate), if the system is to pay all promised benefits over the next 75 years. Any delay in taking action will result in an increase in the required revenue increase or benefit reduction to ensure the financial solvency of the program over the next 75 years. This estimate is based on Social Security's intermediate actuarial assumptions.

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counties.<sup>3</sup> We agreed to (1) compare the principal features and benefits of these plans with those of Social Security and (2) simulate the retirement, survivor, and disability benefits that individuals in varying circumstances might receive under the Alternate Plans and under Social Security. While not all possible scenarios can be simulated, our examples cover a range of likely experiences. To put both systems on an equal footing, we simulated outcomes for individuals who would have spent their working careers under either one or the other system. We assessed benefits for individuals retiring today and for those who went to work for the counties at the time the Alternate Plans went into effect in 1981. We examined outcomes for individuals with 35-year and 45-year working careers with the counties. Because the Alternate Plans are relatively new, we had to make some assumptions about how the plans' investments would have performed before 1981 because those retiring today would have started working for the counties before 1981. We assumed that the Alternate Plans' funds would have earned returns equivalent to those of similar portfolios—government and corporate bonds and preferred stocks—at the time. We estimated outcomes for workers with low, median, and high incomes on the basis of the distribution of earnings for Galveston County employees. Our low earners are those at the bottom 10th percentile of the wage distribution for Galveston County employees nearing retirement age, and our high earners are those at the 90th percentile.<sup>4</sup> We also assumed that workers retire at 65, the age at which full Social Security benefits are available. In reality, many workers elect to receive reduced benefits at age 62, and many Texas workers may retire even earlier. Finally, our calculations assumed that future Social Security retirement benefits will not be reduced in order to help solve Social Security's long-term financing problem, although we did take into account the scheduled increase in the normal retirement age.

The data we used in our analysis were derived from U.S. government data systems, the three Texas counties, administrators of the Alternate Plans, and insurance industry sources. We analyzed the cost and benefit structures of the Alternate Plans as they existed in 1998. We performed our work between October 1997 and December 1998 in accordance with generally accepted government auditing standards. For a more detailed discussion of our methodology, see appendix I.

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<sup>3</sup>The Alternate Plans receive deferred tax treatment under sec. 457 of the Internal Revenue Code.

<sup>4</sup>The earnings distribution of Galveston County employees is somewhat narrower than that of the nation at large. The median income for Galveston County employees was \$25,596 in 1998—about 82 percent of the national median wage. However, incomes for low-wage earners were one-third higher than those reported for the 10th percentile of Social Security-covered workers, and high-wage earners' incomes were 68 percent of the 90th percentile of wages nationally.

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## Results in Brief

In general, while Social Security and the Alternate Plans offer retirement, disability, and survivor benefits to qualified workers, there are fundamental differences in the purpose and structure of the two approaches. Social Security is a social insurance program designed, in part, to provide a basic level of retirement income to help retired workers, disabled workers, and their dependents and survivors stay out of poverty. Social Security benefits are tilted to provide relatively higher benefits to low-wage earners, and the benefits are fully indexed to protect against inflation. The program also provides significant ancillary benefits to workers' dependents. Social Security is a pay-as-you-go system that is projected to produce a negative cash flow in 2013 and become insolvent by 2032. To restore the program's financial balance over the next 75 years, either annual program revenues would have to rise beginning in 1999 by 16 percent or annual benefit payments would have to fall beginning in 1999 by 14 percent across the board. In contrast, the Alternate Plans are advance funded plans; that is, the contributions made by workers and their employers, which total 13.915 percent of workers' pay,<sup>5</sup> and the earnings made on those invested contributions are used to fund retirement benefits. The Alternate Plans' benefits are directly linked to contributions, so that retirement income is based on accumulated contributions and the earnings thereon. At retirement, the worker can take the money in the account as a lump sum or select from a number of monthly payout options, including the purchase of a lifetime annuity. Like Social Security, the Alternate Plans also offer insurance protection for the disabled and survivors.

Our simulations of how workers for the three Texas counties and their dependents might fare under the two systems revealed that outcomes depend generally on individual circumstances and conditions. In general, we found that certain features of Social Security, such as the progressive benefit formula and the allowance for spousal benefits, are important factors in providing larger benefits than the Alternate Plans for low-wage earners,<sup>6</sup> single-earner couples, and individuals with dependents. For example, our simulations showed that low-wage earners retiring today after a 35-year career generally would have qualified for higher retirement incomes had they been under Social Security (that is, on the basis of promised benefit levels) instead of the Alternate Plans. Many median-wage earners in our simulations, while initially receiving higher benefits under the Alternate Plans, would also have received larger benefits under Social

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<sup>5</sup>Like Social Security, contributions to Alternate Plans are also capped.

<sup>6</sup>Low-wage earners, in the 10th percentile of the wage distribution in the three Texas counties, earned \$17,124 per year. Median earners had wages of \$25,596 per year, and higher earners, in the 90th percentile of the wage distribution, had wages of \$51,263 per year.

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Security after between 4 and 12 years after retirement, because Social Security benefits are indexed for inflation. The Alternate Plans provide larger benefits for higher-wage workers than Social Security would, but in some cases, such as when spousal benefits are involved, Social Security benefits could also eventually exceed those of the Alternate Plans. Even Social Security's cost-of-living adjustment feature would not lift higher earners' benefits beyond those of the Alternate Plan participants until very late in retirement. Survivor benefits often would be greater under Social Security than under the Alternate Plans, especially when a worker died at a relatively young age and had dependent children. With regard to disability benefits, all workers in our simulations would receive higher initial benefits under the Alternate Plans. These higher disability benefits can be traced primarily to the annuitization of the existing account balances at the time of disability and to the fact that the Alternate Plans replace 60 percent of wages at the time the disability occurs. Low-income workers with dependents and some median-income workers with dependents would qualify for 60-percent income replacement under Social Security. Although the presence of dependents would narrow the difference somewhat between Social Security and the Alternate Plans in initial disability benefits, the Alternate Plans' initial disability benefits would still likely exceed those from Social Security because of the added value of the annuity.

It is important to note that the Alternate Plans' performance is not necessarily indicative of how well a proposed system of individual accounts within Social Security might perform. We looked at the two approaches in isolation, whereas many Social Security reform proposals that include individual accounts involve a "two-tiered system" that combines a base defined benefit element with supplemental individual accounts, whereby total retirement income would come from the combination of these two tiers. The Alternate Plans have also followed a very conservative investment strategy that has precluded investing in common stocks. By restricting investments to bonds and preferred stock, the Alternate Plans avoided the higher risks associated with equity investments but also gave up the opportunity for potentially higher returns. Proposed reforms that allow for individual accounts envision investment in equities. Finally, the sum of employer and employee contributions under the Alternate Plans is somewhat higher than Social Security's payroll taxes. On the other hand, the Alternate Plans' benefits are fully funded, while Social Security's promised benefits cannot be met without increasing program revenues.

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## Background

Social Security is largely a pay-as-you-go, defined benefit system under which taxes collected from current workers are used to pay the benefits of current retirees.<sup>7</sup> Social Security is financed primarily by a payroll tax of 12.4 percent on annual wages up to \$72,600 (in 1999) split evenly between employees and employers or paid in full by the self-employed.<sup>8</sup> Since 1940, Social Security has been providing benefits to the nation's eligible retired workers, their dependents, and the survivors of deceased workers. In addition, since 1956, the program has provided income protection for disabled workers and their eligible dependents. Today, the Social Security program covers over 145 million working Americans—96 percent of the workforce. It is the foundation of the nation's retirement income system and an important provider of disability benefits. Currently, 44 million individuals receive Social Security benefits.<sup>9</sup>

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## Social Security Benefit Eligibility and Calculation

Social Security retirement benefits are calculated using the worker's 35 years of highest earnings in covered employment. However, benefits are not strictly proportional to earnings. A progressive benefit formula is applied so that low-wage workers receive, as a monthly benefit, a larger percentage of their average monthly lifetime earnings than do high-wage workers. The benefit is adjusted for the age at which the worker first begins to draw benefits. To receive Social Security retirement benefits, employees must be at least 62 years old and have earned a certain number of credits for work covered by Social Security. Retirees are eligible for full benefits at age 65—the normal retirement age—and those retiring at 62 currently receive 80 percent of their full benefit. The age for full benefit eligibility is scheduled to incrementally increase to age 67 for those born between 1938 and 1960.<sup>10</sup> Since 1975, benefits have been automatically adjusted each year to compensate for increases in the cost of living.

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<sup>7</sup>Revenues that exceed current expenditures are credited to the Social Security Trust Fund to be used for future expenditures.

