Will Social Security be here for future generations?
The Federal Reserve Bank of St. Louis

The Federal Reserve Bank of St. Louis is one of 12 regional Reserve Banks, which together with the Board of Governors make up the nation's central bank. The Fed carries out U.S. monetary policy, regulates certain depository institutions, provides wholesale-priced services to banks and acts as fiscal agent for the U.S. Treasury. The St. Louis Fed serves the Eighth Federal Reserve District, which includes all of Arkansas, eastern Missouri, southern Indiana, southern Illinois, western Kentucky, western Tennessee and northern Mississippi. Branch offices are located in Little Rock, Louisville and Memphis.
As we approach our golden years, we all hope and plan for financial security in retirement. For generations, such hopes were fulfilled in part by Social Security, with each generation depending on the next for funding. This chain of succession forms the basis for public pension systems throughout the world—but as our populations and our economies change, so must the system.
How It All Started

Across the globe, the future of public pension systems is currently in doubt. And while there is no lack of suggestions for how to reform these systems, the key to assessing the various reform proposals is to understand why public pension systems were established and how they operate. What were the goals of these systems, and how successful have they been in meeting them?

The Origins of Social Security

Germany established the first national public pension system in 1889. By the time the United States established its program (commonly referred to as Social Security) in 1935, such systems were well established in most major industrialized countries.

The pace with which public pension systems spread throughout the world can be tied to the demographic transformations taking place during the late 19th and early 20th centuries. As life expectancies began to increase, so too did the population of the elderly. Meanwhile, migrations of people from farms to cities reduced the ties among extended families and, thus, the family support system that the elderly traditionally relied upon. Combined with the usual employment difficulties faced by older workers, these transformations often plunged the elderly into poverty.

Concerned about their own financial security in old age, wage earners pressured their governments to create public pension systems. In the United States, the Great Depression was the catalyst: Older workers were often the first to be laid off and the last to be rehired.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1889</td>
<td>The first national public pension system is established in Germany.</td>
</tr>
<tr>
<td>1910</td>
<td>The U.S. plunges into depression. By 1933, 25% of the workforce is unemployed.</td>
</tr>
<tr>
<td>1935</td>
<td>The U.S. establishes its public pension system — commonly referred to as Social Security. Payroll tax rate is set at 2%.</td>
</tr>
<tr>
<td>1946</td>
<td>Following World War II, birth rates rise worldwide, causing a baby boom that will affect the coming decades dramatically.</td>
</tr>
<tr>
<td>1960</td>
<td>With postwar prosperity, the goal of pension systems worldwide shifts from eliminating poverty to maintaining pre-retirement standards of living.</td>
</tr>
<tr>
<td>1966</td>
<td>Public pension systems in the seven major industrialized countries offer benefits to nearly 100% of retirees.</td>
</tr>
</tbody>
</table>

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http://fraser.stlouisfed.org/
Federal Reserve Bank of St. Louis
hired at a new job. Even worse, the stock market collapse wiped out much of their retirement savings.

**The Success of Public Pension Systems**

If such programs were established primarily to reduce poverty among the elderly, they have been a huge success. In the past 40 years, public pension systems in the seven major industrialized countries (Canada, France, Germany, Italy, Japan, the United Kingdom and the United States) have been extended to cover nearly all workers, and retiree benefits have been expanded. Today, almost 100 percent of retirees in these seven countries receive public pensions. In most countries, poverty rates for retirees are now lower than they are among the rest of the population (see U.S. example at left). Pensions are now the most important source of income for the elderly, and their importance is growing.

The prevalence of public pensions also has been linked to a reduction in labor force participation rates of the elderly. One goal of the 1935 U.S. Social Security Act was to encourage elderly workers to retire, creating vacancies for younger workers and reducing unemployment. Programs in other countries have shared the same goal throughout the years. In Europe, however, this goal took on increasing importance in the 1980s, when persistently high unemployment rates led to the sharp expansion of early retirement incentives.

