

## STATEMENT OF COMMISSIONER PETER G. PETERSON

The President  
The White House  
Washington, D.C.

Dear Mr. President:

I want to applaud your decision to appoint the Bipartisan Commission on Entitlement and Tax Reform. I would also like to commend to you Senators Bob Kerrey and John Danforth, its able co-Chairs, for their major and courageous efforts over the last year. The Commission has certainly served an important purpose in bringing the magnitude of the entitlements problem to the attention of the American people.

However, I am disappointed, as I believe many Americans must be disappointed, that the Commission was unable to reach agreement on recommendations which address the problem that was so cogently outlined in the Interim Report we sent you.

That report left no doubt about the gravity of the challenge we face. By 2012, it pointed out, entitlements and interest on the national debt will together consume all Federal revenues — unless we enact major reforms. By 2030, entitlements alone will consume all Federal revenues. The projected growth in entitlements is so staggering that it promises to make the task of balancing the budget akin to the labors of Sisyphus — in which the stone is pushed up the hill one year only to come rolling down again the next.

Certainly reform is rife with political risks, and it may have been too much to expect that, in this election year, agreement would be forthcoming on detailed recommendations. Still, the Commission should have been able to reach consensus on certain self-evident principles of reform:

— *First, we should have been able to agree that everything must be on the table.* Solving the entitlement problem will require some sacrifice from all groups of Federal beneficiaries — not just seniors receiving Social Security and Medicare, but the recipients of everything from farm aid and veterans' benefits to Federal pensions. Across-the-board sacrifice is fair. It is fiscally necessary. And it is a political necessity.

— *Second, we should have been able to agree that reform must be progressive.* A large share of entitlement benefits now go to Americans with above-median incomes. There is no need to punish the lower-income beneficiaries whom entitlements were originally designed to protect. Instead, whether through an "affluence test" or some other reform, we must develop means of scaling back benefits to middle- and upper-income households.

— *Third, we should have been able to agree that reforming tax expenditures is a necessary part of the solution.* Back-door tax benefits like the home mortgage interest deduction and the tax exclusion for

employer-paid health care are the fiscal equivalent of a government check in the mail. An even larger share of these subsidies goes to households with above-median incomes than is the case with direct entitlement benefits.

— *Finally, we should have been able to agree that we must adjust benefit programs to reflect the new realities of an aging society.* Lifespans and health spans have risen dramatically since Social Security was founded — and are expected to climb still further. Unless retirement ages are also raised substantially, paying for tomorrow's longer retirements will pose an impossible burden for tomorrow's working generations.

Agreement on these general principles of reform would not have substituted for specific recommendations and a bold plan for action. But it would at least have pointed the way.

Mr. President, I now urge you — as I urge Congress — to put the long-term interests of the Nation and of future generations above the short-term dictates of politics. At this juncture, the temptation to defer action on entitlements is great. But we cannot afford more delay and denial.

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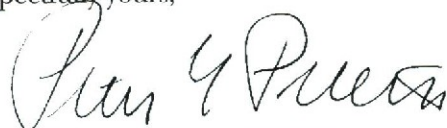
The alternatives to reform are unacceptable. Either we will allow the deficit to widen steadily beginning in the late 1990s — with potentially disastrous consequences for interest rates, inflation, savings, and productivity and living standard growth. Or we will have to enact a series of economically prohibitive and politically impossible tax hikes — roughly one equal to that enacted in 1993 — every four years over the next half-century. Or, as the Baby Boom retires, we will have to make sudden and draconian cuts in benefits that leave Americans without time to prepare and adjust.

As the Administration and Congress come to grips with entitlements, I hope the attached submissions will be useful.

They include: (1) A plan of entitlement reform I submitted to the Commission which would balance the budget by the year 2000 — and keep it at or near balance for decades thereafter; (2) My discussion of and proposed amendments to the plan Senators Kerrey and Danforth put before the Commission; (3) A set of charts that underscores the magnitude of the challenge before us; and (4) A technical paper which reveals that the official projections — horrifying as they are — may underestimate future entitlement costs.

Again, let me commend you for establishing our Commission. Hopefully, the work it has done will bring us one step closer to the point where real reform is possible.

Respectfully yours,



Peter G. Peterson

## THE INEVITABILITY OF ENTITLEMENT REFORM: AN ANALYSIS OF THE SOCIAL SECURITY AND MEDICARE LONG-TERM COST PROJECTIONS

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Submitted to the Bipartisan Commission on Entitlement and Tax Reform

by Peter G. Peterson

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### OVERVIEW

In light of the sacrifices and political risks that entitlement reform entails, it is not surprising that some point to the inherent uncertainties in long-term cost projections in order to argue that we should take a "let's wait and see" approach. According to these cautionaries, the Commission's Interim Report may overstate the future cost of Federal entitlements — and hence the need for reform.

While it is true that all long-term projections are uncertain, this concern is misdirected. The Commission's cost projections are based on a fiscally optimistic scenario which posits (1) that the economy will grow steadily throughout the next half-century, with no new recessions; (2) that the U.S. population will age much less than recent demographic trends make possible; and (3) that the growth in real Federal health care costs will dramatically slow. The risk is thus not that the Commission has overstated tomorrow's entitlement bill, but that it has understated it.

The projection scenario the Commission relies on was developed by the Social Security Administration (SSA) and Health Care Financing Administration (HCFA). For Social Security and Medicare, the Commission's projections directly incorporate the official SSA and HCFA "intermediate" projections. Other entitlements in the Commission's projections are assumed to remain constant as a

share of the economy, except for Medicaid, whose costs are projected on the basis of SSA's official economic and demographic scenario and HCFA's assumptions about real health care cost growth.

This paper offers a discussion of SSA's and HCFA's long-term projection scenarios. The first part of the paper explains why SSA's official intermediate projection is optimistic and why its so-called high-cost scenario actually constitutes a more prudent projection on which to base long-term policy decisions. The second part then turns to a more detailed discussion (together with a sensitivity analysis) of each of the principal economic and demographic assumptions that underlie SSA's and HCFA's cost projections.

## I. SSA'S OFFICIAL SCENARIO: "BEST ESTIMATE" OR "BEST CASE"?

Time and again over the past two decades, SSA has turned out projections based on fiscally favorable assumptions about demographic trends and economic growth — only to have them betrayed by subsequent reality. And time and again, SSA has revised the key assumptions underlying its official scenario — almost always in a negative direction. The latest cycle of optimism and revision began after the Social Security Reform Act of 1983. Every few years since then, the bankruptcy date of the system has been advanced. In April 1994, Social Security's Trustees announced that the OASDI Trust Funds would go belly up in 2029 — seven years earlier than they had reported in 1993 and 19 years earlier than they had reported as recently as 1988.

According to this latest official projection, the cost of Social Security cash benefits (OASDI) will rise from 11.6 percent of payroll in 1994 to 15.0 percent in 2020 and 17.4 percent in 2040. The cost of Medicare (HI and SMI) will meanwhile climb even faster — from 5.1 percent of payroll today to 13.4 percent in 2020 and 18.4 percent in 2040.<sup>8</sup>

These numbers are sufficiently alarming that one might suppose SSA has finally expunged the long-standing institutional optimism from its projections. Alas, this is not the case. Consider the two assumptions that overwhelmingly dominate SSA's projection scenario over the next quarter-century — productivity (or real earnings growth) and longevity. From an average of 1.0 percent annually from 1973 to 1993, SSA's "best estimate" is that productivity will accelerate at an annual rate of 1.4 percent throughout the next century. Or take life expectancy at age 65. SSA projects that in the future it will grow at less than half its pace over the past two decades. Although most Americans consider longer lifespans a happy development, they add to Social Security costs. If longevity gains were to continue at closer to their historical clip, and if productivity and real earnings growth were to fail to accelerate, Social Security would cost an extra 2.6 percent of payroll by 2040 above and beyond the 5.8 percent hike already forecast in SSA's official intermediate scenario.<sup>9</sup>

8 All Social Security and Medicare figures in this report refer to the 1994 OASDI, HI, and SMI Trustees Reports or to unpublished data supplied by SSA and HCFA. Figures for Medicare refer to Part A and Part B (HI and SMI) combined. SMI costs are calculated as a share of (HI) taxable payroll for ease of comparison. HCFA does not publish a high-cost SMI scenario. In the high-cost Medicare projections cited in this report, it is assumed that SMI outlays will exceed their intermediate scenario (II) path by the same multiple by which HI under HCFA's high-cost scenario (III) exceeds HI under HCFA's intermediate scenario (II).

9 In this calculation, the real earnings and mortality assumptions in SSA's intermediate scenario were changed to the rates assumed in its high-cost scenario (while all other assumptions were left the same). This sensitivity analysis is discussed in detail in the second part of the report.

