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For nearly 80 years, Social Security has served as the foundation of retirement security for most American workers. Today, it confronts a particular challenge: the retirement of 76 million Baby Boomers and, eventually, the aging of their children, the Millennials.

Social Security—as it is currently defined—is not sustainable over the long-term without modifications. It is estimated that the overall reserves of the program will be fully depleted by 2033. Encouragingly, a range of bipartisan proposals present various options that could make Social Security fully sustainable through 2087—and there is ample time for action.

This paper examines the financial state of the Social Security trust funds, the powerful demographic forces that are shaping the future of the American retirement landscape and the specific proposed reforms that aim to preserve this important social program.

The Great American Demographic Shift

There is no question that America is experiencing a tremendous demographic shift. Based on birth rates, the GI and Silent generations, born between 1910 and 1945, totaled 37.4 million individuals. The Baby Boomers, born between 1946 and 1965, are more than twice as large a group.

A generation is defined as a group of individuals with shared experiences, beliefs and behaviors who share a common sense of identity.¹ While generations typically span 20 years, several experts have argued that the Boomer generation and their children, the Millennials (also known as Generation Y or the ‘Echoboomers’), have such strong identities that they have eclipsed the group between them, Generation X, to a mere 12 years. Definitions vary, but Gen X is often viewed as the group of Americans born between 1966 and 1976. The Millennials are the much bigger cohort, born between 1977 and 1995. **(Exhibit 1)**

Regardless of how the generations are demarcated, the Boomers plainly represent a huge surge in population growth—and one that will be surpassed by their own children’s generation. This is no mere demographic blip but, rather, a critical trend that could impact all aspects of the American retirement system.

¹ William Strauss and Neil Howe, *Generations: The History of America’s Future, 1584-2069* (William Morrow & Co., 1991).

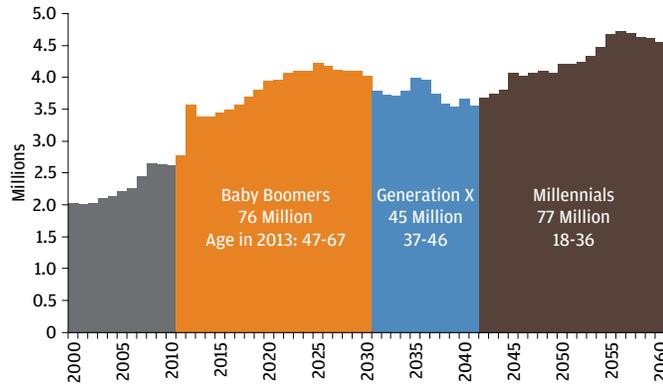
AUTHOR



S. Katherine Roy, CFP®
Chief Retirement Strategist
J.P. Morgan Asset Management

The Great American Demographic Shift

EXHIBIT 1: THE NUMBER OF PEOPLE TURNING 65 YEARS OLD



Source: U.S. Census Bureau, 2012.
Shown for illustrative purposes only.

The prime working years of the Baby Boom generation coincided with a shift in the American retirement system, from defined benefit plans to defined contribution (DC) plans, such as 401(k)s. As more Americans take primary responsibility for funding their own retirements, Social Security is increasingly important as the common ‘floor’ of retirement income for them. What do these demographic changes mean for Social Security?

For roughly the first decade after Social Security was established in 1935, the math worked very well. In 1945 there were almost 42 workers per Social Security beneficiary. The ratio then began to steadily decline. From 1974 to 2008 the ratio remained fairly constant at 3.4:1 as the Boomers passed through their primary working years. In 2008 as the leading edge of the Boomers turned 62 and were eligible for early claiming, the ratio dropped to 2.8:1. It is forecasted to hit 2.1:1 in 2025 when most Boomers will be squarely in retirement, and remain fairly constant for a significant period of time. As this ratio has declined, so too has the revenue received through payroll taxes compared to the costs of promised benefits resulting in long-term solvency implications for the Social Security program.