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**RISING FROM THE ASHES: U.S. Poverty Rates**

![Graph showing poverty rates for ages 65 and over and under 65 in the USA from 1959 to 1996.](image)

In 1959, more than one-third of the elderly were living in poverty. Today, the elderly are wealthier than the general population.
How It Works

The Operation of Public Pension Systems

The public pension systems in these seven countries operate essentially on a pay-as-you-go basis. This means that contributions by current workers are used to pay the benefits for current retirees. Each generation of workers supports the previous generation with the implicit understanding that the next generation of workers will support their retirement, forming a chain of intergenerational transfers.

The table below gives an overview of the current public pension system in each of the seven countries. Since their inception, most of these systems have been revised dramatically. Today, there are two types: a universal flat-rate system and an earnings-related system. Under the former system, workers who are eligible for full pensions receive the same monthly benefit as everyone else. Under the latter, workers’ pensions vary depending on the wages they receive during their working life. Most countries also provide supplemental pensions for the poorest retirees, which are financed from general government revenues.

To qualify for a public pension, a worker must have reached a certain age and have contributed to the system for a minimum number of years.

The normal retirement age varies across countries, with 65 as the current maximum. In Italy, Japan and

<table>
<thead>
<tr>
<th>Country</th>
<th>First Legislation</th>
<th>Benefit Type</th>
<th>Retirement Age</th>
<th>Work Years For Pension</th>
<th>Dependents' Supplement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>1927</td>
<td>UF</td>
<td>Male (M): 65</td>
<td>Male (F): 65</td>
<td>Minimum: 10 (residency), Full: 40 (residency)</td>
</tr>
<tr>
<td>France</td>
<td>1910</td>
<td>ER</td>
<td>Male (M): 60</td>
<td>Male (F): 60</td>
<td>Minimum: 38.5 [40], Full: 37.5</td>
</tr>
<tr>
<td>Germany</td>
<td>1889</td>
<td>ER</td>
<td>Male (M): 63, [65]</td>
<td>Male (F): 65</td>
<td>Minimum: 15 with 12/last 18 mos. unemployed, 35(m); 15 with 10 after age 40(f), Full: 5</td>
</tr>
<tr>
<td>Italy</td>
<td>1919</td>
<td>ER</td>
<td>Any Age [65]</td>
<td>Any Age [65]</td>
<td>Minimum: 36, Full: 40</td>
</tr>
<tr>
<td>Japan</td>
<td>1941</td>
<td>UF</td>
<td>Male (M): 65</td>
<td>Male (F): 65</td>
<td>Minimum: 25, Full: 40</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1908</td>
<td>UF/ER</td>
<td>Male (M): 65</td>
<td>Male (F): 65</td>
<td>Minimum: 12(m) 11(f), Full: 49(m) 44(f)</td>
</tr>
</tbody>
</table>

[ ] Refers to changes that have been approved but are not yet in effect. ER = Earnings Related UF = Universal Flat Benefit
the United Kingdom, women may retire at an earlier age than men, but these gender differences are being eliminated. All countries allow individuals to retire early, with varying restrictions. France, Germany and Italy allow individuals with long work experience to retire early with no penalty (although they are phasing out these provisions). Canada, France, Japan and the United States allow individuals to retire early, but with a reduction in benefits. Most countries allow retirees to increase their benefits by delaying retirement for a few years.

In all countries, benefit payments increase with the number of years worked, up to a maximum. In computing the eligibility requirement, many countries count a portion of the years spent out of the labor force while caring for children. All countries except Germany and Italy increase the pension if a spouse is ineligible for his or her own pension and if there are dependent children.

Retiree benefits in these seven countries are adjusted as often as quarterly and as seldom as annually, in accordance with changes in consumer prices. The exception is Germany, where the adjustment is based on changes in average after-tax wages.

In some countries, the government finances part of the pension program through its general revenues. In all countries, at least part of the cost of the pensions is funded through payroll taxes on current workers.