<sup>8</sup>In 1997, payroll taxes accounted for 88.7 percent of Social Security's revenue. Interest income from the Treasury bonds in the Social Security Trust Funds generated another 9.6 percent of Social Security's revenue. Taxes on Social Security income accounted for the remaining 1.7 percent.

<sup>9</sup>Of those receiving Social Security benefits in 1996, 61.5 percent were retired workers, 24.7 percent were family members and survivors of retired workers, 10.1 percent were disabled workers, and 3.9 percent were family members of disabled workers. (Numbers exceed 100 percent because of rounding.)

<sup>10</sup>When the age for full benefits reaches 67, those retiring at 62 will receive only 70 percent of their full benefits.

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Additionally, benefits are adjusted when recipients aged 62 through 69 have earnings above a certain threshold.<sup>11</sup>

Individuals may be eligible for Social Security benefits on the basis of their spouses' earnings. For example, a married person who does not qualify for Social Security retirement benefits may be eligible for a spousal benefit that is worth up to 50 percent of the primary earner's retirement benefit. Spouses who do qualify for their own Social Security retirement benefit but whose retirement benefit is worth less than 50 percent of the primary earner's benefit are eligible for both their own retirement and certain spousal benefits. Specifically, benefits for such dually eligible individuals are calculated so that their retirement benefit and their spousal benefit could add up to 50 percent of the primary earner's benefit. In practice, spouses receive either the value of their individual benefit or the value equivalent to 50 percent of the primary earner's benefit, whichever is higher.

Under Social Security, retirement benefits can be paid to ex-spouses if they were married to the worker for at least 10 years, are not remarried, and are at least 62 years old. A deceased worker's survivors are eligible for benefits if the survivor is a spouse at least 60 years old or a disabled spouse at least age 50, a parent caring for an eligible child under age 16, an eligible child under the age of 18, or a dependent parent.<sup>12</sup> Ex-spouses are eligible for survivor benefits if they do not remarry before age 60 and meet other qualifications for surviving spouses.

Social Security's Disability Insurance program provides cash benefits to disabled workers and their dependents. To qualify for disability benefits, the worker must be unable to engage in any substantial gainful activity because of a medically determinable physical or mental impairment that is expected to result in death or to last for a continuous period of at least 12 months. Disability benefits are available after a 5-month waiting period beginning at the onset of the disability. To be eligible, the employee, if over age 30, must have worked in Social Security-covered employment for at least 20 of the 40 quarters immediately preceding the disability's onset. If under 31, the disabled worker must have had earnings in at least one-half the quarters worked after he or she reached age 21, with a minimum of six quarters. Disabled worker benefits are automatically

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<sup>11</sup>In 1996, the earnings limit for those under age 65 was \$8,280 a year, and the earnings limit for those aged 65 through 69 was \$12,500 a year. For earnings above these amounts, recipients under age 65 lose \$1 in benefits for every \$2 earned, while recipients aged 65 through 69 lose \$1 for every \$3 earned.

<sup>12</sup>Children aged 18 or older can also qualify for survivor benefits if they became disabled before attaining age 22 or if they are full-time elementary or secondary school students under the age of 19.



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converted to retired worker benefits when the disabled worker reaches the normal retirement age.

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## Coverage of State and Local Government Workers Under Social Security

Workers for state and local governments were originally excluded from Social Security because many were already covered by a state or local government pension plan, and the federal government's constitutional right to impose a tax on state and local governments was uncertain. In the 1950s, the Social Security Act was amended to allow state and local governments the option of covering their employees. Those state and local governments that elected coverage were allowed to opt out later if certain conditions were met. However, the Congress amended the Social Security Act in 1983 to prohibit state and local governments from opting out of the program once they joined.

In 1981, Galveston County officials, citing expected future increases in the Social Security tax rate and wage base, notified the Social Security Administration of the County's intent to withdraw from the program. County employees voted two to one in support of withdrawal. The neighboring counties of Brazoria and Matagorda followed Galveston's lead and also withdrew from Social Security. Rather than simply eliminate the Social Security payroll taxes and the coverage provided, the three Texas counties continued to collect these amounts to create the Alternate Plans—deferred compensation plans that include retirement, disability, and survivor insurance benefits.<sup>13</sup> The Alternate Plans are designed to replicate many of the features found in the Social Security program. Creators of the Alternate Plans, however, wanted to replace Social Security's benefits package with one that offered potentially higher returns, while still providing a high level of benefit security. Today, about 3,000 employees of the three Texas counties are covered by these plans.<sup>14</sup>

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<sup>13</sup>Under deferred compensation plans, income that is invested is not taxed when earned but rather when benefits are paid in retirement, when, it is assumed, the individual's marginal tax rate will usually be lower.

<sup>14</sup>The Alternate Plans are a secondary source of retirement income for the workers in the three Texas counties. Their primary retirement benefit is provided under the Texas County and District Retirement System, another defined contribution plan, which also provides disability and survivor benefits.

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## Important Differences Exist Between Social Security and the Alternate Plans

While Social Security and the Alternate Plans offer a similar package of benefits, there are a number of important differences between the two approaches in the calculation of benefits and scope of coverage. The Alternate Plans' benefits are advance funded, while Social Security's promised benefits are not. As a defined benefit plan, Social Security calculates benefits by formula, whereas the Alternate Plans—defined contribution plans—determine benefits largely by the accumulations in the beneficiary's retirement account. Retirement benefits under the Alternate Plans are thus based on contributions and investment returns and are not adjusted to provide proportionately larger benefits to low-income workers, as is the case with Social Security. Survivor benefits under the Alternate Plans are not lifetime benefits, but a one-time life insurance payment made to the worker's designated beneficiaries, along with the worker's account balance; there are no additional benefits for dependents. Disability benefits under the Alternate Plans are equal to 60 percent of the employee's wage at the time of disability, up to a maximum benefit of \$5,000 a month. Workers are eligible to receive the value of the employee's account at the time he or she becomes disabled. At that time, a new retirement account is established that pays an amount equivalent to the employee and employer's contributions at that time. The Alternate Plans' disability benefits make no allowances for dependents. Social Security's disability benefits are based on a modified benefit formula and include additional benefits for the dependents of disabled workers.

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## Funding and Coverage

As is the case with Social Security, the Alternate Plans are funded by payroll taxes collected from employers and employees. Galveston County employees, for example, contribute 6.13 percent of their gross earnings toward their deferred compensation account. The County contributes 7.785 percent of a worker's gross compensation. Total contributions to the Alternate Plans in Galveston County today are 13.915 percent—somewhat higher than the 12.4 percent contributed by employers and employees to Social Security. A portion of the County's contribution goes to pay for the employee's life and disability insurance premiums (4.178 percent in 1998).

The Alternate Plans were designed to give the employees a guaranteed nominal annual return on their contributions of at least 4 percent. Therefore, the Alternate Plans' managers contracted with an insurance company to purchase an annuity that guaranteed the minimum return. The portfolios holding the plans' contributions are invested only in fixed-rate marketable securities (government bonds, corporate bonds, and preferred

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stocks) and bank certificates of deposit. Rates of return on the portfolios for all of the Alternate Plans have ranged widely over the years but currently are around 6 percent in nominal terms.

Social Security, on the other hand, is mostly a pay-as-you-go program, but when revenues exceed outlays, as they currently do, the surplus is credited to the Trust Funds in the form of nonmarketable Treasury securities. The funds earn interest but, unlike the Alternate Plans, the interest income does not influence the amount of Social Security benefits paid to retirees.

Because virtually all work in the United States is covered by Social Security, benefits are fully portable if the worker changes jobs. If participants in the Alternate Plans leave county employment, they can either take their account balances with them or leave the account, which will continue to earn the portfolio's rate of return. The Alternate Plans are tax-deferred plans, so if the employee elects to cash out the account, he or she must pay income taxes on the proceeds, although there is no penalty involved. All distributions of deferred compensation accounts are taxed at the employee's marginal tax rate at the time of distribution. Social Security income is not taxed as long as an individual's income does not exceed certain thresholds.

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## Retirement Benefits

There are also a number of significant differences in how retirement income benefits are determined under the two approaches. Because Social Security is a defined benefit plan, it calculates benefits by formula. The Alternate Plans are defined contribution plans, so benefits are directly related to the capital accumulations in the beneficiaries' retirement accounts. In addition, retirement benefits are available at younger ages under the Alternate Plans than under Social Security. Moreover, unlike Social Security retirement benefits, which are based on the 35 years of highest covered earnings and weighted to replace a larger share of a low earner's wages, retirement income benefits under the Alternate Plans depend solely on contributions to the individual's account and the earnings on the plans' investments. Also, Social Security provides a separate spousal benefit, and the Alternate Plans do not. (See table 1.)

