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Retirement Age and the Need for Saving

Studies of retirement preparedness typically assume that workers will retire at a fixed age—usually 62 or 65. However, the timing of retirement is largely a matter of choice, and studies that ignore workers' ability to delay retirement tend to overstate the significance of shortfalls in their retirement savings. Every additional year of work leaves members of a household with more income, a shorter retirement to finance out of pocket, more time to save and earn returns, and higher annual Social Security benefits, which are largely tax-exempt. Taken together, those factors can substantially reduce the private assets that the members of the household need to accumulate to maintain their working-age standard of living in retirement. Even workers who find themselves poorly prepared for retirement late in their careers may be able to substantially augment their retirement resources by working a few more years and modestly increasing their saving. Those conclusions hold true for both married couples and single people across a wide range of incomes.

American workers typically accumulate a significant amount of savings during their working years to support their standard of living in retirement. In addition, a substantial portion of their working-age income is replaced by defined-benefit private pensions and Social Security benefits, and a large share of their medical expenses is covered by Medicare and Medicaid. Nevertheless, the extent of workers' savings has become an increasing concern to policymakers during the past decade as members of the generation born from 1946 to 1964—known as the baby boomers—approach the end of their careers and prepare to leave the workforce. That coming wave of retirees will cause spending for federal entitlement programs to swell, which will in turn increase pressure on the federal budget.[1] That pressure could be even greater if, as some researchers have claimed, baby boomers are not accumulating enough private savings to maintain their working-age standard of living in retirement. Low saving could restrain the growth of investment and output and thus the tax base from which entitlements must be financed.

In response to policymakers' concerns, the Congressional Budget Office (CBO) recently reviewed the past decade's research on the retirement prospects of aging Americans.[2] Most of the studies that CBO reviewed conclude that many baby boomers are preparing adequately for retirement; at the same time, a substantial portion of boomers may not be able to maintain their current consumption levels in retirement if they retire when they now plan to.

The Importance of Retirement Age

An important point that is not fully appreciated is that the retirement ages assumed in studies of retirement preparedness strongly affect their estimates of preparedness. Most studies estimate how financially well prepared households will be for retirement when their primary workers retire at a fixed age—typically 62 or 65. However, barring disabling injury or illness, workers can choose when to retire, just as they choose how much to save. The longer they work, all else being equal, the more prepared for retirement they are likely to be. Because most studies of retirement preparedness do not treat

1. For more details about the likely budgetary pressures from growth in spending for entitlement programs, see Congressional Budget Office, *A 125-Year Picture of the Federal Government's Share of the Economy, 1950 to 2075,* Long-Range Fiscal Policy Brief No. 1 (June 14, 2002; revised July 3, 2002); *The Looming Budgetary Impact of Society's Aging,* Long-Range Fiscal Policy Brief No. 2 (July 3, 2002); and *The Long-Term Budget Outlook* (December 2003).

2. Congressional Budget Office, *Baby Boomers' Retirement Prospects: An Overview* (November 2003).

Table 1.

How Retirement Age Affects the Total Assets Needed in Retirement

(2004 dollars)

Retirement Age	80 Percent of Preretirement After-Tax Income	Annual Social Security Payments[a]	Additional Annual After-Tax Retirement Income (Besides Social Security) Needed to Achieve 80 Percent of Preretirement Income	Assets Needed at Retirement to Produce That Additional Income Through an Annuity[b]	Personal Assets Needed at Age 62 to Produce That Additional Income at Retirement Age[c]
			Married Couple		
			25th Income Percentile		
62	34,534	16,008	18,526	335,072	335,072
66	34,534	21,924	12,610	192,901	155,344
70	34,534	30,096	4,438	59,804	16,908
			50th Income Percentile		
62	46,848	20,088	26,760	510,757	510,757
66	46,848	27,648	19,200	298,380	243,340
70	46,848	38,136	8,712	117,651	51,768
			75th Income Percentile		
62	65,738	25,284	40,454	890,525	890,525
66	65,738	34,500	31,238	551,548	459,482
70	65,738	47,112	18,626	262,962	149,902
			Single Person		
			25th Income Percentile		
62	12,635	6,576	6,059	106,673	106,673
66	12,635	8,976	3,659	55,148	43,128
70	12,635	12,252	383	4,989	0
			50th Income Percentile		
62	19,051	8,532	10,519	189,314	189,314
66	19,051	11,712	7,339	110,896	89,678
70	19,051	16,104	2,947	39,240	14,260
			75th Income Percentile		
62	29,607	12,096	17,511	332,645	332,645
66	29,607	16,692	12,915	202,795	166,424
70	29,607	23,088	6,519	87,040	42,732

Source: Congressional Budget Office.