<table>
<thead>
<tr>
<th>Indexation of Pension</th>
<th>Payroll Tax Rate</th>
<th>Government Contribution</th>
<th>Taxable Wages</th>
<th>Trust Fund</th>
<th>Operating Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prices</td>
<td>0</td>
<td>2.925%</td>
<td>100%</td>
<td>NA</td>
<td>NA SURPLUS</td>
</tr>
<tr>
<td>Prices</td>
<td>2.925%</td>
<td>0</td>
<td>NA</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Prices</td>
<td>7.96%</td>
<td>7.96%</td>
<td>Cover Deficit</td>
<td>No</td>
<td>No DEFICIT</td>
</tr>
<tr>
<td>Prices</td>
<td>9.3%</td>
<td>9.3%</td>
<td>20%</td>
<td>Yes</td>
<td>Yes DEFICIT</td>
</tr>
<tr>
<td>Prices</td>
<td>8.34%</td>
<td>21.3%</td>
<td>Cover Deficit</td>
<td>Yes</td>
<td>No DEFICIT</td>
</tr>
<tr>
<td>Prices</td>
<td>8.675% and 0.5%</td>
<td>33.33% plus administrative cost</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes BALANCE</td>
</tr>
<tr>
<td>Prices</td>
<td>2-11.1%</td>
<td>2-10.2%</td>
<td>Cover Deficit</td>
<td>Yes</td>
<td>Yes DEFICIT</td>
</tr>
<tr>
<td>Prices</td>
<td>6.2%</td>
<td>6.2%</td>
<td>0</td>
<td>No</td>
<td>Yes SURPLUS</td>
</tr>
</tbody>
</table>
and their employers. Wages below a minimum level are exempt from taxes in all countries, except France and the United States, reducing the actual tax paid. In the United Kingdom, the tax rate paid by the employee and employer is graduated: Wages below an established level are taxed at one rate, while wages above are taxed at a higher rate. All, except Italy, place an upper limit on taxable earnings, and Italy will soon follow suit. In most countries, however, this limit is high: More than 90 percent of all workers fall below it.

Four of the seven countries maintain trust funds for their pension systems. In Canada and Germany, these funds are used purely for handling cyclical fluctuations in contributions and payments. In Japan and the United States, such funds are intended as a form of insurance, to counteract the effects of looming demographic changes.

The last column in the table indicates the financial health of each country’s program. All of Europe’s systems are currently in deficit: Contributions from workers do not cover the payments to current retirees. Canada’s and Japan’s systems are roughly in balance, with contributions just covering payments to retirees. In the United States, contributions exceed payments and the trust fund is growing. According to the latest annual report of the U.S. Social Security Board of Trustees, contributions from workers will cover payments to retirees until 2012. After this date, monies from the trust fund will be used to finance the shortfall in contributions. By 2029, the fund will be depleted, and in the following year contributions will cover only 75 percent of payments. Without an increase in taxes or a reduction in benefits, government revenues will be necessary to pay the remaining 25 percent. This shortfall will continue to grow through the middle of the next century, as will the deficits in the other six countries.

Keeping The System Afloat

The financial stability of a pay-as-you-go system requires that contributions keep pace with benefit payments. To understand the problems faced by these systems, consider the factors that affect contributions and those that affect payments.

<table>
<thead>
<tr>
<th>CONTRIBUTIONS</th>
<th>PAYMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>What determines contributions made to the system</td>
<td>What determines payments made by the system</td>
</tr>
<tr>
<td>• tax rates</td>
<td>• the number of retirees</td>
</tr>
<tr>
<td>• wages</td>
<td>• the cost of living</td>
</tr>
<tr>
<td>• the number of workers paying into the system</td>
<td>• the generosity of the system</td>
</tr>
</tbody>
</table>

The factors determining contributions and payments all have risen rapidly since World War II. Suppose our goal is to maintain the current systems without raising taxes or reducing the benefits. Is such a goal achievable? It is if we can maintain the ratio of contributors to retirees or boost the growth of real wages substantially. But how likely is either of these conditions?
What would my retirement be like without Social Security?
Will We Have Enough Contributors to Support the Beneficiaries?

The number of contributors relative to retirees can be roughly approximated by the working-age population relative to retirement-age population. Looking at the changes in these populations since 1950 and the projected changes through the middle of the next century will give you the first indication of the problems confronting public pension systems. As the figure below shows, the number of working-age individuals supporting each retiree has fallen in all seven countries in the past 50 years and is projected to continue falling.

While the pace of aging varies across countries, all are facing sharp declines in their working-age population relative to the retirement-age population. The most extreme example is Japan, where in 1950 there were 10 people of working age for each retiree. By the year 2000, there will be only four possible workers per retiree, and this number is expected to decline to two workers by 2050.