**Table 1: Principal Differences Between Social Security and the Alternate Plans' Retirement Benefits**

<b>Feature</b>	<b>Social Security</b>	<b>Alternate Plans</b>
Minimum eligibility requirements	Employees must have at least 40 quarters of work in covered employment. At age 65 employees are eligible for full benefits, and at age 62, for reduced benefits. The age for full benefits is scheduled to rise to 67 for those born after 1959.	Employees are immediately vested and may take the balance of their deferred compensation accounts, which are subject to taxation, when leaving county employment. Employees may retire when their combined years of age and service equal 75 or at age 60, with at least 8 years of service.
Benefit determination	The progressive formula used is based on the 35 years of highest indexed earnings. Low-wage workers have a higher proportion of lifetime earnings replaced. Married couples are eligible for a spousal benefit of up to 50 percent of the worker benefit. Dependent children also eligible for benefits.	The value of the employee's account at the time of retirement is based on the contributions of the employee and employer and interest income on the Plan's investments. There are no benefits for dependents. However, married couples may use the value of the account to purchase a joint annuity.
Benefit period	The benefit is a lifetime annuity that includes a benefit for a surviving spouse after the principal annuitant dies.	The retiree has the option of purchasing an individual or a joint and survivor annuity. Alternatively, the retiree may take a lump sum benefit that lasts until the account is depleted.
Cost-of-living adjustments	Adjustments are automatic and tied to the Consumer Price Index.	There are no adjustments, although retirees may purchase a graduated annuity.

The Alternate Plans do not ensure the preservation of retirement benefits. While Social Security provides retirees with a lifetime annuity, the Alternate Plans allow retiring employees to choose between taking a lump sum payout or purchasing an annuity with one of several different payout options. If the worker chooses to receive income from the plan over his or her remaining lifetime or over that of a spouse, he or she must purchase either an individual annuity or a "joint and survivor" annuity.<sup>15</sup> But annuities generally are not inflation-protected as they are under Social Security, so the purchasing power of this retirement income could decline over time. To protect against future inflation, the retiree can arrange to

<sup>15</sup>A joint and survivor annuity pays benefits for the remainder of both the worker and his or her beneficiary's lifetime. There is a probability that payments will need to be made over a longer period, so the monthly income from such an annuity is less than if the annuity were only for the lifetime of the individual worker.

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schedule the annuity payouts so that they are higher in the later years, but this means accepting smaller benefits in the early years. In 1998, the plan for Brazoria County was modified to allow employees to place their share of the contributions in equity funds. It is too soon to judge how this change would affect our comparisons.

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## Survivor Benefits

Unlike Social Security, the Alternate Plans' survivor benefits can be a one-time payment or a series of payments over a finite period of time. Under the Alternate Plans, if an employee dies, the surviving beneficiary (anyone named as beneficiary by the worker) receives the value of the employee's account at the time of death, plus a life insurance benefit. The life insurance benefit for a beneficiary of an employee who dies while under age 70 is 300 percent of the deceased worker's salary, with a minimum benefit of \$50,000 and a maximum of \$150,000. Beneficiaries of employees who die between the ages of 70 and 74 are entitled to insurance proceeds up to 200 percent of the covered employee's annual earnings, with a minimum of \$33,330 and a maximum of \$100,000. Beneficiaries of employees who die at age 75 or older are entitled to 130 percent of the employee's annual earnings, with a minimum of \$21,665 and a maximum of \$65,000.<sup>16</sup> These lump sum payments can be used by the beneficiary to purchase a lifetime annuity. Social Security survivor benefits, on the other hand, are based on the worker's benefit at the time of death, adjusted for the number of beneficiaries. The benefit is paid as an annuity, not a lump sum distribution, and is paid generally to surviving spouses who are 60 years old or older or who have dependent children. (See table 2.)

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<sup>16</sup>These benefits are for full-time workers. For a part-time worker, survivor benefits can range from 65 percent of the worker's annual earnings to 150 percent, and the amount payable can range from a minimum of \$10,832 to a maximum of \$75,000. Survivor benefits for workers differ slightly for employees of Matagorda County.

**Table 2: Principal Differences Between Social Security and the Alternate Plans' Survivor Benefits**

<b>Feature</b>	<b>Social Security</b>	<b>Alternate Plans<sup>a</sup></b>
Eligibility	A survivor is a widow(er) at least 60 years old or a parent caring for an eligible child under age 16 or a dependent child under 18. Surviving disabled children, widows, and widowers are also eligible.	A survivor is any person named as a beneficiary.
Method of payment	A beneficiary receives a lifetime annuity after age 60 or until children reach age 16.	The beneficiary has the option of taking a lump sum distribution or purchasing an annuity.
Benefit calculation	The benefit is based on the worker's benefit at the time of death and adjusted for the number of beneficiaries.	Survivors of workers who die before reaching age 70 receive three times the deceased worker's annual salary with a \$150,000 maximum, as well as the value of the individual account at time of death.

<sup>a</sup>Full-time employees who have 8 years of service and retire at age 65 or older will also receive a "retired life reserve" benefit, which is a paid-up death benefit worth \$50,000.

## Disability Benefits

Under the Alternate Plans, workers are considered to be disabled if they cannot work in their occupation for at least 24 months. Social Security, in contrast, requires that the individual not be able to perform any substantial gainful activity because of a physical or mental impairment for at least 12 months to qualify for benefits. After an initial 180-day waiting period, the Alternate Plans' disability insurance pays 60 percent of an individual's base salary until age 65 or until the individual returns to work. The amounts provided by Social Security's disability insurance vary, but they follow the same formula as retirement benefits. Of the first \$505 of monthly earnings, 90 percent is replaced, but the replacement rate falls off rapidly after that. Only 32 percent of monthly earnings between \$505 and \$3,043 are replaced, and only 15 percent of earnings above \$3,043 are replaced. Few disabled workers who do not have dependents, therefore, would receive as much as 60 percent of their wage or salary. A totally disabled employee can receive a minimum monthly benefit payment of \$100 under the Alternate Plans, up to a maximum benefit of \$5,000 a month. At the time the worker ceases employment because of a disability, he or she can purchase an annuity with the account balance. A separate account is then set up by the disability insurance provider, and the insurer pays an amount into that account equivalent to the employer and

employee contributions at the time the employee stopped working. Payments are made until the employee reaches age 65.<sup>17</sup> Unlike Social Security, the Alternate Plans provide no dependent benefits. (See table 3.)

**Table 3: Principal Differences Between Social Security and the Alternate Plans' Disability Benefits**

<b>Feature</b>	<b>Social Security</b>	<b>Alternate Plans</b>
Eligibility	If over 30, the beneficiary must have been in covered work 20 of the last 40 quarters; if 30 or younger, the beneficiary must have been in covered work at least half of the quarters since age 21, with a minimum of 6 quarters.	Workers are immediately qualified under long-term disability and term life insurance policies and the group annuity contract disability rider.
Definition of disability	Person must be unable to perform substantial gainful work because of a physical or mental impairment expected to last at least 12 months.	Person must be unable to perform his or her usual occupation for 24 months because of a physical or mental impairment. Thereafter, the person must be unable to work in any occupation for which he or she is fit or becomes reasonably fit by education, training, or experience. <sup>a</sup>
Waiting period	5 full calendar months	180 days
Calculation of benefits	The benefit is determined using a modified retirement benefit formula, and additional benefits are available for eligible dependents.	The benefit is 60 percent of the worker's salary at the time of disability, up to \$5,000 per month, plus the value of the individual account at the time of disability. In addition, the insurer makes monthly deposits into a separate retirement account equal to the worker and county's predisability contributions.

<sup>a</sup>Monthly income benefits for mental impairments may be limited to a total of 12 months.

<sup>17</sup>A provision of the Alternate Plans requires the insurance company to make monthly contributions to a new retirement account after the worker becomes disabled. The fixed contribution amount is based on an average of the employee and employer contributions during the 18-month period before the onset of the disability. In addition, counties pay life insurance premiums for workers who are totally disabled before the age of 59.

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## Benefits Under the Two Plans Vary With Individual Circumstances

Our comparisons of retirement, survivor, and disability benefits under the two approaches show that outcomes generally depend on individual circumstances and conditions. For example, certain features of Social Security, such as the tilt in the benefit formula and the allowance for spousal benefits, are important factors in providing larger benefits than the Alternate Plans for low-wage earners, single-earner couples, and those with dependents. The Social Security benefit formula replaces a larger share of the wages of a low earner than of a high earner. As a result, low-wage earners with relatively shorter careers in the three Texas counties would have received larger initial benefits from Social Security than from the Alternate Plans. Social Security benefits also are adjusted for inflation so their purchasing power is stable over time. Thus, the longer the period of retirement, the more likely it is that Social Security will provide higher monthly benefits than a fixed annuity purchased with the proceeds from the Alternate Plans. The Social Security spousal benefit also can significantly raise the retirement incomes of couples when one partner had little or no earnings. Under the Alternate Plans, workers have assets that they may pass on to designated beneficiaries. Conversely, a worker has no assets from Social Security to bequeath to his or her heirs. Finally, the fact that Social Security takes into account the number of dependents in calculating survivor and disability benefits means that individual family circumstances will be important in determining whether Social Security or the Alternate Plans provides larger benefits.