Note: These examples assume households with income levels that are roughly the 25th, 50th, and 75th percentiles for working single people and working married couples ages 55 to 64 in 2002, as reported in the Census Bureau's March 2003 Annual Social and Economic Supplement to the Current Population Survey. The examples assume that the earnings come solely from wages, and, for the married couples, that one member of the couple earns twice as much as the other. The households' federal and state income taxes and Social Security taxes are calculated using 2004 rates specified in the National Bureau of Economic Research's TAXSIM model (available at www.nber.org/~taxsim/taxsim-calc5/). These payments are subtracted from annual income to yield after-tax income.

a. Taken from the Social Security Administration's "Social Security Quick Calculator" (available at www.ssa.gov/OACT/quickcalc/calculator.html).

b. The figures are based on the cost of an annuity from the federal Thrift Savings Plan as of April 2004, taken from www.tsp.gov/calc/annuity.html. For single people, the annuity is a single life annuity; for married couples, it is a joint and 50 percent survivors annuity. The annuity is adjusted for increases of up to 3 percent in the consumer price index. Prices of annuities purchased singly in the private sector are likely to be somewhat higher. The annuity generates enough income to meet the retirement goal as well as federal and state income taxes on the combined income from Social Security benefits and the annuity, assuming that the entire annuity payment is subject to tax. An adjustment is made for lower tax liability at age 65 due to the additional income-tax exclusion.

c. Assuming a saving rate of 10 percent between age 62 and retirement age and a real (inflation-adjusted) rate of return of 3 percent.

retirement age as a matter of choice, they tend to overstate the gravity of potential shortfalls in retirement assets.

Working just a few years longer and saving somewhat more of their income can greatly improve older workers' financial status even if they have not saved much until they near retirement. Americans in their early 60s can typically expect to live another 20 years or so. By extending their working lives, they shorten the period of retirement that they need to finance while giving themselves more time to save and to earn returns on any assets they have already accumulated. Every year they continue to work reduces their likely period of retirement by several percent and increases the value of their assets by the annual rate of return, plus any additional saving.

Moreover, by waiting to apply for Social Security benefits, workers can substantially increase their annual benefits, thus cutting the share of their retirement needs that they must finance from their own assets. For instance, although the oldest boomers will be eligible to receive 75 percent of their normal retirement benefit if they apply at age 62, they will qualify for 100 percent if they apply when they turn 66 and 132 percent if they wait until age 70. Those additional years of earnings could raise benefits even further if they replaced lower annual earnings from previous years in the calculation of Social Security benefits. (That calculation is based on a worker's highest 35 years of wage-adjusted taxable earnings.) For boomers born after 1954, Social Security benefits are somewhat lower as a percentage of preretirement income because the retirement age is rising, but the advantages of retiring later are similar.[3]

3. Under current law, the normal retirement age (NRA) at which baby boomers will receive full Social Security benefits is rising. It is 66 for boomers born before 1955 but rises by two months per year for boomers born between 1955 and 1960; it is 67 for boomers born thereafter. Within each birth cohort, however, Social Security benefits compensate workers (on an actuarially fair basis) for delaying retirement beyond the NRA for their cohort. The later workers apply for benefits, the fewer years they are expected to receive them, and so the larger the annual benefit they will receive. The benefit rises by 8 percent of the benefit received at the NRA for every year that a worker delays retirement after the NRA; the formula for reducing benefits in the case of early retirement is more complex. The upshot of those rules is that boomers will increase their benefits by between 6.7 percent and 8.3 percent for every year after age 62 up to age 70 that they delay retirement, with the actual value depending on the cohort and year of retirement.