A Tale of Two Trust Funds

Social Security, officially the Old-Age, Survivors and Disability Insurance Trust Funds (OASDI), is comprised of two trust funds that are funded and managed separately: the Old-Age and

Survivor Insurance (OAS) trust fund and the Disability Insurance (DI) trust fund.

The total payroll tax levied on earnings up to \$113,700 in 2013 is 12.4% (6.2% each from employees and their employers, with self-employed individuals contributing the full 12.4%). Of this total, 10.6% goes to OAS and 1.8% goes to DI. When looked at individually:

- The DI trust fund is forecast to fully deplete its reserves by 2016, at which time 80% of DI benefits would be covered by current revenue.
- Social Security is fully funded to 2035, at which time 77% of benefits would be covered.

When looked at in combination, the two funds are projected to be fully depleted by 2033.

Though Social Security is facing growing challenges over time, 2010 was the first year in which benefits paid exceeded annual payroll tax contributions. Many individuals believe that the temporary reduction in payroll tax income in 2011 and 2012 exacerbated the problem, but it is important to remember that the fund was credited the amount of lost payroll revenue from the Treasury’s General Fund as a result of legislation. Factoring in this credit, the net deficit to the trust fund was \$55 billion in 2012 and is projected to grow to \$75 billion in 2013.

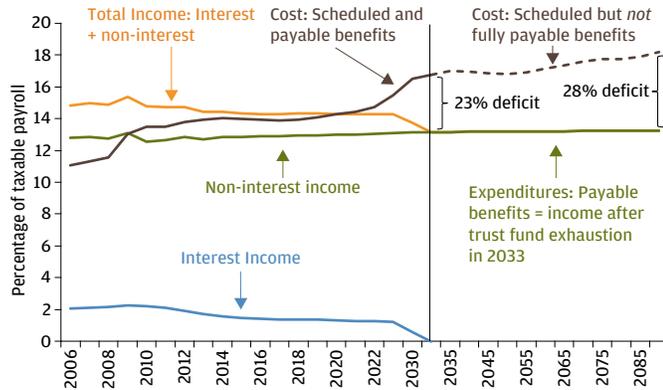
Despite costs exceeding annual payroll revenue, ongoing annual interest income credited results in positive growth of the trust fund from \$2.7 trillion to \$2.9 trillion (in current dollars) until 2021 at which point it begins a steady decline until depletion in 2033. It is important to note that even though the trust fund is growing, the amount of annual costs covered goes from 330% to 218% by 2021 due to promised benefits growing exponentially.

When the OASDI fund is projected to be fully depleted, the combined benefits promised will exceed payroll tax income by 23%. By 2087, that deficit is projected to grow to 28%.

The longer we wait, the more drastic the necessary ‘fix.’ To ensure solvency for the years beyond 2033, a 2.66% increase in the payroll tax, from 12.4% to 15.06% (this assumes no substantial legislative changes to the maximum wage base) or an across-the-board decrease in benefits of 16.5% would be required if we acted today. If we wait until 2033, the required action would be more severe—a 4.1% increase in the payroll tax or a 23% decrease in benefits. (Exhibit 2 on next page)

Social Security solvency

EXHIBIT 2: OASDI INCOME, COST AND EXPENDITURES AS PERCENTAGES OF TAXABLE PAYROLL; UNDER INTERMEDIATE ASSUMPTIONS



Note: Non-interest income includes net payroll tax contributions, General Fund of the Treasury reimbursements and taxation of benefits.

Source: 2013 OASDI Trustees Report, J.P. Morgan Analysis.

Shown for illustrative purposes only.