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## Social Security Provides Higher Retirement Benefits for Most Low Wage Earners

Our simulations comparing the retirement benefits for employees of the three Texas counties show that the benefits from Social Security and the Alternate Plans depend on the employee's earnings, the number of years in the program, the presence of a spouse, the length of time in retirement, and the year the worker retires. In general, low-wage workers and, to a lesser extent, median-wage earners would fare better under Social Security. High-wage earners can generally expect to do better under the Alternate Plans, although if spousal benefits are included, even high-wage workers could eventually receive higher retirement income benefits from Social Security.

Low-wage workers retiring at 65 today after a 35-year career in county employment would receive a higher initial monthly benefit under Social Security. If the family is eligible for a Social Security spousal benefit or if a joint and survivor annuity is elected under the Alternate Plans, the gap increases. Social Security provides a spousal benefit of up to 50 percent of a worker's benefit (for a spouse with a record of little or no earnings of his



or her own), while the Alternate Plans' spousal coverage through the purchase of a joint and survivor annuity actually reduces the couple's monthly income. Low-wage earners with 35-year careers retiring in 2016 are projected to receive roughly the same individual initial monthly benefits under Social Security and the Alternate Plans. The Alternate Plans' benefits are relatively better for those retiring in the future than for those retiring today because earnings on the plans' investments were relatively low in the '60s and early '70s as compared with the '90s. (See table 4.)

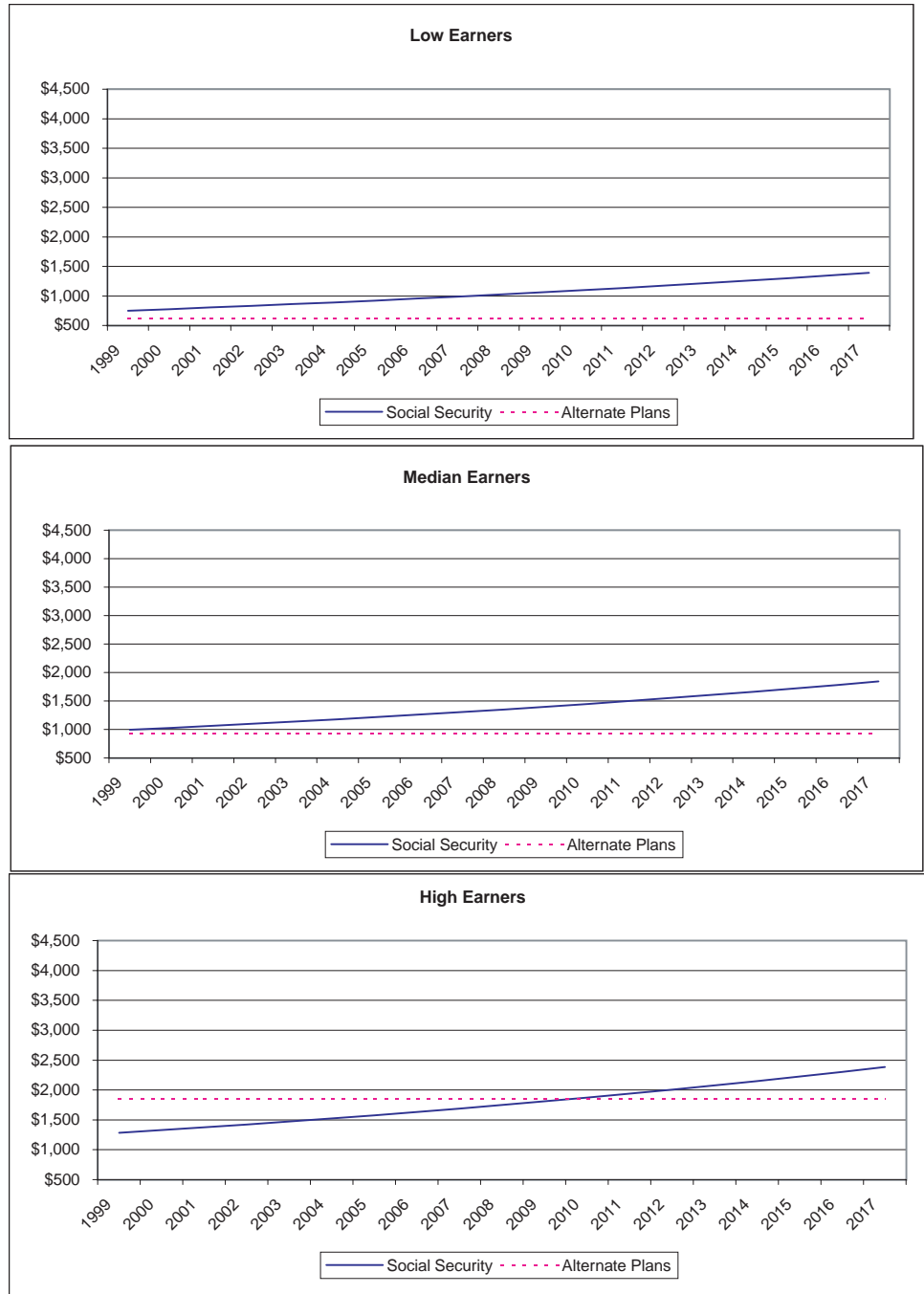
**Table 4: Initial Monthly Retirement Benefits at the Social Security Normal Retirement Age Under Social Security and the Alternate Plans, 35-Year Work History, 1998 Dollars**

Earner	Social Security individual benefit	Social Security with spousal benefit	Alternate Plan individual annuity	Alternate Plan joint and survivor annuity
<b>1964-1998</b>				
Low	\$750	\$1,125	\$617	\$542
Median	992	1,488	923	810
High	1,283	1,984	1,848	1,621
<b>1981-2016<sup>a</sup></b>				
Low	947	1,420	946	830
Median	1,260	1,891	1,414	1,241
High	1,737	2,605	2,771	2,431

<sup>a</sup>Period is 36 years, reflecting the increase to 66 in the Social Security normal retirement age by 2024.

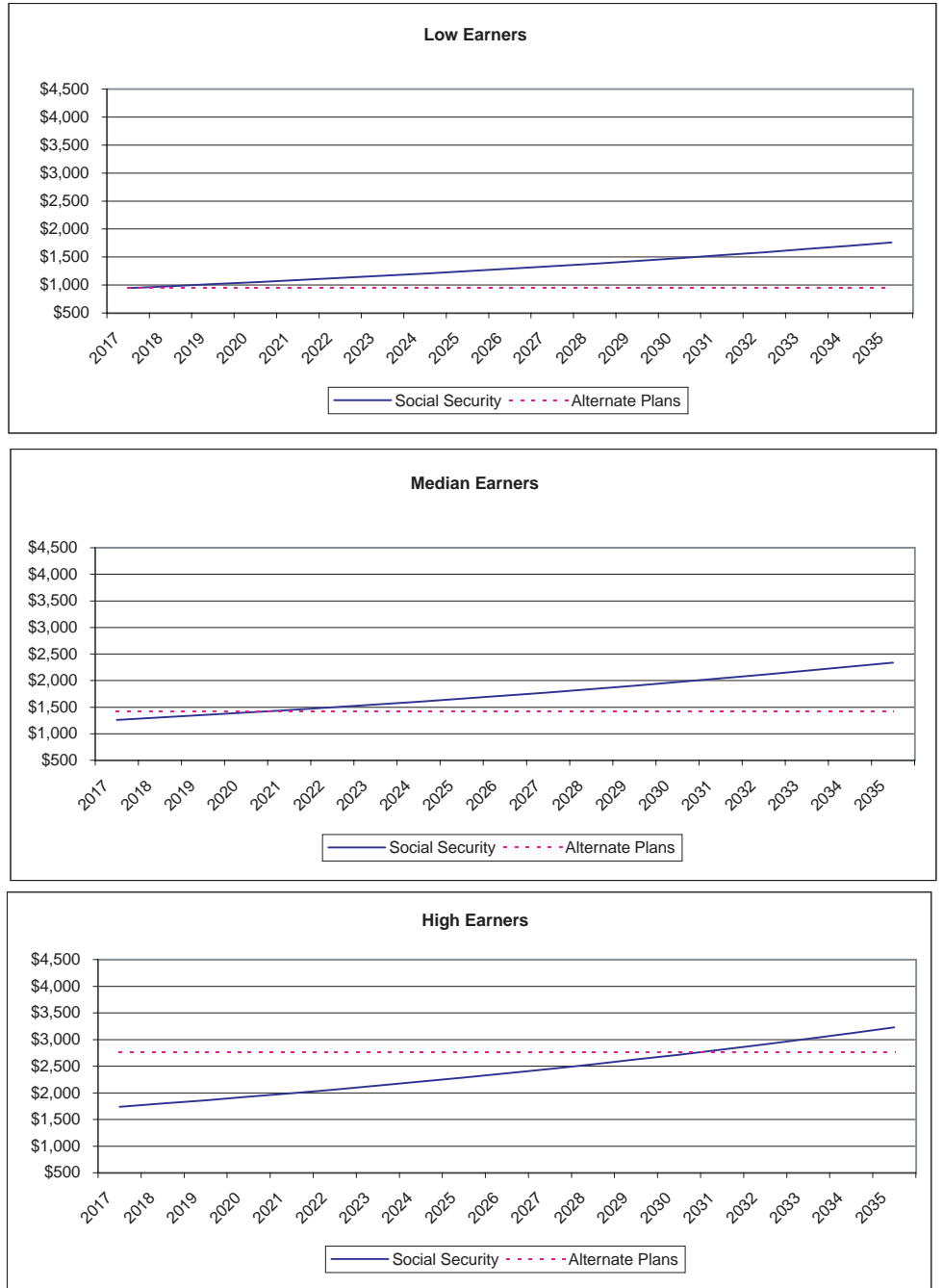
Nevertheless, because Social Security benefits are indexed for inflation, they would grow larger over time and would eventually exceed the retirement benefits from the Alternate Plans, as the latter remained constant. (See figs. 1 and 2).