For many workers, delaying retirement may also result in tax advantages because Social Security benefits are largely exempt from income taxation. Workers who apply for Social Security benefits at age 70 will receive nearly double the annual benefits they would have received at age 62. With a larger amount of income likely to be untaxed, a worker who delays retirement will not need as much total income to have the same after-tax income as one who retires earlier.

Delaying retirement thus leaves a worker with fewer years of retirement to finance, more time to save and earn returns, and—if the worker delays applying—higher Social Security benefits, which are largely tax-exempt. Taken together, those factors can substantially reduce the private retirement assets required by the typical household. That observation applies to many types of households—for example, both married couples and single people—across a wide range of incomes (see Table 1).[4]

An Example of How Delaying Retirement Affects a Household's Finances

As an illustration, consider a married couple in their early 60s earning $77,000 per year—roughly the median pretax income of married households ages 55 to 64 in 2002. (This couple's finances are shown in the middle of the upper panel of Table 1 and in Figure 1.) After paying federal and state income taxes and Social Security taxes, the couple typically takes home about $58,600 in annual income. Thus, in retirement, they will need about $46,900 per year in order to replace 80 percent of their preretirement after-tax income—a percentage that financial planners often recommend to allow most people to maintain a roughly constant standard of living.[5]

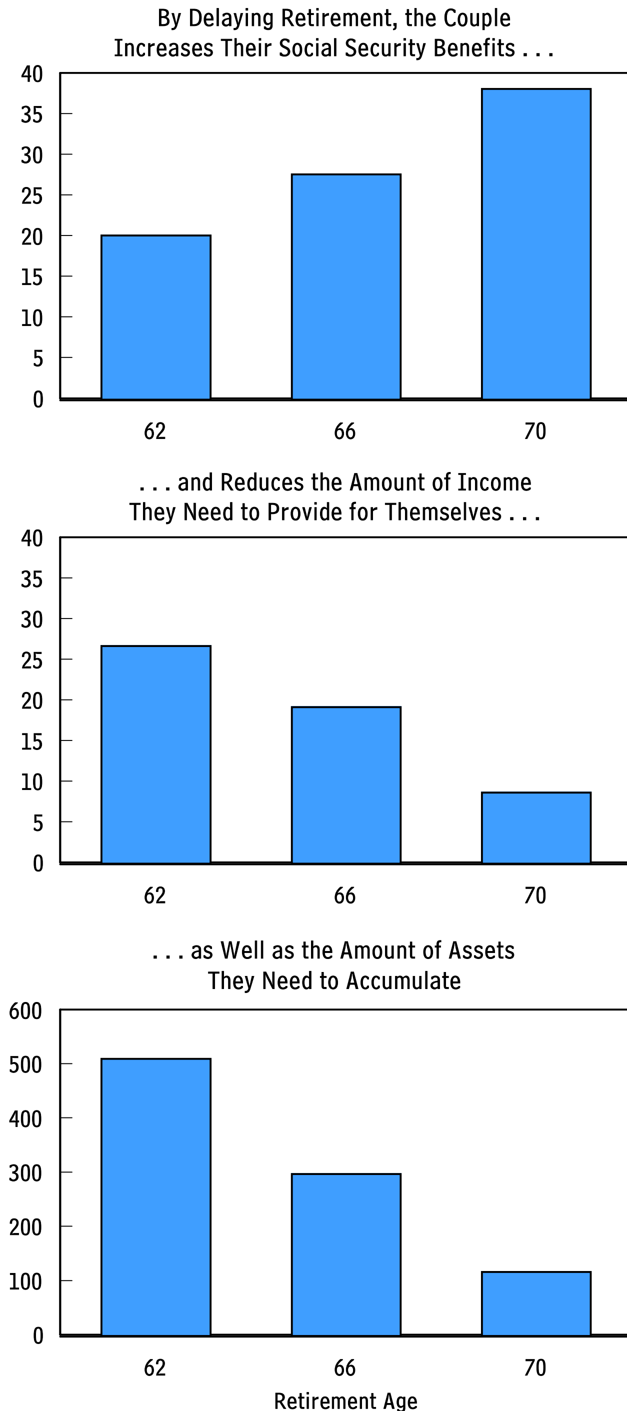
4. Because Social Security benefits replace a larger share of lower-income workers' earnings than they do for higher-income workers, the share that lower-income workers need to provide for themselves is smaller and declines more quickly the longer they work and delay applying for benefits. As a result, delaying retirement can make up a retirement shortfall slightly more rapidly for lower-income workers than for higher-income workers. The effect is more pronounced for unmarried workers than for married ones because unmarried workers tend to have lower income.