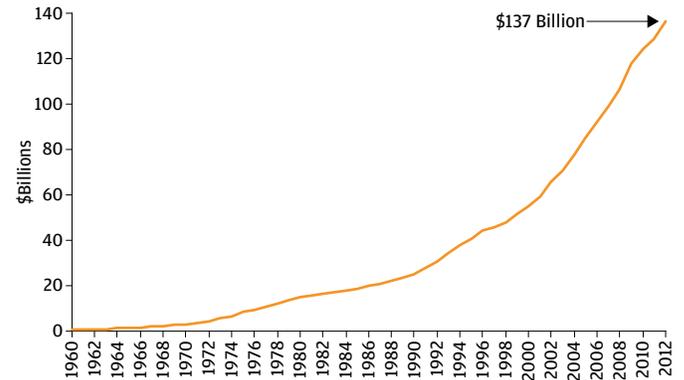
Disability Insurance: A near-term speed bump

Disability insurance is intended for individuals who are unable to work due to disability but too young to claim Social Security benefits. In 2012, total federal spending on worker disability insurance benefits amounted to almost \$137 billion (**Exhibit 3**), accounting for almost 20% of the OASDI budget, up from 10% in 1988.

There are now 8.8 million workers enrolled in disability, with 1.1 million individuals added since June 2009, a 15% increase. (**Exhibit 4**) Recent growth reflects a long-term trend of increasing the number of beneficiaries.² This shift began in 1984 when the approval process to become a beneficiary became less rigid. Before 1984, disability benefits were only covered based on a list of specific medical conditions, but in recent decades the approval process changed to become more subjective, considering an applicant's overall medical condition and ability to work. There are currently 6.6 people on disability for every 100 people working—double the ratio from 20 years ago, and three times what it was in 1972.

The average age of claimants is also falling, which means that beneficiaries receive disability income for a longer period. This directly impacts the solvency of the Disability Insurance fund.

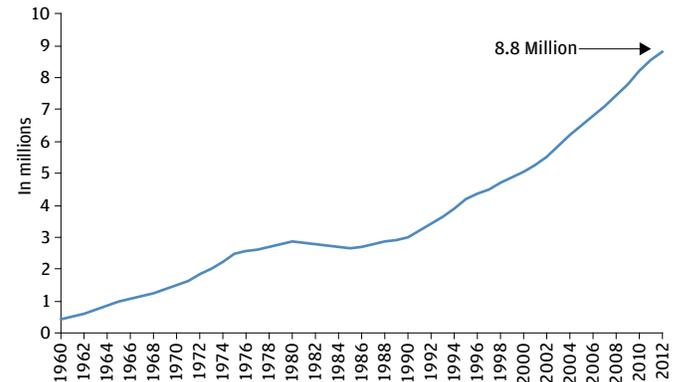
EXHIBIT 3: FEDERAL SPENDING ON WORKER DISABILITY (SSDI) BENEFITS



Source: Social Security Administration.

Shown for illustrative purposes only.

EXHIBIT 4: WORKERS ENROLLED IN DISABILITY (SSDI)



Note: 2012 figure through August. Source: Social Security Administration.

Shown for illustrative purposes only.

The possibility of disability insurance insolvency is a near-term issue: If nothing is done, in 2016 the Disability Insurance trust fund will be fully depleted, leading to a reduction to 80% of promised disability benefits. This scenario could be easily avoided with legislative action to 'fix' the fund by 2016 by adjusting the payroll tax allocation between the two trust funds. There is a clear precedence for this, as Congress has taken action to address disability fund issues 11 times in the past, most recently in 1994.

Any action to bolster either the disability or old-age survivor funds is unlikely to deliver a meaningful change to individuals over the age of 50. Most likely, the Millennials will be most impacted, though fortunately, they have time to plan and save.

² John Merline, "The Sharp Rise in Disability Claims," Richmond Federal Reserve, Region Focus, Second/Third Quarter 2012.

DOES THE SOCIAL SECURITY TRUST FUND EXIST?