**TABLE 1: SSA AND HCFA ASSUMPTIONS VERSUS HISTORICAL EXPERIENCE**

|   | <b>Intermediate<br/>Projection</b> | <b>High-Cost<br/>Projection</b> | <b>History<br/>(1973-93)</b> |
|---|------------------------------------|---------------------------------|------------------------------|
| Average Annual Rate of Productivity Growth (in percent)                           | 1.36                               | 1.08                            | 0.99                         |
| Average Annual Rate of Real Earnings Growth (in percent)                          | 1.00                               | 0.50                            | 0.21                         |
| Average Annual Growth in Longevity at Age 65 (in years per decade)                | 0.44                               | 0.84                            | 0.95                         |
| Average Total Fertility Rate (in lifetime births per woman)                       | 1.90                               | 1.60                            | 1.88                         |
| Average Annual Rate of Growth in Real Per-Beneficiary Medicare Costs (in percent) | 2.54                               | 2.97                            | 5.04                         |

**Note:** Assumptions for productivity, real earnings, and fertility refer to “ultimate” rates that are reached early in the next century. Assumptions for longevity and real Medicare cost growth refer to averages for the periods 1993-2040 and 1995-2040, respectively. (Historical figures for Medicare cost growth are for 1970-1995). Real earnings are earnings in OASDI-covered employment. Longevity is average male and female longevity at age 65. Real Medicare cost growth is the combined growth in HI and SMI costs per age-adjusted beneficiary in excess of economy-wide inflation (as measured by the GDP deflator).

HCFA’s official Medicare projection reflects the same optimism. Since 1970, the growth in real Medicare spending per (age-adjusted) beneficiary has averaged 5.0 percent annually. HCFA projects that this growth will dramatically slow, averaging just 2.5 percent annually between 1995 and 2040. Nowhere does HCFA explain how this cost-containment triumph will be achieved. It simply posits it. Yet consider: If real per-beneficiary spending were to continue growing at an average annual rate of just 3.0 percent after the year 2000 — a mere three-fifths its historical pace — Medicare would climb to 25.1 percent of payroll by 2040, compared with 18.4 percent in HCFA’s official projection.

SSA of course recognizes that things may turn out worse than the “best estimates” in its official projection. Accordingly, it also publishes a “high-cost” scenario. This scenario allows for greater population aging (lower fertility and larger gains in life expectancy) than does its official intermediate scenario. It also anticipates somewhat less buoyant economic growth (lower productivity and real wage growth). Under SSA’s high-cost scenario, Social Security climbs to 17.2 percent of payroll by 2020 and 22.2 percent of payroll by 2040. Under the corresponding HCFA high-cost scenario, Medicare reaches 21.0 percent of payroll by 2020 and 35.7 percent of payroll by 2040.

**TABLE 2: SSA AND HCFA SOCIAL SECURITY AND MEDICARE PROJECTIONS**

|  | 1994 | 2000 | 2010 | 2020 | 2030 | 2040 |
|--|------|------|------|------|------|------|
| Intermediate Projection:<br>OASDI      | 11.6 | 11.8 | 12.3 | 15.0 | 17.2 | 17.4 |
| High-Cost Projection:<br>OASDI         | 11.6 | 13.3 | 14.2 | 17.2 | 20.6 | 22.2 |
| Intermediate Projection:<br>HI and SMI | 5.1  | 6.5  | 9.8  | 13.4 | 16.9 | 18.4 |
| High-Cost Projection:<br>HI and SMI    | 5.1  | 7.3  | 12.9 | 21.0 | 30.7 | 35.7 |

**Note:** The intermediate projection is SSA's (and HCFA's) scenario II. The high-cost projection is SSA's (and HCFA's) scenario III. In the high-cost Medicare projection, SMI outlays are assumed to exceed their intermediate scenario path by the same multiple by which HI under HCFA's high-cost scenario exceeds HI under HCFA's intermediate scenario.

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This high-cost scenario is by no means a worst-case scenario. It assumes that productivity, though it will not accelerate, will be no worse than the average experience of the past two decades. And it assumes that longevity, though it will rise more rapidly than in SSA's intermediate scenario, will still grow more slowly than its historical pace. As for health care costs, the assumptions are actually optimistic. The huge growth in Medicare projected in the high-cost scenario is largely due to its less favorable demographics and economics. Just as in the intermediate scenario, a dramatic slowdown is assumed to occur in the rate of growth in real per-beneficiary spending.

Still, SSA's high-cost scenario serves as a reasonable "stress test" of how our entitlement system would fare if the official optimism once again turns out to be unfounded. It behooves policymakers to pay close attention to it, if only to avoid the absurdity of regarding a less than dramatic improvement in current trends as unthinkably dismal.

Of course, the future may turn out to be brighter than the recent past — perhaps even brighter than that projected in SSA's official intermediate scenario. But the occasional "eureka" one hears about favorable new economic and demographic trends hardly justifies banking on that hope.

Yes, productivity is up over the past two years. But that's what productivity typically does during the early phases of an economic recovery. Even if the recent gains turn out to be lasting, moreover, they would have to point to a permanent 35 to 40 percent improvement in our historical record just to get to buoyant outcome already built into SSA's intermediate scenario. And yes, "health care inflation" (as measured by the medical care component of the CPI) is down. But economists don't really know how to measure health care inflation. What matters are dollars — and thus far in the 1990s, the average

growth rate in real Federal health care spending has weighed in higher than its average during the 1980s.<sup>10</sup> As far as the long-term outlook for entitlement costs is concerned, the only real bright spot is the recent rise in U.S. birth rates. But, even if this is sustained, it would have no positive impact on Social Security's and Medicare's balance sheet before the 2020s — long after today's entitlement system promises to unravel.

Above and beyond such obvious caveats, there is a bigger problem with the hope that some *deus ex machina* will exonerate us from the need to make tough choices about entitlements. It pretends that Federal benefits have no impact on the economy and society at large. The reality is that our current system of entitlements itself helps to perpetuate many of the trends which now threaten its sustainability. Because they contribute to the deficit and substitute for private thrift, Social Security and other old-age benefit programs lower national savings. Lower saving means slower productivity growth — which in turn results in still lower saving. Or take health care. Virtually all experts agree that today's open-ended Federal reimbursement policies are a primary cause of spiralling costs. Without major reform of Medicare and Medicaid, it is a fantasy to suppose that real cost growth can somehow be stopped dead in its tracks. There may even be a relationship between rising entitlement costs and low birth rates. By reducing the after-tax incomes of working-age families and by eliminating the role of children as “old-age insurance,” our entitlement system may well encourage Americans to raise smaller families than they otherwise would.

It is also worth noting that at times there is an open conflict between the interests of the Social Security system and those of the Nation. Teenage pregnancies increase the size of tomorrow's potential labor force — and thus reduce projected Social Security cost rates. Yet no one argues we should encourage more out-of-wedlock births. Illegal immigration is at the center of a political firestorm. Yet SSA assumes that a long-term violation of immigration policy — to the tune of 200,000 illegal immigrants annually — will indefinitely help prop up the system's balance sheet.

These disjunctures are worth reflecting on, since, more generally, the only future that would give our present entitlement system even the slightest chance of survival is a future that most Americans would at best greet with mixed feelings: surging birth rates, massive immigration, and stagnant life expectancies. Such developments may brighten the annual reports of Social Security's Trustees, but they are neither likely — on the whole — to be welcomed.

## II. THE FORCES DRIVING THE PROJECTIONS

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Each year, the Trustees of the Social Security (OASDI) Trust Funds publish an annual report which includes an analysis of future projected expenses and revenues. These projections are computed by SSA on the basis of long-term economic and demographic assumptions that are approved yearly by the

<sup>10</sup> To be sure, that rate has been slower in 1993 and 1994 than in 1992 — when real Federal health care spending registered an unusual double-digit surge. This is now prompting the CBO to consider lowering its projections of health care spending for the rest of the 1990s. Yet even if it does, this hardly bears on the plausibility of HCEA's long-term Medicare projections, which include real cost growth assumptions that are far lower than any CBO may adopt.

Trustees. The same assumptions are used by the Trustees of the HI (Medicare Part A) and SMI (Medicare Part B) Trust Funds in the expense and revenue projections included in their reports. Currently, the OASDI Trustees produce three sets of scenarios: a “low-cost,” an “intermediate,” and a “high-cost” scenario. Of these, the first is generally dismissed by policy experts because it posits outcomes that are extremely optimistic relative to recent historical experience (sustained productivity growth averaging 1.7 percent annually, for instance). The second scenario is considered the Trustees’ “best estimate” and is used to report Social Security’s official actuarial balance to Congress each April. The third scenario serves as a “stress test” of how our entitlement system might fare if SSA’s intermediate scenario itself proves overoptimistic.