**Figure 1: Influence of Indexation on the Relationship Between the Value of Social Security and Alternate Plan Monthly Retirement Benefits for Workers Who Begin Receiving Benefits in 1999 After a 35-Year Career, 1999-2017**



Note: An inflation rate of 3.5 percent is assumed.

**Figure 2: Influence of Indexation on the Relationship Between the Value of Social Security and Alternate Plan Monthly Retirement Benefits for Workers Who Begin Receiving Benefits in 2017 After a 35-Year Career, 2017-2035**



Note: An inflation rate of 3.5 percent is assumed.

The picture for low-wage workers changes somewhat if a 45-year career is assumed. Because all contributions and the investment earnings on them determine the size of an Alternate Plan account, more years of earnings in jobs covered by Alternate Plans lead to higher account balances and, therefore, higher monthly benefits from the annuity. Social Security benefits, by contrast, are based on a formula using the 35 years of highest earnings from all jobs. With the longer work history, initial individual benefits for low-wage workers would be higher under the Alternate Plans than under Social Security, although, if spousal benefits and joint and survivor annuities were considered, Social Security benefits would again be larger. (See table 5.)

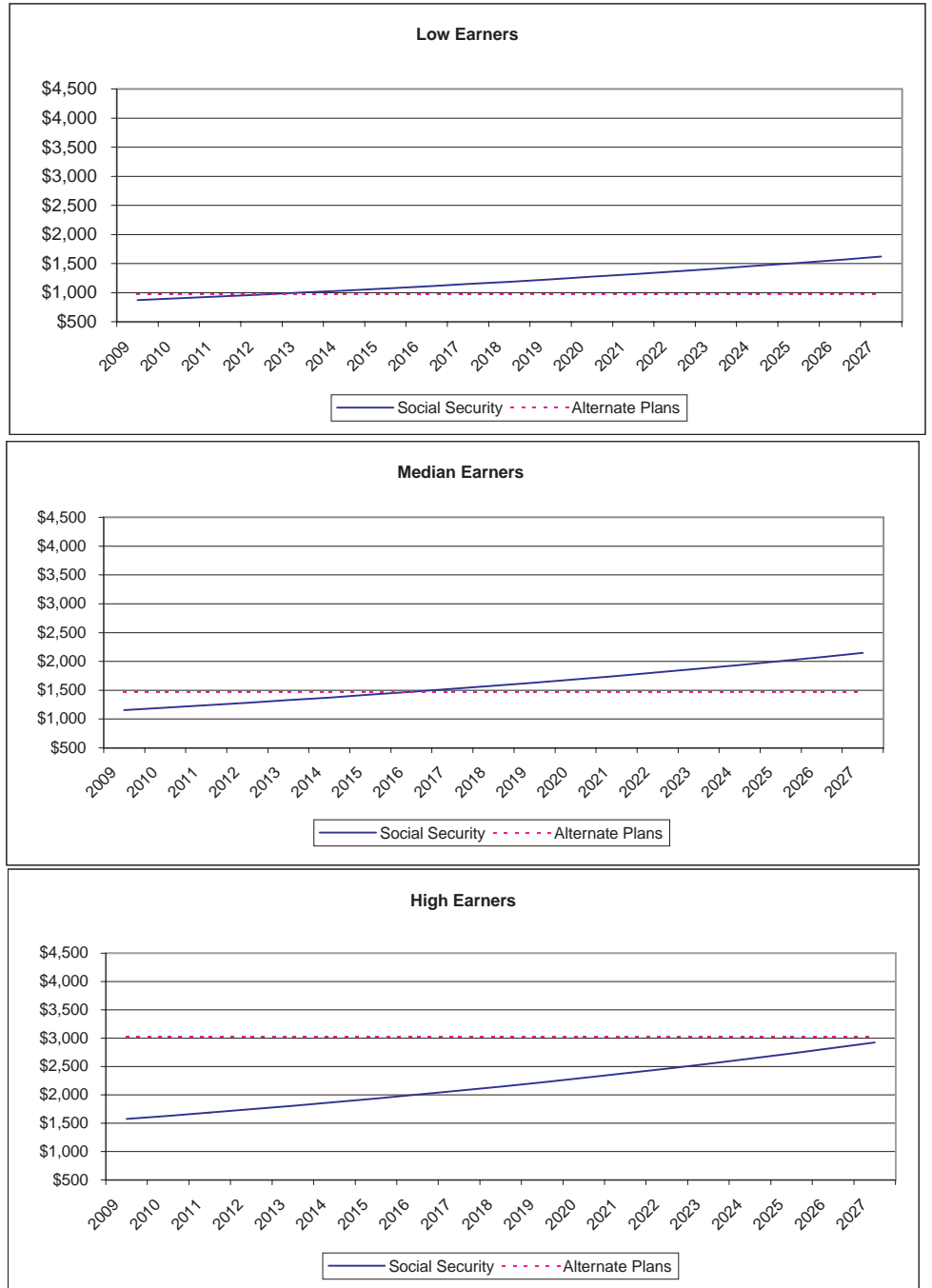
**Table 5: Initial Monthly Retirement Benefits at the Social Security Normal Retirement Age Under Social Security and the Alternate Plans, 45-Year Work History, 1998 Dollars**

<b>Earner</b>	<b>Social Security individual benefit</b>	<b>Social Security with spousal benefit</b>	<b>Alternate Plan individual annuity</b>	<b>Alternate Plan joint and survivor annuity</b>
<b>1964-2008</b>				
Low	\$872	\$1,308	\$982	\$861
Median	1,157	1,735	1,469	1,289
High	1,575	2,363	3,024	2,653
<b>1981-2026<sup>a</sup></b>				
Low	1,028	1,542	1,366	1,198
Median	1,367	2,050	2,024	1,775
High	1,898	2,847	4,089	3,587

<sup>a</sup>Period is 36 years, reflecting the increase to 66 in the Social Security normal retirement age by 2024.