The effect of these declines might be mitigated if employment rolls were to expand more rapidly than projected, or if workers were to delay their retirements. But the trends are not encouraging. Only Canada and the United States have labor force participation rates that are higher today than they were in 1950. In the United Kingdom, the labor force participation rate has remained nearly steady over the last 40 years, while in the four other countries, the rate has fallen.

In all countries, the labor force participation rates of men have fallen. Young men are delaying their entry into the labor force, spending more time in formal education, while older men are exiting the workforce earlier, either by taking early retirement or by simply not working past age 65.

**Only Canada and the U.S. have labor force participation rates that are higher today than they were in 1950.**

**FROM FULL TO FRAGILE SUPPORT: Number of Workers Supporting Each Retiree**

- **Canada and United States**
  - 1950 → 2000 → 2050
- **France**
  - 1950 → 2000 → 2050
- **Germany and United Kingdom**
  - 1950 → 2000 → 2050
- **Italy**
  - 1950 → 2000 → 2050
- **Japan**
  - 1950 → 2000 → 2050

As birth rates decline and life expectancy rises, fewer workers will be available to finance retirement benefits.
How long will it be before we can afford to retire?
Young and older women’s labor force participation rates have fallen in accordance with men’s, but these declines have been dwarfed by the rise in the labor force participation rates of prime-age women. Only in Canada and the United States, however, have women’s labor force participation rates grown fast enough to offset the declining rates of men.

Most of the seven countries are taking steps to reverse the declines in their labor force participation rates, either by increasing the normal retirement age or by increasing the work requirement for full pension benefits.

Long phase-in periods for these changes — in some cases up to 30 years — won’t do much to affect the near-term health of public pension systems, however. Furthermore, these changes may have little effect on early retirement, which at present is taken by a majority of individuals in all seven countries.

Another troubling factor for the viability of public pension systems has been the rise in unemployment rates since the 1950s. One has to be working in order to contribute to the coffers of the public pension system (although Germany requires individuals receiving unemployment payments to contribute). Thus, the higher the unemployment rate, the greater the deviation between potential and actual social security revenues.

Will Real Wages Grow Fast Enough?

The amount of revenue an individual worker generates for the public pension system in a given year depends on the worker’s wages and the rate at which these wages are taxed. Holding tax rates fixed, an increase in the wage results in higher revenues for the public pension system.

A rise in wages that is linked to inflation, however, doesn’t help much. Public pension benefits are also linked to inflation, so retiree benefits are rising at the same rate. Thus, the only way to generate an increase in public pension revenues without a simultaneous rise in expenditures is through a rise in real wages. (Even this is not possible in Germany since pension benefits are indexed to wages.)

Growth in real wages is driven primarily by increases in productivity — how much output each worker produces. When the output of a worker rises, the real earnings of that worker also rise.

In all seven countries, productivity growth in the past two decades has dropped sharply below that of previous decades. In Japan, for example, manufacturing output per hour grew by an average of 7.9 percent a year from 1955 to 1973; since then, it has fallen to 3.9 percent a year. In the United States, labor productivity in nonfarm businesses grew at an average of 2.8 percent a year from 1960 to 1973, but declined to 1.1 percent a year since. While many economists do expect productivity growth to improve, few expect improvements large enough to restore the health of public pension systems.
I'm just getting started. Should I worry about retirement already?
What We Can Do

Fixing the Social Security Problem

Given the grim outlook for public pension systems, what can be done to ensure that individuals entering the workforce today will have adequate income in retirement? The first step is to ensure that economic conditions are optimal for maximizing contributions to the system. This requires that the economy grow fast enough to provide job opportunities for those in the labor force and that productivity grow fast enough to promote growth in real wages.

Governments can help achieve these goals best by enacting policies that promote economic growth. Thus, government polices that provide incentives for working, saving and investing will tend to stimulate growth. Increases in the level of education of the workforce and improvements in the quality of education will also help.

Central banks, like the Federal Reserve, can help promote growth by maintaining price stability. Inflation — even at moderate rates — and inflation uncertainty impose substantial costs that hinder economic activity.