The Social Security trust fund is comprised of accounts managed by the Department of the Treasury. These accounts hold “special issue” securities of the United States Treasury which means that they are only available to the trust fund, are not marketable and cannot be redeemed prior to maturity. The benefit of these “special issue” securities is that they are not subject to nor contribute to volatility in the U.S. Treasury market which results in the accounts essentially operating like they are holding cash.

Income (i.e., payroll taxes received and interest income) is deposited on a daily basis and invested in the securities. The U.S. government then spends the borrowed cash on other obligations. Concerns about the U.S. government’s ability to meet the loan obligations is unfounded. The securities held by the trust funds are by definition backed by the full faith and credit of the U.S. government and are as safe as U.S. Savings Bonds or other financial securities of the U.S. government, given that it is generally accepted that the U.S. government will never default on its loan obligations.

What is the Future of Social Security?

Social Security can be put on a path to longer-term solvency through a number of manageable ways. The good news is that there are plenty of bipartisan proposals from which to choose.

These proposals include:

- Increasing the maximum wage earnings cap (\$113,700 in 2013) at a rate that would ensure that 90% of all wages earned in the United States would be subject to OASDI taxes. For perspective, in 2013, only 83% of all wages were subject to this tax.
- Modifying the benefits formula to slow the growth of benefits promised to younger Americans.
- Raising early eligibility and full retirement ages at a rate that would keep pace with increased longevity (e.g., 64 and 69, respectively).

- Expanding the number of individuals paying into the program (e.g., including state and local workers).

All of these proposals would likely affect individuals at least 50 or younger and would be very gradually implemented over an extended period of time.

Chained CPI

There is only one proposal under active discussion that would affect all Americans, including those close to or receiving Social Security benefits. This proposal would change the inflation index used to calculate the cost of living adjustments (COLA) applied to Social Security. The index currently used is CPI-W which tracks the inflation experienced by wage earners in urban areas. CPI-W generally underweights the inflation of prices related to housing, recreation and medical care—three categories that are particularly important to older Americans. Therefore, it is important to note Social Security today isn’t adjusted to keep pace with the basket of goods that older people buy.

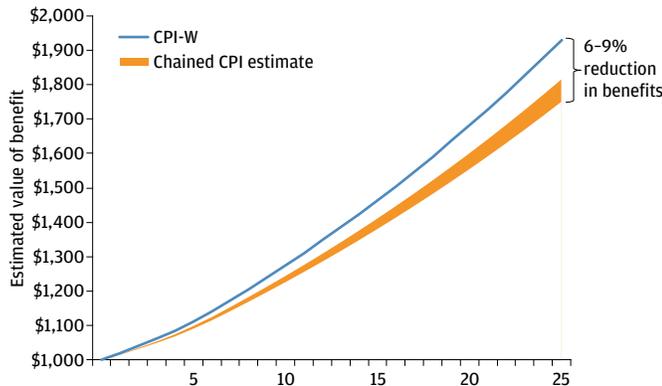
Chained CPI takes into account the fact that when prices for one good rises, consumers have the choice to choose a less expensive substitute. A good example is when the price of beef rises, consumers can substitute chicken or fish which may be cheaper at the time. As a result, many believe that Chained CPI is a better measure of the inflation that people actually experience.

Using Chained CPI to determine adjustments to Social Security would result in a very modest reduction in income received over time. It is estimated that the difference in the cost of living adjustment could be between .25% and .4% lower, which would mean an estimated 6-9% reduction in annual benefits received after 25 years. **(Exhibit 5)**

The investment implications of such a change are clear: if Chained CPI is implemented, individuals will need to fund more of their retirement spending from their portfolios, making it that much more important that they are invested in a balanced way that keeps pace with the erosion of purchasing power experienced by older individuals over ever-longer retirements.