Each SSA scenario consists of future projections for at least two dozen separate economic and demographic variables, including inflation, unemployment, labor force participation, productivity and real earnings growth, fertility, longevity, immigration, and disability rates. The demographic trends determine how many future taxpayers and beneficiaries there will be; the economic trends determine the average taxable income of each future worker and the average monthly benefit of each future beneficiary. In addition to SSA’s economic and demographic assumptions, HCFA’s Medicare scenarios include assumptions about the future growth in real per-beneficiary costs. Generally, the key assumptions in the Social Security and Medicare scenarios fluctuate in the near term before stabilizing at some “ultimate” rate 5 to 25 years from now.

Over the near term, the difference between SSA’s intermediate and high-cost Social Security scenario — 1.5 percent of payroll in the year 2000 — is largely due to macroeconomic effects. Whereas the intermediate scenario is recession-free, the high-cost scenario includes two (relatively mild) downturns later in the 1990s. The spikes in unemployment and dips in real earnings growth that accompany these recessions have a large negative effect on Social Security’s balance sheet. In contrast, the less optimistic demographic assumptions (fertility, mortality, and immigration) built into the high-cost scenario only account for a small share of its extra near-term cost.<sup>11</sup>

11 This sensitivity analysis is based on unpublished computer runs supplied by SSA. It differs from the sensitivity analysis published in the 1994 OASDI Trustees Report in that it measures the impact of changes in assumptions on Social Security’s annual cost rate rather than its long-term “actuarial balance.” The analysis takes SSA’s intermediate scenario (II) as its starting point. Assumptions are varied one at a time to low-cost (I) or high-cost scenario (III) levels and the impact on OASDI’s cost rate (plus or minus relative to the intermediate scenario) is expressed as a share of taxable payroll. The sensitivity analysis trends variables to their “ultimate” values — which means that it does not capture the cyclical developments which explain much of the near-term difference between the intermediate and high-cost scenarios. Whenever this report refers to the difference between two scenarios accounted for by a particular assumption, this means the extent to which varying that assumption gets you from one scenario to the other; all other variables being held constant.



**TABLE 3: DIFFERENCE BETWEEN INTERMEDIATE AND HIGH-COST OASDI PROJECTION ATTRIBUTABLE TO KEY ECONOMIC AND DEMOGRAPHIC ASSUMPTIONS**

|  | 2000 | 2010 | 2020 | 2030 | 2040 | 2060 |
|--|------|------|------|------|------|------|
| Extra High-Cost Projection Cost<br>(as % of payroll) | 1.53 | 1.88 | 2.24 | 3.37 | 4.78 | 8.13 |
| Key Assumptions:                                     |      |      |      |      |      |      |
| Real Earnings<br>(% of extra cost)                   | 14   | 33   | 42   | 36   | 28   | 17   |
| Longevity<br>(% of extra cost)                       | 6    | 15   | 21   | 23   | 26   | 24   |
| Fertility<br>(% of extra cost)                       | -1   | -3   | -1   | 9    | 18   | 32   |
| Immigration<br>(% of extra cost)                     | 2    | 3    | 6    | 7    | 5    | 4    |
| Inflation<br>(% of extra cost)                       | -8   | -9   | -11  | -9   | -6   | -4   |
| Disability<br>(% of extra cost)                      | 5    | 16   | 18   | 14   | 11   | 7    |

**Note:** The first line is the difference between the intermediate and high-cost projection as a percent of taxable payroll. The following lines are the shares of this difference accounted for by each assumption. As noted above, the analysis does not capture the macroeconomic effects which dominate the early years of the high-cost scenario. Also unaccounted for are additional variables — from marriage and divorce rates to labor force participation and unemployment rates — as well as minor interactive effects.

Farther into the future, the SSA projections allow for no macroeconomic effects. Instead, the intermediate and high-cost scenarios diverge slowly but steadily under the cumulative impact of differences in long-term economic and demographic trends. Of all the assumptions driving the projections, fertility, mortality, and productivity (or real earnings growth) are far and away the most important. Over the course of the projection period, however, the relative importance of these three assumptions varies tremendously. In the early decades of the next century, real wage growth dominates decisively — accounting for 42 percent of the difference between the two scenarios in 2020, compared with 20 percent for fertility and mortality combined. Thereafter, the two principal demographic variables come to exercise decidedly more control over our fiscal future — accounting for 44 percent of the difference between the intermediate and high-cost scenarios in 2040 and 56 percent in 2060.

The following two sections discuss the demographic and economic assumptions underlying SSA's projections in greater detail. Most often, the analysis focuses on how adverse high-cost scenario outcomes would affect Social Security's projected cost rate. In cases such as fertility and immigration, however, where more favorable developments than those foreseen in the official intermediate scenario are at

least plausible, the analysis also considers what the impact of low-cost scenario outcomes would be. The final section then turns to a discussion of HCFA's Medicare projections.

### (1) Demographic Assumptions in SSA's Long-Term Scenarios

"Demographics is destiny," Richard Easterland, one of that quantitative art's most famous students, once declared. It's difficult to think of a subject to which his observation better applies than the future viability of our entitlement system. Over the next half-century, the steep projected rise in Social Security cost rates almost exactly tracks the steep projected rise in the ratio of Social Security beneficiaries to covered workers. This is hardly surprising. After all, average Social Security benefits rise at about the same rate as average earnings — and the Social Security cost rate is equal to the number of beneficiaries times their average benefit divided by the number of covered workers times their average taxable earnings.

Among the three forces shaping tomorrow's demographic equation, two are of almost equal importance: the fertility rate, which determines how many future workers there will be paying into the system; and longevity at age 65, which determines how long benefits must be paid over the lifetime of each beneficiary. Assumptions about mortality are important throughout the projection period, accounting for 15 percent of the difference between SSA's intermediate and high-cost projections in 2010, a share that rises steadily to 26 percent in 2040. Until the mid-2020s, changes in fertility will have only a barely perceptible impact on projected Social Security cost rates. Thereafter, however, assumptions about fertility rise to dominate the projections — accounting for 18 percent of the difference between the intermediate and high-cost scenarios in 2040 and 32 percent in 2060. Net immigration, which acts somewhat like a higher fertility rate, is the third (and much less important) factor in tomorrow's demographic equation.

*Longevity.* It is common knowledge that the life expectancy of the average American has increased dramatically over the past century. What is less appreciated is that until the postwar era most of the increase was due to improvements in treating the diseases of infancy and childhood. Life expectancy at age 65 grew little. Since the 1940s, however, remarkable progress in combatting the diseases of old age has caused elderly longevity to soar. In 1935, when Social Security was established, average male and female life expectancy at age 65 was 12.6. Today it is 17.2 — over a third longer.

At times the improvements in elderly longevity have been so rapid that they have caught the official government agencies responsible for making demographic forecasts entirely by surprise. In 1964, the National Center for Health Statistics was reporting that U.S. death rates had "reached the point where further decreases as experienced in the past cannot be anticipated." This pessimism proved to be unfounded. Starting in the late 1960s, a period of especially rapid gains in elderly longevity began, and between 1968 and 1982 two years were added to elderly life expectancy — as much as during the three decades from 1935 to 1968. When improvements in death rates then slowed during the balance of the 1980s, many experts again supposed that the era of rapid increases in elderly longevity was over. That supposition seems to have been premature. Beginning in 1989, gains in life expectancy at age 65 once more sped up.

The growing longevity of the elderly has enormous implications for entitlement spending. For Social Security, each extra year of life expectancy at age 65 means an additional year during which benefits must be paid. As for Medicare (and Medicaid), the arithmetic of longer lifespans means not just more beneficiaries, but a rising average cost per beneficiary. The reason is that longer life expectancies result in a disproportionate growth in the number of elderly in the oldest age brackets — a phenomenon demographers call the “aging of the aged.” Since rates of morbidity and disability rise with age, this explosion in the old-old population is translated directly into higher average health care costs. For acute care, the ratio of spending on the 85-and-over age bracket to spending on the 65 to 69 age bracket is 2 to 1. For long-term care, it is over 20 to 1.

In light of the enormous past improvements in elderly longevity — and the prospects for continued medical advances on so many fronts — SSA’s projection of future gains in elderly life expectancy seems extremely conservative. Over the past 20 years, average male and female life expectancy at age 65 has grown by 0.95 years per decade. In SSA’s intermediate scenario, the improvement is projected to be just 0.44 years per decade — less than half the historical pace. Even SSA’s high-cost scenario posits a future rate of improvement in elderly longevity that is less than what we have achieved historically: 0.84 years per decade. We must ask ourselves: Does SSA’s official projection reflect a reasonable set of expectations? Or, in the case of longevity, is its “worst-case” scenario not only something we should hope for, but something we should prudently expect?