While economic growth and productivity are important, however, they cannot by themselves eliminate the problems caused by an aging population. Given the sweeping demographic trends discussed earlier, it is highly unlikely that the public pension systems of these seven countries can maintain the current level of benefits without raising taxes or running substantial deficits. Put simply, if the number of workers paying the pension benefits of each retiree declines as expected, then real wages would have to rise much faster than they have in the past 25 years in order to compensate. Those who espouse economic scenarios that would allow the systems to function free of problems through the middle of the next century are ignoring the prevailing trends, both economic and demographic.

Reform Proposals

Proposals to reform public pension systems are abundant. Generally, these proposals fall into two categories: those that maintain the pay-as-you-go structure of the current systems and those that move toward a fully funded system.

Maintain the Pay-as-you-go Structure

Proposals that would maintain the pay-as-you-go structure typically look for ways to raise contributions or decrease benefits. Seven proposals are listed below:

<table>
<thead>
<tr>
<th>SEVEN WAYS TO RETAIN THE CURRENT SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Increase the retirement age or make planned increases in retirement age effective earlier.</td>
</tr>
<tr>
<td>2. Increase the work years required for full benefits.</td>
</tr>
<tr>
<td>3. Reduce the incentives to retire early or increase the incentives to retire late.</td>
</tr>
<tr>
<td>4. Reduce monthly benefits to new retirees as life expectancy increases.</td>
</tr>
<tr>
<td>5. Increase the taxability of benefits.</td>
</tr>
<tr>
<td>6. Reduce the indexation of pensions.</td>
</tr>
<tr>
<td>7. Raise the contribution tax rate or broaden the tax base.</td>
</tr>
</tbody>
</table>
Will Social Security provide for my child’s retirement?
Interestingly, when public pension systems were established, most workers were not expected to reach retirement age. When Germany established its system in 1889, for example, only 20 percent of workers lived until age 70, the minimum age for receiving benefits. Even after the retirement age was reduced to 65 in 1916, most German workers still did not live to collect a pension. As lifespans have risen (see figure below), a higher percentage of workers is living to collect retirement benefits — and they are collecting for a much longer time. Legislation that made it easier to retire early has only compounded the problem.

Reducing the effect that increases in life expectancy have on the cost of public pension systems is the goal of the first four proposals mentioned earlier. All of these would reduce the total benefits a worker can expect to receive in retirement. The first three would do this by delaying retirement, while the fourth proposal reduces the monthly benefit a retiree would receive.

While the first four proposals would affect only future retirees, the fifth and sixth proposals would affect current as well as future retirees. In the United States, some have suggested that we treat Social Security income the same way we treat private pension income for tax purposes; benefits in excess of a worker’s previously taxed contributions would be treated as ordinary income and taxed accordingly. Taxes applied to Social Security income would be returned to the coffers of the system, reducing the overall cost of benefits.

Some countries have considered adjusting pension benefits by less than the inflation rate. For example, if the inflation rate were 3 percent, benefits might increase by only 2 percent. This would reduce the real pension income of retirees.

The last proposal attempts to increase revenue rather than cut costs. This can be done by increasing taxes on workers directly or by increasing the taxable wage ceiling, thus increasing the tax rate paid by high wage earners.

Across the globe, people are living to riper old ages, threatening to topple public pension systems already heavy with retirees and light on money to support them.
The U.S. Advisory Council on Social Security: A Group Divided

In 1965, the U.S. Congress amended the Social Security Act to require that an Advisory Council be established every four years to analyze the long-term health of the Social Security program. The 13 members of the Advisory Council are chosen to represent the general public, business, workers and the self-employed. The 1994-96 council was asked to focus on three things: the long-range financial status of the old-age survivors and disability insurance program (OASDI); the adequacy and equity of the benefit structure of the OASDI program across generations, income status and family situation; and the roles of the public and private sectors in providing retirement income.