5. The examples presented here do not address the potential for significant health care expenses and difficulties in obtaining health insurance comparable to what workers could obtain during their working years.

Figure 1.

How Retirement Age Affects the Total Assets Needed at Retirement for a Median-Income Married Couple

(Thousands of 2004 dollars)



Source: Congressional Budget Office.

Note: The values shown here replicate those in the middle panel of the top half of Table 1.

If both spouses retire at age 62, the couple will receive about $20,100 in Social Security benefits annually. To achieve an 80 percent replacement rate, they will need another $26,800 of after-tax income per year—for about 20 years, if they reach the average U.S. life expectancy for people their age, but possibly more or less, depending on how long they live. Assuming that they will not receive any income from a pension plan and must finance the entire sum themselves, they can guarantee that income by purchasing a "joint and 50 percent survivors" annuity—a contract that would provide them with annual payments sufficient to yield $26,800 per year after taxes while they are both alive and $13,400 per year after taxes to the survivor when one of them dies. To purchase such an annuity, with substantial (but not necessarily complete) adjustment for inflation, they will need to accumulate about $510,800 before retirement.[6]

If the couple retires one year later, at age 63, their annual Social Security benefits will increase to about $21,600, so they will need to finance $25,200 per year after taxes themselves—and, in all probability, for a shorter period of time.[7] Thus, to purchase the same type of annuity, they will have to accumulate only about $465,000 in assets before retiring—nearly $45,800 (or 9 percent) less than they will need to accumulate to retire at age 62. The price of the annuity—and thus the amount the couple needs to accumulate—continues to decline for each year that they delay retirement, to about $298,400 if they retire at age 66 and to about $117,700 if they retire at age 70.

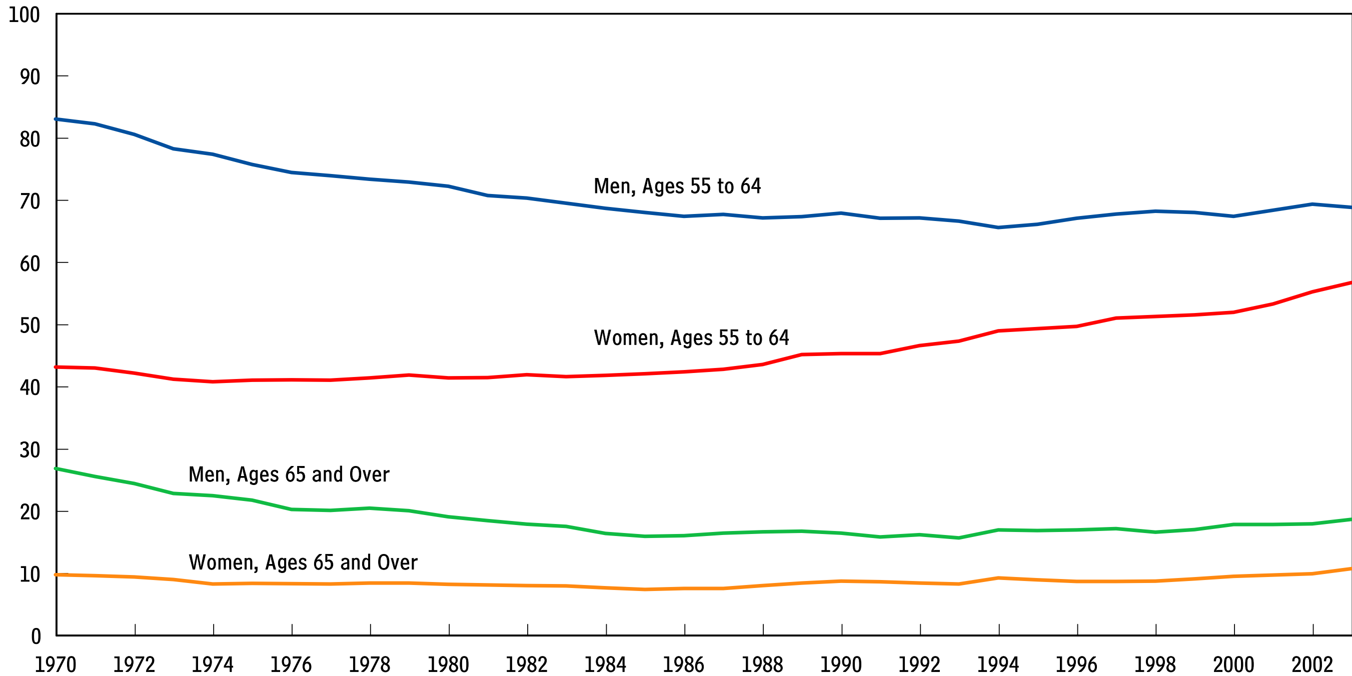
Each additional year of work not only increases annual Social Security benefits and reduces the amount of wealth needed at retirement, but it also extends the amount of time during which working households can earn returns on their savings. As a result, if the couple reaches age 62 with only $243,300 in savings—less than half the assets they will need to retire immediately—they can still retire with sufficient assets at age 66 by saving 10 percent of