To the extent there is any justification for the pessimism in SSA’s official scenario, it lies in the seemingly reasonable conviction that longevity cannot keep climbing at a rapid pace indefinitely. At some point, we feel instinctively, medical progress must push us up against the natural limit to the human lifespan. The conventional wisdom among biologists and health experts is that this is indeed the case. It is well known that many measures of the efficiency of human organs decline linearly after about age 30 regardless of an individual’s general health. Given this fact, it is reasonable to assume that everyone’s reserve physiological strength must eventually reach a level at which even a minor trauma or illness will be life threatening. If fatal, we call this “dying of old age.” Either because genetic material becomes damaged over time or because it is “preprogrammed” to reproduce itself with accumulating imperfections, many experts believe medicine will never be able to alter the fundamentals of the aging process.

In recent years, however, other experts have begun to ask searching questions about this assumption. One school of thought accepts a fixed genetic limit to the human lifespan, but stresses the difference between knowing that a theoretical limit exists and understanding at what age, precisely, such a limit is of practical significance. The fact that the elderly keep living longer, in other words, may simply suggest that the limit is considerably higher than we once assumed — instead of the biblical “three-score and ten,” perhaps an average of 85 or even higher.

Another school of thought rejects the so-called fixity thesis altogether, since its acceptance would imply a number of specific and necessary consequences that are not borne out by observation. The fixity

thesis would imply, for instance, that we should be making far less improvement in the longevity of those elderly who live beyond 85 (and who have thus passed or at least are much nearer to the average limit to the human lifespan) than in the longevity of the elderly who are under 85. It would also imply that the variation in the lifespan of the elderly should narrow as they begin to “bunch up” against this limit.

Over the last couple decades, neither of these consequences has been borne out. Between 1968 and 1987, the mortality rates of men in their 80s and 90s showed as much improvement as the mortality rates of men in the 75 to 79 age bracket. The chances of a 90-year-old man living to 95, in other words, have risen by about the same percentage as the chances of a 75-year-old man living to 80. For women, the improvement in mortality rates in every age bracket over 75 has actually been greater than that in younger elderly age brackets. At the same time, the overall variation in elderly lifespans has remained virtually unchanged.

While there may well be some sort of ultimate limit to the human lifespan, such a limit appears to work in a far more complex fashion than conventional theories of aging posit. It may vary with heredity and interact in subtle ways with the lifelong health, diet, and lifestyle of individuals. Most important, it seems to be set at a much older age than we once thought, since there is little statistical evidence that we are yet approaching it. In summing up the results of recent research on the human lifespan sponsored by the National Institute on Aging, Duke demographer James Vaupel notes that “What’s now emerging is a new paradigm of aging.” When it reports early next year, the technical panel to the Advisory Council on Social Security may second this view by recommending that SSA make substantial upward revisions in its longevity assumptions.

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**TABLE 4: OFFICIAL SSA SCENARIO WITH VARIOUS LONGEVITY ASSUMPTIONS  
(OASDI as a Share of Taxable Payroll)**

|                                  | 2000           | 2010           | 2020           | 2030           | 2040           | 2060           |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Official Intermediate Projection | 11.77          | 12.27          | 14.96          | 17.22          | 17.42          | 18.48          |
| High-Cost Longevity Projection   | 0.09<br>11.86  | 0.28<br>12.55  | 0.46<br>15.42  | 0.79<br>18.01  | 1.23<br>18.65  | 1.95<br>20.43  |
| Low-Cost Longevity Projection    | -0.10<br>11.67 | -0.29<br>11.98 | -0.49<br>14.47 | -0.78<br>16.44 | -1.13<br>16.29 | -1.56<br>16.92 |

**Note:** 1994 OASDI cost rate: 11.64 percent of taxable payroll. The first projection series is SSA’s intermediate (II) projection. To generate the high- and low-cost longevity projections, the intermediate scenario’s assumed percentage decreases in death rates were varied to the percentage decreases assumed in SSA’s scenarios III and I, respectively. The first line of each alternate projection series shows the resulting change in OASDI costs (relative to the intermediate baseline) as a share of payroll; the second shows total OASDI costs as a share of payroll.

What would greater-than-projected improvements in mortality mean for Social Security? If future longevity gains were to match those forecast in SSA’s high-cost scenario, it would add 0.28 percent of

payroll to SSA's intermediate cost projection by 2010 — a figure that would rise to 0.46 percent by 2020, 1.23 percent by 2040, and 1.95 percent by 2060. And remember: SSA's high-cost scenario assumes the best we'll be able to achieve in the future is still not as good as what we've already achieved in the past.

*Fertility.* H.L. Mencken once quipped that “The prophesying business is like writing fugues; it is fatal to everyone save the man of absolute genius.” He might have had the pitfalls of projecting fertility in mind. Over the past 50 years, the official agencies responsible for population forecasts have repeatedly missed fundamental shifts in U.S. fertility patterns. Neither the Census Bureau nor SSA predicted the Baby Boom in the 1940s — and both agencies were slow to recognize its significance once under way. When the Baby Boom abruptly ended in the early 1960s, demographers were again caught entirely by surprise.

Today some experts are wondering whether American families are once more about to explode the projections. After plunging from its twentieth-century peak of 3.7 births per woman in 1957, the U.S. fertility rate hovered in a narrow band between about 1.75 and 1.85 throughout most of the 1970s and 1980s. The shift to low fertility was so decisive that the Census Bureau and SSA eventually ratcheted down the long-term assumptions in their population forecasts accordingly (to 1.8 and 1.9, respectively). But no sooner had fertility pessimism become accepted wisdom than the number of U.S. births began to surge. In 1989 the number passed 4 million for the first time since the end of the Baby Boom. It has been above 4 million every year since.

Much of this surge in births is due to the unusually large number of women now passing through their childbearing years. It is an expected “echo effect” of the 1950s and 1960s Baby Boom, and as such has little long-run significance for Social Security. What affects Social Security's payroll tax rate is the relative size of the working-age and retired populations, and this depends primarily on the number of births per woman (or fertility rate). The surprise is that the U.S. fertility rate has also risen significantly — to between 2.0 and 2.1 since the late 1980s.

The enthusiastic pronouncements of the media notwithstanding, a fertility rate of 2.0 to 2.1 — barely enough to ensure population replacement — hardly signifies that a new Baby Boom is under way. Still, sustained fertility at this higher level would have a positive impact on projected long-term Social Security cost rates in the next century. The Census Bureau now believes that the recent rise in the U.S. fertility rate will be sustained and has incorporated this assumption into its latest population projections. The ultimate assumption in SSA's intermediate cost projection, however, remains set at 1.9. Should SSA follow Census' lead and endorse the new fertility optimism?

At first glance, the case for anticipating a continuation of somewhat higher fertility than the average experience of the past two decades seems persuasive. Fertility, after all, has been above 1.9 every year for the past half-dozen years. Increases in birth rates, moreover, are now being registered among women at all childbearing ages.

There are reasons to believe, however, that the optimism is premature. Indeed, it is possible that the recent rise in the U.S. fertility rate is largely (or even entirely) due to shifts in the timing of women's births, not changes in the total number of births that each woman will have. If this is so, it is a one-time blip that will have little or no effect on future Social Security cost rates.

The only way to be certain whether the number of lifetime births per woman has really risen would be to observe what is called "completed cohort fertility." Unfortunately, this can only be known after the fact, at the end of each cohort's childbearing years. Not being omniscient, demographers ordinarily measure what is called the "total fertility rate." The total fertility rate is simply the sum of the age-specific birth rates of all women in a given year. In other words, the total fertility rate of 2.05 in 1992 is the number of children that would be born to a woman if, throughout her childbearing years, she were to experience the age-specific birthrates registered in that year. If successive cohorts of women exhibit the same childbearing patterns, the total fertility rate will closely track the actual completed fertility of each successive generation of women. If behavior changes, however, it will not.

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Consider an example of how behavioral change can cause a divergence between cohort fertility and the total fertility rate. During the 1970s, young Baby Boom women not only decided to have fewer children than their mothers, they decided to have their fewer children later. The total fertility measure in the 1970s thus summed the low age-specific birth rates of Baby Boom women in their 20s with the low age-specific birth rates of an older generation of women in their 30s and early 40s who had already had most of their children at earlier ages. Only during the 1980s, when age-specific birth rates among women in their 30s and early 40s suddenly began to rise, did it become clear that the total fertility measure had somewhat understated the eventual lifetime births of Baby Boom women.

It is possible that shifts in the timing of births are now working in the opposite direction. Even as birth rates among 30-something women began climbing in the early 1980s, rates among younger women continued to decline. Beginning in 1987, however, birth rates among women in their 20s started to rise as well. It is this simultaneous increase in birth rates across all age brackets that has now pushed the U.S. total fertility rate to between 2.0 and 2.1. Whether this rise in total fertility means that the actual completed fertility of today's young "Generation X" will be higher than that of their Baby Boom elders is not clear. If one supposes that today's early-birthing 20-somethings will later have babies in their 30s and 40s at the same rates as Baby Boom women have, it does. But it may simply be that young women now prefer to have their babies a bit earlier in life without increasing the total number of children they plan to have (perhaps having observed their next elders struggle to juggle jobs and babies at older ages).