Council members agreed that the system needs to move away from the pay-as-you-go approach toward a more fully funded system of financing retirement. Members were unable, however, to develop a single proposal to which all could agree. Thus, their final report highlights three different proposals, each of which was advocated by a council subgroup. All of the proposals include measures designed to raise revenue and reduce benefits along the lines of those highlighted in the text. The proposals' key differences are the extent to which they would change the nature of the current system from an intergenerational transfer system to a fully funded one. These differences are detailed below:

MAINTENANCE-OF-BENEFITS PLAN

One of the elements of this plan is to raise the Social Security tax rate in 2045 from 12.4 to 14 percent. But the plan's key element is the proposal to invest a portion (approximately 40 percent) of the Social Security trust fund in equities. Historically, the rate of return on equities has been higher than the rate of return on U.S. government securities, where the fund is currently invested.

By phasing in this plan beginning in 2010, supporters hope that the fund's depletion date will be delayed from 2029 to 2050. Thus, the changes under this plan would do little to alter the structure of the current system.

INDIVIDUAL ACCOUNTS PLAN

This plan gets its name from the proposal to add a 1.6 percent earnings tax to the employees' contribution rate, with these funds to be invested by individual workers in retirement accounts. The contributions would be collected by the Social Security Administration, and individuals would be offered a small range of bond or equity index funds among which to invest their contributions.

Thus, the money goes toward the individual's own retirement rather than the retirement of a previous generation. Upon retirement, these funds would be converted into annuities indexed to provide protection against inflation.

PERSONAL SECURITY ACCOUNTS PLAN

The third plan would move the Social Security system closest to a fully funded system. The key to this system is the movement to a two-tiered pension system. The first tier would consist of a flat monthly benefit designed to equal 76 percent of the monthly benefit currently payable to low-wage workers, which would increase along with inflation.

Tier two would consist of mandatory contributions to private retirement accounts. These accounts would be held and managed by private investment firms, and individuals would have a wider range of investment opportunities than under the individual accounts plan. Furthermore, individuals would not have to convert their funds to annuities upon retirement.

Workers over 55 would continue to be covered by the existing system. Workers between the ages of 25-54 would receive retirement benefits based on benefits accrued under the old system and contributions to the new system. Those under the age of 25 would be covered solely by the new system.

The current payroll tax would finance contributions to both tiers. To continue to finance benefits paid to current and future retirees covered under the old system, a transition payroll tax would be added to the current tax.
Looking At Reform

Move to a More Fully Funded System

A more radical set of reforms would require each generation to finance more of its own retirement. Proponents of a more fully funded system base their proposals on the belief that we can no longer sustain a pay-as-you-go system given the demographic changes affecting most countries. While we could devise a theoretical combination of benefit cuts and tax increases to keep a pay-as-you-go system in balance, such changes are probably not politically viable. As contribution rates rise and benefits are cut, the system's value to a young worker lessens. Even in the absence of further legislation, the contributions of young and future U.S. workers (including implied accrued interest) are projected to exceed the benefits they could earn in retirement.

Often, reform proposals of this type will maintain a portion of the pay-as-you-go system to guarantee a minimum pension for all retirees. This minimum then would be supplemented by workers' mandated contributions to a pension to fund their own retirement, forming a two-tier system.

The first tier could function like the Canadian, British and Japanese universal flat-rate systems. The

<table>
<thead>
<tr>
<th>In a Nutshell: A Generational Profile of Social Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Several trends are converging in a way that spells trouble for the U.S. Social Security system: People are living longer, and the number of workers per retiree is on the way down.</td>
</tr>
<tr>
<td>AGE 70</td>
</tr>
<tr>
<td>LIFE EXPECTANCY AT BIRTH</td>
</tr>
<tr>
<td>61 (F)</td>
</tr>
<tr>
<td>RETIREMENT AGE</td>
</tr>
<tr>
<td>TAX WHEN ENTERING WORKFORCE</td>
</tr>
<tr>
<td>WORKERS PER RETIREE WHEN ENTERING WORKFORCE</td>
</tr>
<tr>
<td>WORKERS PER RETIREE WHEN EXITING WORKFORCE</td>
</tr>
</tbody>
</table>

NOTE: Assumes that worker enters workforce at age 20.
second tier would operate like the defined contribution private pension plans that many individuals currently participate in, except that workers would be required to invest a fixed percent of their salaries in these plans. At retirement, these benefits could be converted into annuities (investments that provide a stream of income for as long as an individual lives).