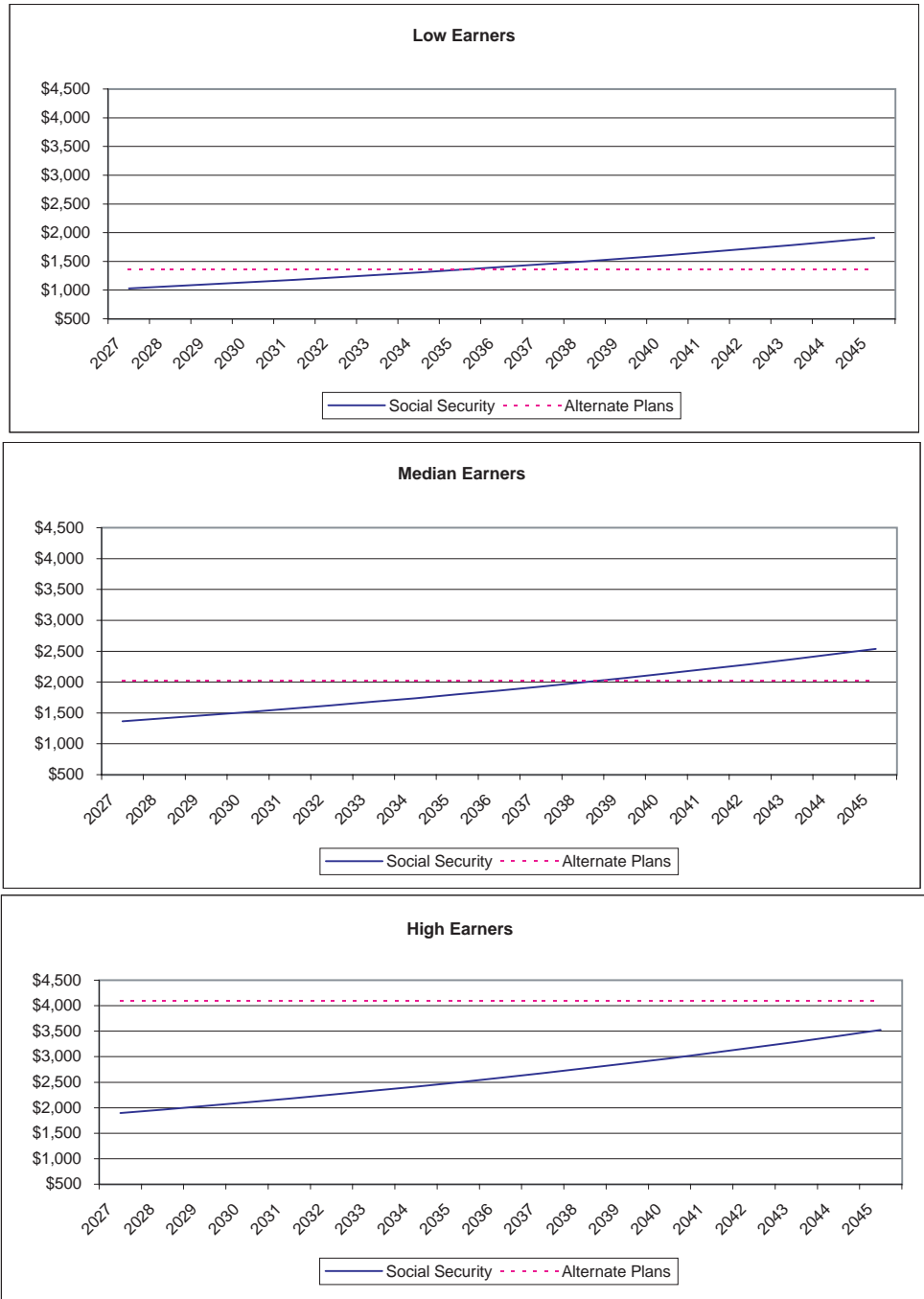
Even the higher individual benefits would not be permanent, as indexation would ultimately close the gap. For low-wage workers retiring in 2008, however, the gap would be closed in 4 years, while for those retiring in 2026, the gap would be closed in 9 years. Thereafter, Social Security monthly benefits would be higher. (See figs. 3 and 4.)

**Figure 3: Influence of Indexation on the Relationship Between the Value of Social Security and Alternate Plan Monthly Retirement Benefits for Workers Who Begin Receiving Benefits in 2009 After a 45-Year Career, 2009-2027**



Note: An inflation rate of 3.5 percent is assumed.

**Figure 4: Influence of Indexation on the Relationship Between the Value of Social Security and Alternate Plan Monthly Retirement Benefits for Workers Who Begin Receiving Benefits in 2027 After a 45-Year Career, 2027-2045**



Note: An inflation rate of 3.5 percent is assumed.

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For median-wage earners, Social Security initial benefits are higher when spousal benefits are included. Individual benefits—even when they start out lower—eventually catch up to the Alternate Plans’ benefits, but it does take longer for median-wage earners than for low-wage earners. After 7 years of retirement Social Security benefits would catch up to Alternate Plan benefits for median-wage earners retiring in 2008 after a 45-year career with the county assuming Social Security was indexed at 3.5 percent. For those with 45-year careers retiring in 2026, it would take about 13 years for Social Security individual retirement benefits to overtake those of the Alternate Plans. High-income workers, in general, would probably do better under the Alternate Plans, although consideration of spousal benefits or coverage also could lead to higher benefits under Social Security through indexation of benefits—at least for those with 35-year careers.

We used 35- and 45-year work histories to approximate working careers. We recognize that many people have shorter or less continuous careers. For example, in 1993 the average 62-year-old woman spent only 25 years in the workforce, compared with 36 years for the average 62-year-old man. Both men and women leave the workforce temporarily for a variety of reasons, such as to return to school or to raise children. Fewer years and less continuity would influence the pattern of benefits under both plans. We simulated outcomes for workers who left the labor force for either 5 or 10 years early in their careers (at age 25). Under both Social Security and the Alternate Plans, retirement benefits were reduced. However, the reduction was larger under the Alternate Plans because the size of the accounts at retirement is sensitive to when the contributions are made. Monies not contributed early in the worker’s career lose the benefits from compounding, leading to a significantly lower account balance at retirement. Social Security benefits are also reduced, but because they are based on the earners’ 35 years of highest income and are not affected by compounding, the impact on retirement income is less.

This simulation shows that the relative “superiority” of the two approaches depends on individual circumstances. These simulations are not meant to portray a “typical” worker, but rather to demonstrate the importance of particular factors in determining relative benefits from the two approaches. For example, currently only about 7 percent of Social Security benefits are spousal benefits, and that percentage is expected to decline over time as more women become eligible for benefits on the basis of their own earnings. It is also true that Social Security benefits are reduced on the death of the retired worker, while the joint and survivor

annuity under the Alternate Plans could be structured to provide constant benefits. Nonetheless, for some county workers Social Security retirement benefits would probably have exceeded those available from the Alternate Plans.

**Presence of Dependents Affects Comparisons of Survivor Benefits**

With respect to survivor benefits, our simulations indicated that, in cases in which the surviving spouse was left with two dependent children under age 16, benefits would usually be higher under Social Security because Social Security takes the number of dependents into account when computing the total family monthly benefit. For example, if a low-wage worker died at age 45, our simulations indicate a surviving spouse with two dependent children would receive \$1,602 per month, while under the Alternate Plans, the family would receive only \$831 per month on the basis of annuitizing lump sum benefits. (See table 6.)

**Table 6: Initial Monthly Survivor Benefits Under Social Security and the Alternate Plans for a Worker Beginning a Career at Age 21, in 1981 in 1998 Dollars**

Earner	Worker's age at time of death								
	21 <sup>a</sup>	25	30	35	40	45	50	55	60 <sup>b</sup>
<b>Initial Social Security benefits with two dependents</b>									
Low	0	\$1,271	\$1,366	\$1,408	\$1,550	\$1,602	\$1,664	\$1,720	\$1,013
Median	0	1,686	1,818	1,877	2,069	2,138	2,219	2,292	1,348
High	0	2,373	2,535	2,589	2,832	2,922	3,043	3,160	1,869
<b>Alternate Plan survivor benefits<sup>c</sup></b>									
Low	\$477	559	635	582	680	831	1,011	1,225	1,494
Median	713	837	948	869	1,017	1,243	1,512	1,831	2,219
High	1,427	1,628	1,830	1,697	2,036	2,490	3,029	3,667	4,471

<sup>a</sup>Assumes worker dies 12 months after beginning first job for pay.

<sup>b</sup>Benefits at age 60 assume no children under age 16.

<sup>c</sup>Assumes life insurance and individual account proceeds are used to purchase individual life annuities.

On the other hand, if there were no dependent children, the surviving spouse would not be eligible for survivor benefits under Social Security until age 60, whereas under the Alternate Plans, the surviving spouse would immediately be eligible to receive three times the worker's salary plus any dollar amounts in the worker's retirement income account. The Alternate Plans' survivor benefits would also be higher in cases in which the worker died late in his or her career. The survivor of a low-wage worker who died at age 60 with no dependents would receive \$1,013 per



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month under Social Security, whereas the survivor could receive a lifetime monthly benefit of \$1,494 under the Alternate Plans if he or she chose to use the proceeds to buy an annuity. Again, in about a dozen years, increases in benefits due to cost-of-living adjustments would lead to larger monthly benefits under Social Security than under the Alternate Plans. In those cases in which the worker died before working enough quarters to qualify for Social Security benefits, the surviving spouse would not be eligible for survivor benefits. Under the Alternate Plans, however, the survivor is immediately eligible to receive three times the employee's wage and any account accumulations regardless of how long the employee worked.