Survey data on the number of lifetime expected births supports the supposition that shifts in the timing of births are at least partly responsible for rising total fertility. Each year the Census Bureau asks women aged 18 to 34 about the number of children they plan to have. The expectations of women now in their 20s and women now in their 30s are virtually identical: an average of 2.1 children. Historically, we know two things about birth expectations data. They have closely tracked swings in

eventual cohort fertility; and they have consistently *overestimated* it by about 0.15 to 0.25 children per woman.

Another reason to question the new fertility optimism involves the wide variation in birth rates among different U.S. population groups. The total fertility rate of non-Hispanic White women is now only about 1.85. The fertility rate of Black women is about 2.5; that of Hispanic women is about 2.9. If one assumes that these differentials are permanent, today's total fertility rate of 2.05 will drift upward in the decades ahead due to the relatively larger projected growth of the Black and Hispanic populations. If one instead assumes that the birth rates of Black and Hispanic Americans will eventually converge with the birth rates of non-Hispanic White women, total fertility will come down.

It is well known that differences in fertility between races are largely attributable to differences in family income and educational attainment. Among Black and White women with family incomes above the national median, for instance, birth rates are now virtually identical. To suppose that fertility rates in the future will not converge is to suppose that today's income and educational inequalities are indelible features of America's economic and social landscape. This is hardly a happy assumption.

In short, the implications of recent trends in U.S. fertility are open to interpretation. But let's grant for a moment that the optimists are right and that we can anticipate somewhat higher levels of fertility for the indefinite future. Would that spare us tough choices about entitlements?

Hardly. Unlike improvements in mortality, the impact of higher fertility on Social Security will barely be registered for more than a generation. In fact, until the 2020s, its primary effect would be to increase the number of child beneficiaries — and hence add to costs. Only in the 2030s, as the cumulative impact of higher birth rates begins to swell the size of the workforce, would higher fertility begin to have a large positive effect on Social Security's balance sheet. Even then, however, this effect will not be large enough to erase Social Security's long-term cost growth. If future fertility were to weigh in at 2.2 (the level anticipated in SSA's low-cost scenario), it would cut SSA's intermediate cost projection by 0.76 percent of payroll in 2040 — or by 13 percent of its scheduled rise. By 2060, it would cut the intermediate cost projection by 2.10 percent of payroll — or by 31 percent of its scheduled rise. Still higher levels of fertility would of course have larger impacts. But to erase the entire long-term cost growth that is projected under SSA's intermediate scenario would require that the fertility rate surge to about 3.0. If changes in mortality rates (or some other variable) at the same time added to costs, the required fertility swing would be even larger.

**TABLE 5: OFFICIAL SSA SCENARIO WITH VARIOUS FERTILITY ASSUMPTIONS  
(OASDI as a Share of Taxable Payroll)**

|                                  | 2000           | 2010           | 2020           | 2030           | 2040           | 2060           |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Official Intermediate Projection | 11.77          | 12.27          | 14.96          | 17.22          | 17.42          | 18.48          |
| High-Cost Fertility Projection   | -0.02<br>11.75 | -0.06<br>12.21 | -0.03<br>14.93 | 0.29<br>17.51  | 0.87<br>18.29  | 2.61<br>21.09  |
| Low-Cost Fertility Projection    | 0.01<br>11.78  | 0.06<br>12.33  | 0.03<br>14.99  | -0.26<br>16.96 | -0.76<br>16.66 | -2.10<br>16.38 |

**Note:** 1994 OASDI cost rate: 11.64 percent of taxable payroll. The first projection series is SSA's intermediate (II) projection. To generate the high- and low-cost fertility projections, the intermediate scenario's ultimate fertility assumption (1.9) was varied to 1.6 and 2.2, respectively (the rates assumed in SSA's scenarios III and I). The first line of each alternate projection series shows the resulting change in OASDI costs (relative to the intermediate baseline) as a share of payroll; the second shows total OASDI costs as a share of payroll.

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No one anticipates such an outcome. As it turns out, the Baby Boom of the mid-1940s to mid-1960s represents the only significant interruption in a long-term trend toward lower birth rates that stretches out over the past two centuries. From over 7.0 at the beginning of the nineteenth century, the U.S. total fertility rate declined fairly steadily to 3.6 in 1900 and to 2.5 in 1930 — then dropped more rapidly to between 2.0 and 2.1 during the Great Depression. In light of this secular trend, most demographers have come to believe that it was the postwar Baby Boom that was highly unusual, not the low fertility of the past two decades. They may disagree about the exact level of future fertility we can expect. But their disagreement is over a relatively narrow range of assumptions.

The ultimate fertility rate of 2.2 assumed in SSA's low-cost projection is toward the upper edge of this range. What about the lower edge? SSA's high-cost scenario posits that the U.S. fertility rate will gradually decline to 1.6 by the year 2020 — an outcome that would add roughly as much to future Social Security cost rates as a fertility rate of 2.2 would take away. If 1.6 seems an extraordinarily low assumption, consider this: The average fertility rate in the other G-7 countries has sunk to 1.6 *today*. In Germany, the fertility rate is below 1.5; in Italy it is below 1.4.

The United States may never know such low fertility. But to hope that fertility will rise much above current levels seems unrealistic in view of the host of social and economic trends tending to push it the other way. These include increased female participation in the labor force, the rising percentages of women who have never married, the delayed age of first marriages, high divorce rates, and the increased availability of birth control and abortion. Historically, we also know that parents' decisions about whether to have few or many children are critically affected by three conditions: the cost in time and money of raising a child; real after-tax family incomes; and the extent to which parents will have to rely on a child to assume personal responsibility for their security in old age. It is not hard to see each of these conditions is currently shifting in a direction that makes a new Baby Boom unlikely.



*Immigration.* So we arrive at immigration, the third major demographic variable underlying SSA's long-term cost projections. In its intermediate scenario, SSA currently projects an ultimate annual level of net immigration of 850,000 — the sum of 650,000 net legal immigrants plus 200,000 illegals. In its low-cost scenario, it projects that annual net immigration will be 1,100,000 (of which 350,000 will be illegal immigrants). In its high-cost scenario, it projects that annual net immigration will be 700,000 (of which 100,000 will be illegal immigrants).

In setting the level of legal immigration in its intermediate scenario, SSA simply assumes that the quotas established in the Immigration Act of 1990 will apply in future years. Its assumption of 200,000 annual illegal immigrants reflects the Census Bureau's current best estimate of annual illegal immigration. Whether one finds SSA's intermediate assumptions reasonable thus depends on whether one believes that current policy will continue indefinitely.

It is not inconceivable that future Congresses will raise quotas above those established in current law. If net immigration were to weigh in at the level envisioned in SSA's low-cost scenario, would this have a major impact on projected long-term Social Security cost rates? The answer is no. Immigration may have certain broad economic benefits. But, despite what is often asserted, it cannot substantially mitigate the costs of an aging society. To be sure, higher immigration acts somewhat like a higher fertility rate — both because the average age of immigrants is lower than that of native-born Americans and because immigrants tend to have higher birth rates. It thus initially increases the size of the workforce relative to the size of the retired population — and hence lowers payroll cost rates. But most immigrants will eventually become Social Security (and Medicare) beneficiaries — and hence add to the cost side of the equation as well. For this reason, the long-term impact of higher immigration is modest compared with even small changes in fertility or mortality rates.

Consider the following numbers. A sustained rise in annual net immigration to 1,100,000 (the level in SSA's low-cost scenario) would reduce Social Security's projected cost rate by just 0.20 percent of payroll in 2020, 0.32 percent of payroll in 2040, and 0.41 percent of payroll in 2060. To erase even one-quarter of the overall cost growth in the intermediate scenario between now and 2040 (5.8 percent of payroll) would require a huge and potentially destabilizing increase in net immigration to about 2 million annually. This is about twice the number of immigrants who arrived annually on U.S. shores at the turn of the twentieth century, when immigration was at its all-time historical high.

**TABLE 6: OFFICIAL SSA SCENARIO WITH VARIOUS IMMIGRATION ASSUMPTIONS  
(OASDI as a Share of Taxable Payroll)**

|                                  | 2000           | 2010           | 2020           | 2030           | 2040           | 2060           |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Official Intermediate Projection | 11.77          | 12.27          | 14.96          | 17.22          | 17.42          | 18.48          |
| High-Cost Immigration Projection | 0.03<br>11.80  | 0.06<br>12.33  | 0.13<br>15.09  | 0.23<br>17.45  | 0.23<br>17.65  | 0.30<br>18.78  |
| Low-Cost Immigration Projection  | -0.04<br>11.73 | -0.10<br>12.17 | -0.20<br>14.76 | -0.32<br>16.90 | -0.32<br>17.10 | -0.41<br>18.07 |

**Note:** 1994 OASDI cost rate: 11.64 percent of taxable payroll. The first projection series is SSA's intermediate (II) projection. To generate the high- and low-cost immigration projections, the intermediate scenario's annual net immigration assumption (850,000) was varied to 700,000 and 1,100,000, respectively (the levels assumed in SSA's scenarios III and I). The first line of each alternate projection series shows the resulting change in OASDI costs (relative to the intermediate baseline) as a share of payroll; the second shows total OASDI costs as a share of payroll.