Benefits under the first tier would be assured by the government; benefits under the second tier would depend on the return on your investments. Thus, the first tier would provide some insurance in the face of adverse market conditions.

Such a system could even be supplemented with a third tier of incentives for additional voluntary savings. The third tier would provide tax incentives to encourage individuals to increase their savings for retirement beyond the mandatory contributions of the second tier.

For a multi-tier system to work, the benefits under the first tier must be modest enough to sustain in the face of projected demographic changes, but substantial enough to provide a cushion against the market risk inherent in the second-tier benefits. This is particularly relevant for low-wage workers. In the United States, 42 percent of the elderly would have incomes below the poverty line were it not for public pension benefits. Right now, only 6 percent of the elderly in the United States receive public assistance, less than half the proportion 30 years ago. A reform that reduces public pension benefits but increases the need for public assistance provides no cost saving.

Conclusion

Public pension systems were established to guarantee retirement income for the elderly. These systems have been highly successful at reducing poverty rates among the elderly and allowing many to enjoy a comfortable retirement.

Unfortunately, increases in the generosity of pension benefits, slowing economic growth and changes in demographics worldwide have made these systems increasingly costly to maintain, causing concern among workers about the ability of their system to finance their approaching retirement. To address these concerns, policymakers are formulating reform proposals in each of the seven major industrialized nations.

Three approaches to reforming the U.S. Social Security system are currently being debated. The particular reform solution one favors depends on the goals one wants the system to achieve. But if we make realistic assumptions about upcoming trends in the economy and demographics, it is clear that the current balance between costs and benefits is unsustainable.

If we lull ourselves into complacency and fail to act because our system is currently healthier than most, we will only cause future reform to be more costly. The amount by which taxes must rise or benefits must be cut increases the longer we wait. Furthermore, delaying reform will reduce the time workers have to adjust their financial planning to any changes.

The clock is ticking.
## Balance Sheet (thousands of dollars)

<table>
<thead>
<tr>
<th>Assets:</th>
<th>December 31, 1996</th>
<th>December 31, 1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold Certificates</td>
<td>$474,000</td>
<td>$484,000</td>
</tr>
<tr>
<td>Special Drawing Rights Certificates</td>
<td>419,000</td>
<td>490,000</td>
</tr>
<tr>
<td>Loans to Depository Institutions</td>
<td>28,700</td>
<td>9,165</td>
</tr>
<tr>
<td>U.S. Government and Federal Agency Securities, Net</td>
<td>18,469,573</td>
<td>17,475,302</td>
</tr>
<tr>
<td>Items in Process of Collection</td>
<td>666,154</td>
<td>219,695</td>
</tr>
<tr>
<td>Other Assets</td>
<td>727,177</td>
<td>737,949</td>
</tr>
<tr>
<td>Interdistrict Settlement Account</td>
<td>0</td>
<td>356,727</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td><strong>$20,784,604</strong></td>
<td><strong>$19,772,838</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Liabilities:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Reserve Notes</td>
<td>$16,769,048</td>
<td>$18,426,919</td>
</tr>
<tr>
<td>Deposits</td>
<td>754,191</td>
<td>908,876</td>
</tr>
<tr>
<td>Deferred Credit Items</td>
<td>292,155</td>
<td>195,199</td>
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<tr>
<td>Other Liabilities</td>
<td>49,562</td>
<td>45,904</td>
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<tr>
<td>Interdistrict Settlement Account</td>
<td>2,693,540</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td><strong>$20,558,496</strong></td>
<td><strong>$19,576,898</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Capital Accounts:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Paid In</td>
<td>$114,363</td>
<td>$97,970</td>
</tr>
<tr>
<td>Surplus</td>
<td>111,745</td>
<td>97,970</td>
</tr>
<tr>
<td><strong>Total Capital</strong></td>
<td><strong>$226,108</strong></td>
<td><strong>$195,940</strong></td>
</tr>
<tr>
<td><strong>Total Liabilities and Capital</strong></td>
<td><strong>$20,784,604</strong></td>
<td><strong>$19,772,838</strong></td>
</tr>
</tbody>
</table>
## Statement of Income and Expenses (thousands of dollars)