6. Those dollar amounts are based on the prices of annuities available through the federal Thrift Savings Plan. Prices of annuities purchased singly in the private sector are likely to be somewhat higher. All of the values in the examples are in 2004 dollars.

7. Delaying retirement by one year does not translate into exactly one year less in expected retirement. Life expectancy rises from 82 at age 62 to 84 ½ at age 70; and the later retiree, having survived somewhat longer, is also likely to live somewhat longer. An additional factor, not addressed here, is that people with higher income are likely to live longer.

Figure 2.

Labor Force Participation by Older People, 1970 to 2003



Source: Department of Labor, Bureau of Labor Statistics.

their after-tax income and earning a 3 percent real (inflation-adjusted) rate of return. Likewise, by continuing to work and saving 10 percent of their income, the couple can still retire comfortably at age 70 even if they reach age 62 with only $51,800 in savings.[8]

The effect of retirement age on required saving rates applies to workers long before retirement. For example, if the couple had accumulated only $161,400 in retirement assets by age 55, they would need to save nearly 70 percent of their after-tax income to accumulate the $510,800 in assets necessary to retire with 80 percent of their preretirement income by age 62 (assuming a 3 percent real rate of return). But they would need to save only 10 percent to retire at age 66.

The calculations described above are all based on the assumption that baby boomers retiring in years to come will receive entitlements as scheduled under current law. However, the growing population of retirees, increasing life spans, and rising health care costs will likely contribute to severe and mounting pressures on the federal budget. To the extent that such pressures are addressed by reducing the future growth of entitlement benefits, affected boomer households will have to work even longer, increase their saving by even more, or reduce their consumption in retirement.

Trends in Labor Force Participation

Labor force data suggest that some workers are indeed working longer and that the long-term trend toward earlier retirement may have ceased or even reversed. Participation in the labor force by people ages 65 and over—both men and women—declined for many years until the mid-1980s, but it has risen modestly since then. For people ages 55 to 64, the patterns are slightly different: labor force participation by men declined until the mid-1990s and has since turned upward; participation by women has been climbing more or less continuously for half a cen-

8. This example assumes that the couple will continue to earn the same level of real after-tax income. Lower rates of return would raise the required saving rate: at a 2 percent real rate of return, that representative household would have to save about 4.5 percent more of its income to retire at age 66 and about 1.3 percent more to retire at age 70.

tury, though with a relatively stable period in the 1970s and 1980s (see Figure 2 on page 5).[9] With rising life expectancy, improvements in health, and the fact that many types of work are less physically demanding than in the past, at least some people may be deciding to provide for a longer retirement by working somewhat longer, too.[10]

9. That behavior of older men and women stands in contrast to that of younger people: participation by men ages 25 to 54 has been trending slightly downward for at least half a century, and participation by women ages 25 to 54, after rising for several decades, has declined slightly over the past five years.

10. Average life expectancy at age 60 has risen by nearly five years over the past half century.

Related CBO Publications: In addition to those listed in footnotes 1 and 2 of this brief, see *The Retirement Prospects of the Baby Boomers,* Economic and Budget Issue Brief (March 18, 2004).

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