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The reality, of course, is that lower (not higher) immigration is the more likely development. By the standards of the past three-quarters of a century, today's level of legal immigration is already quite high. It is no political secret that a large and growing majority of Americans favor restricting immigration quotas; few are vocal advocates of liberalizing them. As for illegal immigration, it is at the center of a political firestorm. While the eventual upshot of Proposition 187 and other anti-immigration initiatives is uncertain, one wonders whether it is realistic to assume (as SSA does) that, throughout the indefinite future, an additional 200,000 (payroll-tax-paying) illegal aliens will become available annually to help shore up the solvency of the Social Security system.

## (2) Economic Assumptions in SSA's Long-Term Scenarios

Of all the economic assumptions underlying SSA's projections, productivity growth is by far the most important in determining the future cost of the Social Security system. The reason is straightforward. Over the long term, productivity directly determines the growth in real earnings, which in turn establishes the future real tax revenue available to pay benefits. Although over the long run the average Social Security benefit also rises at about the same rate as average earnings, the effect of productivity on benefits is smaller than that on taxable payroll since only initial benefit awards are indexed to wages.

Changes in labor force participation rates can also have an impact on Social Security costs. A higher (or lower) rate means that there will be more (or fewer) workers paying payroll taxes. Among the elderly in particular, a higher (or lower) participation rate also means there will be fewer (or more) retirees receiving benefits. Assumptions about unemployment and inflation are only marginally important in and of themselves. Interestingly, higher future inflation is somewhat beneficial to Social Security's solvency. This is

because the impact of inflation on payroll tax revenue (through rising wages) takes place immediately, whereas the positive impact of inflation on benefit outlays (through annual COLA adjustments) takes place with a lag. Over the long run, however, the overall effect is relatively small, and is usually overwhelmed by the slower real earnings growth that normally accompanies higher inflation. SSA's high-cost scenario, for instance, assumes an ultimate inflation rate that is 1 percent higher than that in its intermediate scenario. At no point over the next half-century does this lower Social Security's cost rate by more than one-third of a percent of payroll. As for higher unemployment, it of course hurts Social Security by reducing taxable earnings — but again, over the long run, the effect is trivial next to productivity and real earnings growth.

Real interest rates determine the annual earnings of the OASDI Trust Funds. But Social Security Trust Fund balances cannot be effectively saved to defray the system's future costs. All future Social Security expenditures must be financed out of revenues that are raised tomorrow. Since the real interest rate assumptions included in SSA's scenarios have no effect on either projected Social Security expenditures or projected Social Security payroll (and income) tax revenues, they are not relevant to this analysis.

*Productivity and Real Earnings:* Perhaps the most enduring economic development of the past two decades has been the dramatic slowdown in U.S. productivity growth. From the early 1970s to the early 1990s, output per worker-hour in the total U.S. economy — the ultimate source of living standard growth — grew at the average annual rate of just 1.0 percent, compared with 2.5 percent over the earlier postwar period. The record is equally dismal no matter what end years or subperiod one chooses. In fact, over no 10 consecutive years since 1973 has average productivity weighed in over 1.2 percent.

Countless blue-ribbon commissions have studied the U.S. productivity slowdown — without reaching any definitive consensus on what caused it or whether it can be turned around. Apparently SSA knows something the rest of us don't. In its intermediate scenario, it projects that productivity will accelerate indefinitely at an average annual rate of 1.4 percent throughout the next century. Even in its high-cost scenario — supposedly a “worst case” — it projects that productivity will weigh in at 1.1 percent, slightly over its historical average for the past 20 years.

Few economists would disagree that the improvement foreseen in SSA's intermediate scenario is possible. The question is whether it constitutes a prudent basis for assessing the affordability of today's entitlement promises.

To be fair, some experts interpret the unusually large productivity gains of 1992 and 1993 as evidence that the problem of slow growth is indeed behind us. But productivity typically surges during the early phases of an economic expansion. Every time that it does, there is talk of a “productivity renaissance.” It is unclear how much — if any — of the recent gains in productivity will prove to be more than cyclical. But even if they do presage a real turnabout, they would have to point to a permanent 35 to 40 percent improvement in average productivity just to reach the outcome already built into SSA's intermediate scenario.

Is such a shift at all likely? A number of developments would seem to argue cautious optimism. Several of the factors that initially impaired economic efficiency and depressed productivity during the 1970s are no longer important today (high energy prices and high and fluctuating levels of inflation, for instance). At least one has reversed itself. As Baby Boomers and first-time women job seekers flooded the workforce beginning in the late 1960s, it became younger and less experienced. Today the middle-aging of the Baby Boom is raising the median age of the workforce. In addition, it appears that the ongoing investment of businesses in new computer technologies over the past decade is finally being translated into efficiency gains.

Other developments, however, suggest that the outlook is not so rosy. Numerous studies have documented an emerging gap between the skills of entry-level workers and the demands of an information-age economy. The economy-wide shift from manufacturing to services, where technological advances are less easily translated into productivity gains, continues unabated. Perhaps most important, rates of capital formation are plumbing new historical lows. From an average of 8.1 percent of GDP in the 1960s, U.S. net national savings dropped to 7.2 percent in the 1970s, 3.9 percent in the 1980s, and 1.7 percent thus far in the 1990s. Net domestic investment has also plunged — from 7.3 percent of GDP in the 1960s to 2.6 percent in the 1990s. Needless to say, such razor-thin rates of savings and investment are hardly consistent with the buoyant productivity forecast in SSA's intermediate scenario. Yet on our current trajectory, we are likely to see less savings and investment in the years ahead, not more. In fact, absent major changes in entitlement policy, resurgent budget deficits will push U.S. net national savings well below zero within the next 20 years.

Productivity may be the ultimate determinant of living standards. It is the growth in worker earnings, however, that directly determines the size of taxable payroll — the denominator in Social Security (and Medicare) cost rates. In its intermediate scenario, SSA assumes that average real annual earnings in Social Security-covered employment will grow at an ultimate rate of 1.0 percent; in its high-cost scenario, it assumes they will grow at a rate of 0.5 percent.

**TABLE 7: OFFICIAL SSA SCENARIO WITH VARIOUS REAL EARNINGS GROWTH ASSUMPTIONS  
(OASDI as a Share of Taxable Payroll)**

|                                    | 2000           | 2010           | 2020           | 2030           | 2040           | 2060           |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Official Intermediate Projection   | 11.77          | 12.27          | 14.96          | 17.22          | 17.42          | 18.48          |
| High-Cost Real Earnings Projection | 0.22<br>11.99  | 0.63<br>12.90  | 0.93<br>15.89  | 1.21<br>18.43  | 1.33<br>18.75  | 1.39<br>19.87  |
| Low-Cost Real Earnings Projection  | -0.22<br>11.55 | -0.59<br>11.68 | -0.86<br>14.10 | -1.10<br>16.12 | -1.20<br>16.22 | -1.26<br>17.22 |

**Note:** 1994 OASDI cost rate: 11.64 percent of taxable payroll. The first projection series is SSA's intermediate (II) projection. To generate the high- and low-cost real earnings growth projections, the intermediate scenario's ultimate real earnings growth assumption (1.0 percent) was varied to rates of 0.5 percent and 1.5 percent, respectively (the rates assumed in SSA's scenarios III and I). The first line of each alternate projection series shows the resulting change in OASDI costs (relative to the intermediate baseline) as a share of payroll; the second shows total OASDI costs as a share of payroll.

These projected rates of growth in annual earnings are slower than the corresponding rates of growth in hourly productivity in the SSA scenarios (1.4 and 1.1) for two reasons. First, SSA assumes that the historical trend toward shorter average workweeks will continue, albeit at a slower pace than over most of the postwar period. Second, it also projects that earnings will continue to shrink as a share of total compensation — an almost inevitable outcome given the rising cost of health benefits. During the 1970s, both of these secular trends were especially rapid. As a result, tepid productivity was insufficient to sustain any growth in take-home pay, and average real annual earnings dropped. During the 1980s, however, earnings played catchup, growing at an only somewhat slower pace than productivity. Given these divergent patterns, it is difficult to judge whether SSA's assumptions about the future linkages between productivity and real earnings are optimistic or pessimistic. It is worth noting, however, that in both of SSA's projection scenarios the outlook for earnings growth relative to productivity growth is more favorable than the average experience over the past two decades.