<table>
<thead>
<tr>
<th></th>
<th>December 31, 1996</th>
<th>December 31, 1995</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Earnings:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest on Government Securities</td>
<td>$1,099,849</td>
<td>$1,040,741</td>
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<tr>
<td>Other Revenue</td>
<td>49,305</td>
<td>52,869</td>
</tr>
<tr>
<td><strong>Total Current Income</strong></td>
<td>$1,149,154</td>
<td>$1,093,610</td>
</tr>
<tr>
<td><strong>Current Expenses:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Operating Expenses</td>
<td>$95,026</td>
<td>$87,470</td>
</tr>
<tr>
<td>Less Reimbursables</td>
<td>(9,133)</td>
<td>(9,189)</td>
</tr>
<tr>
<td><strong>Current Net Operating Expenses</strong></td>
<td>85,893</td>
<td>78,281</td>
</tr>
<tr>
<td>Cost of Earnings Credits</td>
<td>12,101</td>
<td>6,860</td>
</tr>
<tr>
<td>Net Periodic Pension Costs</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td><strong>Current Net Expenses</strong></td>
<td>$98,007</td>
<td>$85,141</td>
</tr>
<tr>
<td><strong>Current Net Income</strong></td>
<td>$1,051,147</td>
<td>$1,008,469</td>
</tr>
<tr>
<td><strong>Miscellaneous Additions and Deductions:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Additions or Deductions</td>
<td>$(39,723)</td>
<td>$19,445</td>
</tr>
<tr>
<td>Cost of Unreimbursed Treasury Services</td>
<td>(2,129)</td>
<td>(2,114)</td>
</tr>
<tr>
<td>Assessment for Expenses by Board of Governors</td>
<td>(4,061)</td>
<td>(3,730)</td>
</tr>
<tr>
<td>Federal Reserve Currency Costs</td>
<td>(18,499)</td>
<td>(18,660)</td>
</tr>
<tr>
<td><strong>Net Income Available for Distribution</strong></td>
<td>$986,735</td>
<td>$1,003,410</td>
</tr>
<tr>
<td><strong>Distribution of Net Income:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dividends Paid to Member Banks</td>
<td>$(6,431)</td>
<td>$(5,344)</td>
</tr>
<tr>
<td>Payment to the U.S. Treasury</td>
<td>$(963,911)</td>
<td>$(984,871)</td>
</tr>
<tr>
<td>Transferred to Surplus</td>
<td>16,393</td>
<td>13,195</td>
</tr>
<tr>
<td>Surplus, January 1</td>
<td>97,970</td>
<td>84,775</td>
</tr>
<tr>
<td>Statutory Surplus Transfer to Treasury, October 1</td>
<td>$(2,618)</td>
<td>0</td>
</tr>
<tr>
<td>Surplus, December 31</td>
<td>$111,745</td>
<td>$97,970</td>
</tr>
</tbody>
</table>

The Balance Sheet and Statement of Income and Expenses are prepared by Bank management. Copies of full financial statements complete with footnotes are available by contacting the Public Affairs Department of the Federal Reserve Bank of St. Louis, Post Office Box 442, St. Louis, Missouri 63166.
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Brumfield Plantation and FTB Farms
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Supervisory Officer

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Supervisory Officer

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Assistant Vice President

Andrea S. Eddy
Operations Officer

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Vice President and Manager

Ronald L. Byrne
Vice President

Thomas O. Short
Assistant Vice President

Memphis Branch
Martha L. Perine
Vice President and Manager

John W. Mitchell
Operations Officer

Robert A. Hopkins
Vice President and Manager
Sources:

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  U.S. Dept. of Commerce, Bureau of the Census

A Global Comparison of Social Security Programs, 1996, page 6
  U.S. Social Security Administration, Organization for Economic Cooperation and
  Development, Bank of Italy, Canadian Department of Finance, German Federal
  Ministry of Labor and Social Affairs

Number of Workers Supporting Each Retiree, page 10
  2000 and 2050: World Bank, Averting the Old Age Crisis (1994)

Life Expectancy, page 16
  U.S. Dept. of Commerce, Bureau of the Census, and United Nations