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### Alternate Plans Provide Higher Disability Benefits

Because the Alternate Plans replace 60 percent of a disabled worker's wage or salary and because disabled workers can also annuitize their account balances at the time of disability, the Alternate Plans often provide substantially better disability benefits than Social Security. This is especially true when no dependents are involved. Indexation of Social Security benefits for inflation can eventually close the gap, but it could take over 20 years to do so. For example, a 26-year-old low-income worker with no dependents would receive \$711 monthly under Social Security, but \$1,086 from the Alternate Plans. It would take a dozen years for indexation (at 3.5 percent per year) to raise the Social Security initial benefit to that received under the Alternate Plans. For a high-income 26-year-old, it would take more than 25 years to close the gap.

Although the Alternate Plans still provide a larger initial monthly benefit in all the cases we simulated, the differences were narrowed when dependents were involved. Nevertheless, for high earners, even those with dependents, the Alternate Plans provided larger benefits, and indexation would not close the gap for 15 to 20 years. (See table 7.)

**Table 7: Disability Benefits for 21-Year-Old Workers Entering the Labor Force in 1981 Under Social Security and the Alternate Plans, in 1998 Dollars**

Benefit type	Worker's age at time of disability								
	21	25	30	35	40	45	50	55	60
<b>Low earner</b>									
Social Security	0	\$711	\$752	\$788	\$877	\$912	\$951	\$983	\$1,013
Social Security with dependent	0	1,067	1,128	1,183	1,316	1,367	1,426	1,475	1,520
Alternate Plans	\$829	1,086	1,242	1,346	1,473	1,620	1,771	1,926	2,106
<b>Median earner</b>									
Social Security	0	941	996	1,048	1,169	1,216	1,268	1,310	1,348
Social Security with dependent	0	1,412	1,494	1,573	1,753	1,824	1,902	1,965	2,022
Alternate Plans	1,237	1,625	1,856	2,012	2,201	2,421	2,648	2,879	3,147
<b>High earner</b>									
Social Security	0	1,335	1,409	1,459	1,608	1,666	1,739	1,806	1,869
Social Security with dependent	0	2,003	2,113	2,189	2,412	2,499	2,608	2,708	2,804
Alternate Plans	2,479	3,253	3,718	4,030	4,409	4,850	5,302	5,766	6,304

The type of disability a worker has also influences how he or she fares under the two systems. Benefits for workers with “mental or nervous disorders” are limited to 12 months under the Alternate Plans. Workers with such disabilities would receive higher benefits under Social Security if their condition lasted over 12 months because Social Security does not limit benefits on the basis of impairment.<sup>18</sup>

## Observations

Given the inherent differences between the two systems, our results suggest that benefits primarily depend on individual circumstances. Social Security was designed, in part, to protect low earners and their families, and indeed low-wage earners generally would do better under Social

<sup>18</sup>In 1997, over 30 percent of disabled workers receiving Social Security benefits had some sort of mental disorder, including mental retardation.

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Security. Moreover, while individual circumstances play a role, particular features of Social Security, such as the spousal benefit and automatic cost-of-living adjustments, often result in larger Social Security benefits to recipients than the benefits available under the Alternate Plans. In addition, when dependent children are involved, survivor benefits can be higher under Social Security. Because the Alternate Plans do not tilt benefits in favor of low-wage earners, they can provide better benefits for high-wage workers. In terms of disability benefits, the Alternate Plans generally provide higher initial monthly benefits, especially for high-income workers.

It is important to keep the results of our analysis in perspective. Our results reflect the specific features and conditions of the Alternate Plans and should not be construed as an analysis of the potential for individual accounts in general. For example, in an effort to mirror the “safety” of Social Security, the Alternate Plans have followed a conservative investment strategy wherein investments in common stocks are avoided. As a result, the Alternate Plans’ investments have had low returns—especially relative to those from the equities markets. Also, our projections of future Social Security benefits assume the benefits available today will be available in the future. Social Security benefits in the future could certainly be less than those we simulate depending on the reforms that are implemented to address the system’s long-term shortfall. Finally, many of the proposals for individual accounts do not call for the complete replacement of Social Security but rather provide for a two-tier system that combines the safety net, social insurance aspect of Social Security with the promise of higher returns from individual accounts.

Overall, our analysis suggests that several of Social Security’s features make an important difference to the relatively less well-off, to single-earner married couples, and to families with dependent children. How these features are treated in any changes to Social Security could have important implications for these groups.

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## Agency and Other Comments and Our Response

We shared a draft of this report with Social Security personnel familiar with the program’s benefit structure, outside retirement income specialists, and individuals responsible for administering the Alternate Plans. We received technical comments from several reviewers and incorporated the comments as appropriate. Administrators for the Alternate Plans also provided us with updated figures, which we used in calculating benefits. In addition, these administrators pointed out that we

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should use the annuitized values of the accounts at the time of the disability to calculate the Alternate Plans disability benefits. We incorporated those changes.

The administrators also noted that they were in the process of introducing a number of changes to the Alternate Plans that would improve benefits. They told us that they were introducing an annuity that provided for a 2- to 3-percent annual adjustment to protect against inflation. The administrators also said they were in the process of adding new benefits for surviving spouses and dependent children. The spouse would receive a lifetime benefit of 30 percent of the deceased worker's income, and dependent children would receive an additional 30 percent. How much these benefits would cost had not been determined, and it was not clear how they would affect our comparisons.

Finally, the Alternate Plans administrators told us that, in their view, we should have used the average returns that the plans' investments made in the past 17 years in projecting future returns. We disagree. Returns on fixed income portfolios have declined significantly since the 1980s, and forecasts of future returns on the assets in fixed income portfolios do not envision a return to those higher levels. The projections we employed were for an asset whose performance has closely mirrored the performance of the Alternate Plans' investments. We believe that is a more accurate estimate.

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We are providing copies of this report to the Commissioner of Social Security, officials of organizations and state and local governments that we worked with, and other interested congressional parties. Copies will also be made available to others upon request. Please contact me at (202) 512-7215 if you have any questions about this report. Other major contributors to this report are listed in appendix III.



Barbara D. Bovbjerg  
Associate Director, Income Security Issues

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**Abbreviations**

GDP            gross domestic product

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# Scope and Methodology

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In order to compare potential retirement, survivor, and disability benefits under the Alternate Plans and Social Security, we simulated the work histories of county employees who had relatively low, median, or high earnings. We classified employees as low earners if they were at the 10th percentile of the wage distribution and as high earners if they were at the 90th percentile. Median earners are in the middle of the distribution (half earn more and half earn less). We used the 1998 wage distribution of Galveston County employees nearing retirement to determine low, median, and high earnings: \$17,124, \$25,596, and \$51,263, respectively. Nationally, low, median, and high earnings were \$13,000, \$31,200 and \$75,000. Low earners in Galveston County, therefore, had wages nearly one-third higher than those in the 10th percentile nationally, but the wages of high earners in Galveston were about 68 percent of those of the 90th percentile earners nationally; median wages of the Galveston County workers were 82 percent of the national median.

In order to calculate Alternate Plans and Social Security benefits for our illustrative employees, we created earnings and contributions histories for these workers. We used a model of earnings growth over workers' careers to reflect the fact that wage income does not grow linearly over a working lifetime, but rather that wage growth resembles an "s"-shaped curve. This curve reflects more rapid growth during the years when an individual's productivity grows fastest and slower wage increases as the worker nears the end of his or her career. We used the earnings for workers nearing retirement in 1998 to project the nominal wages of such workers back to the beginning of their careers. We also used the model to project earnings experiences for those retiring in the future. We projected earnings at age 65 for workers retiring in the future in the three income classes by taking the wage distribution for 1998 earnings and inflating the earnings by nominal wage growth to the future retirement years, using the Social Security Trustees' Intermediate Cost Assumptions (see app. II). We applied the model to create the wage histories. The coefficients used to create the earnings histories were developed and reported in T. Hungerford and G. Solon, "Sheepskin Effects in the Returns to Education," *Review of Economics and Statistics*, 69(1), 1987. While actual earnings histories may have greater diversity over time than the wages produced by this model, this methodology allowed us to provide illustrative earnings patterns.

To compute expected retirement, survivor, and disability benefits under the Alternate Plans, we calculated the expected balances in the accounts at the time of retirement, death, or onset of disability. Account balances



depend on earnings, contributions, and investment income. We used the actual contribution rates that were in effect when the Alternate Plans began (Social Security payroll tax rates at the time) and adjusted the rates as they changed over time. Similarly, in projecting what the contributions would have been if the Alternate Plans had been in effect before 1981, we used the corresponding Social Security payroll tax rate. The contribution rates for the three counties differ only slightly, so we used the Galveston County contribution rates in generating our estimates. For future years, we assumed that current contribution rates would remain in effect.