The differences in productivity growth and in real earnings growth between SSA's two scenarios may seem small. But even such small differences can have profound effects indeed. Until the 2040s, slower real earnings growth explains a larger share of the difference between SSA's intermediate and high-cost scenarios than any other variable. If real earnings growth were to weigh in at 0.5 instead of 1.0, it would already be adding 0.63 percent of payroll to the intermediate scenario cost rate by 2010 — a figure that would grow to 0.93 percent of payroll by 2020 and to 1.33 percent of payroll by 2040. And remember: This is hardly a pessimistic outcome. It assumes that future productivity will be as good as in the recent past, not worse.

*Labor Force and Employment:* Demographic assumptions about fertility and immigration — and to a lesser extent mortality — determine the size of the future working-age population. But of course not all working-age people are employed. To project taxable payroll, SSA must therefore also project labor force participation and unemployment.

In its intermediate scenario, SSA sets its ultimate (age-sex adjusted) unemployment rate at 6.0 percent — a plausible assumption just slightly under the average for the last decade. It is possible, of course, to imagine unemployment weighing in somewhat higher or lower. But even if average unemployment rates in the next century prove to be as high as 7.0 percent or as low as 5.0 percent — the assumptions in SSA's high-cost and low-cost scenarios — it would have only a minor effect on long-term Social Security cost rates: about 0.2 percent of payroll one way or the other in 2040.<sup>12</sup>

At least in theory, changes in labor force participation rates could have a much larger impact on Social Security. Just as some optimists look to higher immigration to mitigate the costs of an aging society, others therefore hope for higher labor force participation. One place where large increases are sometimes anticipated is among women, whose overall rate of participation, though at an historical high today, remains substantially below that of men. Another place is the elderly. Among men aged 65 to 69, labor force participa-

<sup>12</sup> The effects of varying unemployment and labor force participation rate assumptions are author's estimates. SSA does not prepare sensitivity analysis for these variables.

tion has fallen from 60 percent in 1950 to 25 percent in 1993. The rates for middle-aged men have dropped sharply as well: for men aged 55 to 59, from 92 to 78 percent; and for men aged 60 to 64, from 80 to 54 percent.

SSA, however, declines to take an optimistic view of possible shifts in rates of labor force participation. Under its intermediate scenario, it projects that (age-adjusted) participation rates for women will rise, but only slightly. As for the participation rates of elderly men, SSA projects they will register a further (though gradual) decline.

140 These conservative expectations seem well founded. After a vertiginous rise during the 1960s and 1970s, female labor force participation rates grew more slowly in the 1980s and have been perfectly flat in the 1990s. Unless one supposes further radical changes in the organization of work life and family life, there is little reason to anticipate that future rates will climb much above this plateau. For its part, the precipitous drop in elderly labor force participation over the postwar era has coincided exactly with the introduction and liberalization of Social Security. Absent major changes in public policies that subsidize retirement, it is difficult to see why elderly labor force participation should rise. Certainly there is nothing obvious on the horizon that points to such an outcome — including the scheduled rise in Social Security's Normal Retirement Age to 67. (Remember: Early retirement with reduced benefits will still be available at age 62 even when the new Normal Retirement Age is fully phased in.)

It is perhaps worth noting — as one Commission member has — that current Bureau of Labor Statistics (BLS) expectations about labor force and employment growth are somewhat more buoyant than SSA's. By 2005, in fact, BLS's "moderate" scenario puts employment about 6 million higher than SSA's intermediate scenario. All other things being equal, an extra 6 million employed workers a decade from now would cut projected Social Security cost rates by about 0.5 percent of payroll.

But all other things are unlikely to be equal. Ordinarily, a marginal increase in employment will not yield a proportional increase in GDP and taxable payroll because the productivity of additional workers is likely to be less than average. BLS implicitly recognizes this in setting its productivity assumption lower than SSA does. In fact, BLS's assumption is sufficiently low so that the growth rates in real GDP and real wages it projects are actually less than those SSA projects in its intermediate scenario. In other words, the BLS projection takes away with one hand what it gives with the other. If Social Security cost rates were calculated on the basis of the BLS projection as a whole, they would be higher than in SSA's intermediate scenario. This is hardly the sort of optimism we should hope for.

### **(3) Health Care Assumptions in HCFA's Long-Term Scenarios**

It is well known that health benefit programs constitute much of the projected growth in entitlements over the coming decades. From 5.1 percent of payroll in 1994, the Health Care Financing Administration (HCFA) projects that the cost of Medicare (HI and SMI) alone will rise to 13.4 percent

in 2020 and 18.4 percent in 2040. So rapid is this growth that many policymakers assume the official forecasts must embody pessimistic (or at least business-as-usual) assumptions about future trends in health care spending. The conclusion they draw is that reform, if only we undertake it, could easily ratchet the projections down.

The truth is that even a strict cost-control effort will not be able to keep Medicare from growing rapidly as a share of payroll in the decades ahead. Let's assume, for example, that over the next half-century the average growth rate in real Medicare outlays per enrollee were to weigh in at just half its historical rate. Would this, to borrow a phrase from former Secretary of Health and Human Services Margaret Heckler, "break the back of the health care inflation monster?" Hardly. As it turns out, this is precisely the outcome that HCFA assumes in calculating its official projection — with its terrifying forecast that Medicare costs will soar to 18.4 percent of payroll by 2040.

It is impossible to understand HCFA's projections without first disaggregating the Medicare cost growth it forecasts into its various components. The first of these components is the cost growth due to the greater number of beneficiaries. The second is the cost growth due to the older-age composition of the beneficiary population, or the "aging of the aged." The third is the cost growth due to economy-wide inflation. All three of these components (as well as the size of the real tax base that will be available to pay for future benefits) are determined by SSA's demographic and economic scenarios. Taken together, they answer the question: How much will Medicare cost in the future if it simply gives the same amount of inflation-adjusted care to each beneficiary at each age as it does today?

Any projection of Medicare costs, however, must obviously take into account a fourth factor: the expected growth in spending above and beyond any consideration of economy-wide inflation or the future numbers and ages of beneficiaries. HCFA calculates its assumptions about growth in real spending per (age-adjusted) beneficiary according to a complex and interacting array of variables, including "labor factors," "nonlabor factors," "unit input intensity allowance," and "volume of services." But it is not necessary to understand the details of this methodology in order to assess the optimism or pessimism of HCFA's projections. It is enough to calculate the extra spending growth the projections allow for after taking into account economy-wide inflation and the number and age of enrollees, then compare this "extraordinary" growth to past experience.<sup>13</sup>

Ever since Medicare was established, the growth in real spending per (age-adjusted) beneficiary has always been an important (and explosive) component of total cost growth. Since 1970, in fact, that growth has averaged 5.0 percent annually for both parts of Medicare combined. In no five-year period since 1970 has it averaged less than 3.0 percent. This has been true, moreover, despite major efforts at cost control — from the introduction of DRGs to SMI's new relative value fee schedule. As it turns out,

<sup>13</sup> Calculations of the real spending growth residual per (age-adjusted) beneficiary in HCFA's projections are author's calculations. To "back out" this residual, the other components of projected Medicare cost growth were first accounted for using (1) SSA's population projections by detailed elderly age bracket; (2) unpublished HCFA data on age-specific Medicare costs; and (3) SSA's GDP deflator.

the designation of real per-beneficiary spending growth as “extraordinary” is therefore misleading. It is really quite ordinary.

**TABLE 8: HCFA ASSUMPTIONS VERSUS HISTORICAL EXPERIENCE**  
**(Average Annual “Extraordinary” Percentage Increase in Medicare Costs)**

|         | <b>Intermediate<br/>Projection</b> | <b>High-Cost<br/>Projection</b> | <b>History</b> |
|---------|------------------------------------|---------------------------------|----------------|
| 1970-75 |                                    |                                 | 4.6            |
| 1975-80 |                                    |                                 | 5.9            |
| 1980-85 |                                    |                                 | 6.3            |
| 1985-90 |                                    |                                 | 3.0            |
| 1990-95 |                                    |                                 | 5.4            |
| 1995-00 | 5.2                                | 4.9                             |                |
| 2000-05 | 5.0                                | 5.9                             |                |
| 2005-10 | 4.2                                | 4.9                             |                |
| 2010-15 | 2.9                                | 3.9                             |                |
| 2015-20 | 1.4                                | 2.5                             |                |
| 2020-25 | 1.0                                | 1.9                             |                |
| 2025-30 | 1.1                                | 1.5                             |                |
| 2030-35 | 1.2                                | 0.9                             |                |
| 2035-40 | 1.1                                | 0.4                             |                |

**Note:** Medicare includes both HI (Part A) and SMI (Part B). “Extraordinary growth” is the growth in real per age-adjusted beneficiary costs (*i.e.*, cost growth in excess of that explained by demographic change and economy-wide inflation as measured by the GDP deflator).

In light of this experience, HCFA’s assumptions about the future growth in real spending per (age-adjusted) beneficiary are nothing short of astonishing. Until the year 2005, “extraordinary” growth in its intermediate scenario weighs in at close to its historical rate. Over the following decade, however, it begins a rapid deceleration. (Incredibly, this is timed to happen just as aging Baby Boomers begin adding to health care demand.) Between 2010 and 2015, “extraordinary” growth in HCFA’s intermediate scenario falls to just under 3.0 percent annually. By 2020 to 2025, it falls to about 1.0 percent annually, where it remains indefinitely thereafter. In other words, hidden within HCFA’s intermediate projection is the assumption of a remarkable cost-containment triumph.

How does HCFA arrive at its ultimate 1.0 to 1.2 percent assumption for “extraordinary” cost growth? In generating its intermediate scenario, HCFA simply assumes that, after the year 2018 (25 years from now) the real growth in per-beneficiary costs will slow all the way down to the rate of growth in real hourly earnings (for Medicare Part A) and real GDP per capita (for Medicare Part B). Nowhere does it explain why it expects this to happen. It simply posits it.

Curiously, HCFA makes the same ad hoc assumption in its high-cost Medicare projection. The results are bizarre. Past 2030, “extraordinary” cost growth under HCFA’s high-cost scenario actually falls beneath that under its intermediate scenario. Why? Because hourly earnings and GDP per capita grow more slowly. HCFA’s high-cost scenario is thus not really a pessimistic health-cost projection at all. It is a



pessimistic economic and demographic scenario that makes extraordinarily optimistic assumptions about the future rate of growth in real per-beneficiary Medicare costs.

What would happen if HCFA's assumptions turn out to be unfounded? Consider the following hypothetical scenarios. If "extraordinary" growth in HCFA's intermediate projection were to weigh in at an average annual rate of just 3.0 percent after the year 2000 (compared with the average of 2.2 percent the scenario actually assumes), total Medicare costs would climb to 25.1 percent of payroll by 2040. If "extraordinary" growth in its intermediate projection only fell to 4.0 percent after the year 2000, total costs would hit 36.9 percent of payroll by 2040. If "extraordinary" growth were to remain constant at 5.0 percent (its historical rate), total costs would hit 54.1 percent of payroll by 2040. With the more adverse (but entirely plausible) demographics and economics of the high-cost SSA scenario, a straightline extrapolation of the historical trend in real per-beneficiary spending would push Medicare costs in 2040 all the way to 85.9 percent of payroll.

Obviously, a Medicare cost rate of 54.1 percent of payroll (much less 85.9 percent) is impossible — which is doubtless the reason that HCFA assumes the growth in real health care costs must eventually slow. But to dismiss these numbers out of hand is to miss the point. That point is that it will be very difficult indeed to keep Medicare costs down to the levels forecast in HCFA's official scenario. Getting them lower will be more difficult still.

Remember: America's coming age wave will inevitably lead to a huge rise in health benefit costs even in the absence of any significant real health care cost multiplier. To illustrate, assume that future Medicare spending per (age-adjusted) beneficiary were to grow no faster than GDP per worker starting as soon as the year 2000. The result? Medicare spending would still more than double as a share of payroll between now and the year 2040 — as opposed to tripling under HCFA's official intermediate projection.

**TABLE 9: OFFICIAL HCFA SCENARIO WITH VARIOUS REAL HEALTH CARE COST ASSUMPTIONS  
(Medicare as a Share of Taxable Payroll)**

|                                  | 2000 | 2010 | 2020 | 2030 | 2040 |
|----------------------------------|------|------|------|------|------|
| Official Intermediate Projection | 6.5  | 9.8  | 13.4 | 16.9 | 18.4 |
| 3% Real Growth Assumption        | 6.5  | 8.4  | 12.5 | 19.0 | 25.1 |
| 4% Real Growth Assumption        | 6.5  | 9.3  | 15.1 | 25.5 | 36.9 |
| 5% Real Growth Assumption        | 6.5  | 10.2 | 18.3 | 33.9 | 54.1 |
| GDP per Worker Assumption        | 6.5  | 7.1  | 8.7  | 11.2 | 12.3 |

**Note:** Medicare includes both HI (Part A) and SMI (Part B). The first projection series is HCFA's intermediate (II) projection. All alternate projection series assume intermediate scenario demographics and economics. Starting in the year 2000, however, the projected annual rate of growth in real costs per age-adjusted beneficiary (*i.e.*, Medicare cost growth in excess of that explained by demographic change and economy-wide inflation) is varied. For the first three alternate projection series, it is set at 3 percent, 4 percent, and 5 percent, respectively. The "GDP per worker" projection assumes that after the year 2000 per age-adjusted beneficiary costs will climb at the same rate as GDP per worker, which is roughly equivalent to assuming that real per-beneficiary costs will grow at an average annual rate of 1 percent.

We often hear that all we need to do is get rid of the “waste and redundancy” or “punish the profiteers” — and presto, cost control will be within reach. But most experts agree that the real causes of rising health care costs are quite different: an aging population, the introduction of expensive new tests and treatments, and a cost-blind financing system that exonerates most Americans from making trade-offs between health care and other priorities. Brookings Economic Studies Director Henry Aaron sums up the consensus of these experts when he writes that “sustained reductions in the growth of health care spending can be achieved only if some beneficial care is denied to some people.”

After the great health care debate of the past two years, it is abundantly clear that few politicians are ready to bite that bullet. Democrats like to talk tough about cost containment — but few have ever identified a single benefit, subsidy, or service in Medicare or Medicaid that ought to be cut. To the contrary, most of their proposals have been for benefit expansions — and point toward vast new Federal costs not even accounted for in the current projections. Republicans are not as tied to benefit expansion. But they are even more likely than Democrats to dismiss virtually any cost-control measure as “regulatory interference” or “rationing.” The bottom line? Until the political standard of what constitutes acceptable health care reform changes, Americans should consider themselves lucky if costs do not rise faster than HCFA currently projects.

### III. CONCLUSION: THE INEVITABILITY OF ENTITLEMENT REFORM

The closer one looks at the official SSA and HCFA intermediate scenarios on which the Commission’s long-term projections are based, the clearer it becomes that they rest on an optimistic set of assumptions about future economic and demographic trends that may underestimate the costs of leaving today’s entitlement system on autopilot. Productivity growth is assumed to accelerate indefinitely at an annual rate of 1.4 percent — a permanent 35 to 40 percent improvement over the average experience of the past two decades. Against mounting evidence that the prospects for rising lifespans remain bright, future improvements in elderly life expectancy are expected to occur at less than half their historical pace. As for health care costs, the official projections posit an unprecedented cost-containment triumph in which the growth rate in real per-beneficiary Medicare spending slows to the rate of economic growth.

The SSA and HCFA high-cost scenario better reflects historical experience. But even its terrifying forecast — 22.2 percent of payroll for Social Security by 2040 and 35.7 percent for Medicare — is by no means based on worst-case assumptions. Indeed, in at least two key areas — longevity and real health care cost growth — assumed future developments are more fiscally optimistic than we have any prudent reason to expect. It therefore behooves policymakers to pay close attention to the high-cost scenario, if only to avoid the absurdity of regarding a less than dramatic improvement in recent trends as unthinkablely dismal.

It seems obvious that we cannot raise taxes enough to cover the projected growth in Federal entitlement spending — even under SSA’s intermediate scenario. Doing so would require a new OBRA 1993 scale tax hike roughly every four years over the next half-century. Nor can we cut nonentitlement spending enough. The Commission noted in its Interim Report that, by 2012, net interest and entitlements

will together consume all Federal revenues. By 2030, entitlements alone will more than do that. Congress could shut down every other function of the Federal government — from national defense to the national parks — and still run a deficit.

Even faced with forecasts like these, however, there will always be a few hearty souls to claim there really is no problem. According to some defenders of the status quo, raising taxes to cover the growth in entitlements is an option after all. Why? Because the economy is growing. National columnist Michael Kinsley sums up this view when he writes of Social Security: “Even if it amounts to a large transfer from today’s workers to today’s retirees, and an even larger transfer from future workers to future retirees, so what? ...[T]he younger generation will still be richer than the older one, even after the transfer takes place.”

The problem is that this simply isn’t true. As Neil Howe demonstrates in a recent paper, “Why the Graying of the Welfare State Threatens to Flatten the American Dream — or Worse,”<sup>14</sup> the consequences of leaving entitlements on autopilot will be disastrous for tomorrow’s living standards. Under SSA’s intermediate scenario, real after-tax earnings per U.S. worker will be virtually flat over the next half-century. Under its high-cost scenario, they would suffer a catastrophic decline of 59 percent in real terms.

In the end, such forecasts leave no doubt that we will reform our system of Federal entitlements. The only real question is when we will reform it — and after how many more years of damage to our economy and harm to our children.

14 . National Taxpayers Union Foundation (forthcoming).