To arrive at the investment income, we obtained data on the interest rates earned on assets purchased by the Alternate Plans since 1981. To calculate the potential account balances for workers who entered county employment before 1981 or for future periods, we had to make some extrapolations. For the period 1963 to 1980, the funds' portfolio manager was able to provide us with the investment income on similar types of investment vehicles offered by the firm. In projecting future earnings, we found that Social Security special Treasury securities were another fixed income asset whose earnings closely paralleled the experience of the Alternate Plans' portfolios. The special Treasury securities issued to the Social Security Trust Funds closely mirrored the Alternate Plans' investment earnings history. We used Intermediate Assumptions' interest rate forecasts for the special Treasury securities developed for the Social Security Trustees 1998 Annual Report. To calculate Social Security benefits, we employed the Social Security Benefit Estimate Program for Personal Computers, known as the ANYPIA program, which is available on-line at [www.ssa.gov](http://www.ssa.gov).

Finally, to calculate retirement and survivor benefits under the Alternate Plans, we calculated the monthly benefits that retirees or survivors would receive if they took their lump sum distributions and purchased either an individual life or a joint and survivor annuity. To estimate the monthly benefits, we obtained the annuity factors from the Alternate Plans' insurance and annuity providers. We also received annuity factors from the Social Security Administration to calculate the lifetime monthly retirement benefits.

Our simulations made a number of simplifying assumptions. We do not represent the simulations we undertook to be "typical," but rather as illustrative of how workers and their families might fare under a range of circumstances. We assumed that individuals work continuously at one job for their entire working lives. We simulated 35-year and 45-year working

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**Appendix I**  
**Scope and Methodology**

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lives and assumed that people retire at the normal Social Security retirement age. In reality, many individuals have very discontinuous work histories, work at many different places, and retire before the normal retirement age. Many people elect to take Social Security benefits when they first become eligible at age 62. We also assumed that Alternate Plan beneficiaries annuitized their lump sums, although currently very few elect life annuities. We made this assumption in order to put the two systems on an equal footing for benefit comparability.

# Social Security Trustees' Intermediate Cost Assumptions

Calendar year	Average annual percentage change						
	Real GDP <sup>a</sup>	Average annual wage in covered employment	Consumer price index <sup>b</sup>	Real-wage differential <sup>c</sup>	Average annual interest rate <sup>d</sup>	Average annual unemployment rate <sup>e</sup>	Average annual percentage in labor force <sup>f</sup>
1998	2.5	3.3	1.4	1.9	5.8	4.8	1.0
1999	2.0	3.4	2.4	1.0	5.4	5.0	0.9
2000	2.0	3.8	2.6	1.3	5.6	5.3	1.0
2001	2.0	3.6	2.7	0.9	5.9	5.5	1.0
2002	1.9	3.7	2.8	0.9	6.0	5.7	0.9
2003	1.9	4.1	3.1	1.0	6.1	5.8	0.7
2004	1.9	4.4	3.2	1.2	6.2	5.9	0.7
2005	1.9	4.4	3.4	1.0	6.3	5.9	0.8
2006	2.0	4.4	3.5	0.9	6.4	6.0	0.9
2007	2.0	4.4	3.5	0.9	6.3	6.0	0.9
2008	1.8	4.5	3.5	1.0	6.3	6.0	0.6
2009	1.8	4.5	3.5	1.0	6.3	6.0	0.6
2010	1.8	4.5	3.5	1.0	6.3	6.0	0.6
2011	1.7	4.5	3.5	1.0	6.3	6.0	0.6
2012	1.6	4.5	3.5	1.0	6.3	6.0	0.4
2013	1.5	4.4	3.5	0.9	6.3	6.0	0.3
2014	1.5	4.4	3.5	0.9	6.3	6.0	0.3
2015	1.4	4.4	3.5	0.9	6.3	6.0	0.3
2016	1.4	4.4	3.5	0.9	6.3	6.0	0.3
2017	1.4	4.4	3.5	0.9	6.3	6.0	0.2
2018	1.3	4.4	3.5	0.9	6.3	6.0	0.2
2019	1.3	4.4	3.5	0.9	6.3	6.0	0.2
2020	1.3	4.4	3.5	0.9	6.3	6.0	0.1
2021	1.3	4.4	3.5	0.9	6.3	6.0	0.1
2022	1.2	4.4	3.5	0.9	6.3	6.0	0.1
2023	1.2	4.4	3.5	0.9	6.3	6.0	0
2024	1.2	4.4	3.5	0.9	6.3	6.0	0.1
2025	1.2	4.4	3.5	0.9	6.3	6.0	0.1
2026	1.2	4.4	3.5	0.9	6.3	6.0	0.1
2027	1.3	4.4	3.5	0.9	6.3	6.0	0.1
2028	1.3	4.4	3.5	0.9	6.3	6.0	0.2
2029	1.4	4.4	3.5	0.9	6.3	6.0	0.2
2030	1.4	4.4	3.5	0.9	6.3	6.0	0.2
2031	1.4	4.4	3.5	0.9	6.3	6.0	0.3
2032	1.4	4.4	3.5	0.9	6.3	6.0	0.3

(continued)

**Appendix II  
Social Security Trustees' Intermediate Cost  
Assumptions**

Calendar year	Average annual percentage change						Average annual unemployment rate <sup>e</sup>	Average annual percentage in labor force <sup>f</sup>
	Real GDP <sup>a</sup>	Average annual wage in covered employment	Consumer price index <sup>b</sup>	Real-wage differential <sup>c</sup>	Average annual interest rate <sup>d</sup>			
2033	1.5	4.4	3.5	0.9	6.3	6.0	0.3	
2034	1.4	4.4	3.5	0.9	6.3	6.0	0.3	
2035	1.4	4.4	3.5	0.9	6.3	6.0	0.2	
2036	1.4	4.4	3.5	0.9	6.3	6.0	0.2	
2037	1.4	4.4	3.5	0.9	6.3	6.0	0.3	
2038	1.4	4.4	3.5	0.9	6.3	6.0	0.3	
2039	1.4	4.4	3.5	0.9	6.3	6.0	0.3	
2040	1.4	4.4	3.5	0.9	6.3	6.0	0.2	
2041	1.4	4.4	3.5	0.9	6.3	6.0	0.2	
2042	1.3	4.4	3.5	0.9	6.3	6.0	0.2	
2043	1.3	4.4	3.5	0.9	6.3	6.0	0.2	
2044	1.3	4.4	3.5	0.9	6.3	6.0	0.2	
2045	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2046	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2047	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2048	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2049	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2050	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2051	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2052	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2053	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2054	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2055	1.2	4.4	3.5	0.9	6.3	6.0	0.1	
2056	1.2	4.4	3.5	0.9	6.3	6.0	0.1	
2057	1.2	4.4	3.5	0.9	6.3	6.0	0.1	
2058	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2059	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2060	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2061	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2062	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2063	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2064	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2065	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2066	1.3	4.4	3.5	0.9	6.3	6.0	0.1	
2067	1.3	4.4	3.5	0.9	6.3	6.0	0.1	

(continued)

**Appendix II  
Social Security Trustees' Intermediate Cost  
Assumptions**

Calendar year	Average annual percentage change						
	Real GDP <sup>a</sup>	Average annual wage in covered employment	Consumer price index <sup>b</sup>	Real-wage differential <sup>c</sup>	Average annual interest rate <sup>d</sup>	Average annual unemployment rate <sup>e</sup>	Average annual percentage in labor force <sup>f</sup>
2068	1.3	4.4	3.5	0.9	6.3	6.0	0.1
2069	1.3	4.4	3.5	0.9	6.3	6.0	0.1
2070	1.3	4.4	3.5	0.9	6.3	6.0	0.1
2071	1.3	4.4	3.5	0.9	6.3	6.0	0.1
2072	1.2	4.4	3.5	0.9	6.3	6.0	0.1
2073	1.2	4.4	3.5	0.9	6.3	6.0	0.1
2074	1.2	4.4	3.5	0.9	6.3	6.0	0.1
2075	1.2	4.4	3.5	0.9	6.3	6.0	0.1

<sup>a</sup>The real gross domestic product (GDP) is the value of total output of goods and services expressed in 1992 dollars.

<sup>b</sup>The Consumer Price Index is the annual average value for the calendar year of the Consumer Price Index for Urban Wage Earners and Clerical Workers.

<sup>c</sup>The real-wage differential is the difference between the percentage increases, before rounding, in (1) the average annual wage in covered employment and (2) the average annual Consumer Price Index.

<sup>d</sup>The average annual interest rate is the average of the nominal interest rates, which, in practice, are compounded semiannually, for special public-debt obligations issuable to the Trust Funds in each of the 12 months of the year.

<sup>e</sup>Through 2007, the rates shown are unadjusted civilian unemployment rates. After 2007, the rates are total rates (including military), adjusted by age and sex on the basis of the average labor force for 1996.

<sup>f</sup>The labor force is the total U.S. workforce (including military personnel); it reflects the average of the monthly numbers of people in the workforce for each year.

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