Growth of \$1,000 Social Security Benefit

EXHIBIT 5: ESTIMATED VALUE OF BENEFIT BASED ON CPI-W VS. CHAINED CPI

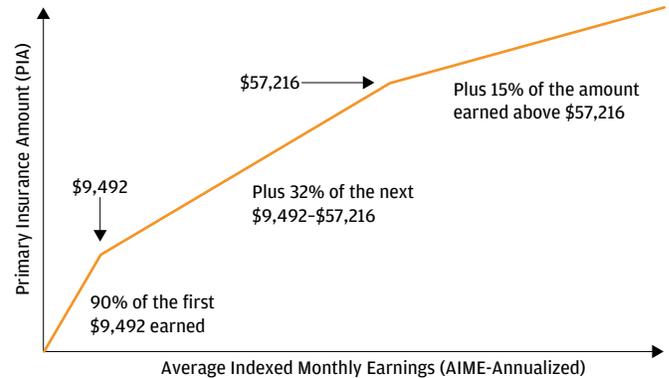


Source: Social Security Administration. Assumes Social Security COLA projection for CPI-W. Estimate based on COLA reductions of 0.25% and 0.4% which are based on estimates by the Congressional Budget Office (CBO) and J.P. Morgan Asset Management.

Shown for illustrative purposes only.

Means testing on high earners

EXHIBIT 6: CURRENT BENEFIT FORMULA BEND POINTS (NUMBERS HAVE BEEN ANNUALIZED)



Source: www.ssa.gov.

Shown for illustrative purposes only.

Means testing for higher earners

While we do not anticipate any form of means testing based on accumulated wealth, it is likely that high lifetime earners may see a reduction in their Social Security benefit. Several proposals seek to reduce the benefits promised to high-earning younger individuals by modifying the formula by which their benefit is calculated. This may be accomplished by changing what are referred to as “bend points” in the benefit formula. Bend points are a lot like marginal tax rates—but in reverse. A higher percentage of income replacement is applied to the lowest level of income, with lower percentages applied to higher earnings.

Exhibit 6 illustrates the current bend points applied to annualized income thresholds. The average of an individual’s 35 highest years of income is assessed at different thresholds on a highly progressive scale. Ninety percent of the first \$9,492 in earnings, 32% of the next \$47,724 in earnings and 15% of the amount earned above \$57,216 up to the maximum wage limit of \$113,700 are used to determine an individual’s Primary Insurance Amount, or his/her Social Security benefit.

Let’s look at the Simpson-Bowles proposal (Exhibit 7) to illustrate how this modification might work. Simpson-Bowles proposed adding a bend point and lowering the percentages applied to an individual with earnings greater than \$38,842, while preserving coverage for median households and below. Keep in mind that this proposal would be very gradually phased in such that the Millennials (currently under the age of 30) would be affected the most.

To quantify the impact this change might have on higher-earning, younger workers, we’ve modeled the benefits before and after for an individual who has consistently earned the maximum wage base for 35 years and has therefore accumulated the highest possible benefit. As such, this is a ‘worst-case’ scenario and indicates that this type of modification could produce as much as a 30% reduction in the Social Security benefit available to this individual. Most estimates anticipate less dire scenarios to be experienced on average with estimates being 15%-20% less in benefits based on more typical earnings experiences.

SOCIAL SECURITY REFORM: A HISTORY LESSON

Social Security was first enacted into law in 1935, with the Social Security payroll tax first levied in 1937. The original tax rate was 2% (1% each from employee and employer on earnings up to \$3,000 a year).

Past changes to Social Security have been gradual, so as not to disrupt individuals currently dependent on benefits. For example, the last significant amendments, made in 1983, affected individuals born in 1938 or later—meaning that they were 45 or younger at the time. The amendments stipulated that the full retirement age (FRA), the age at which one is entitled to full retirement benefits, would gradually increase from 65 to 67 over a 22-year period that began in 2000. Individuals born in 1960 or later (that is, they were 23 years old or younger in 1983), will be eligible for FRA at age 67.

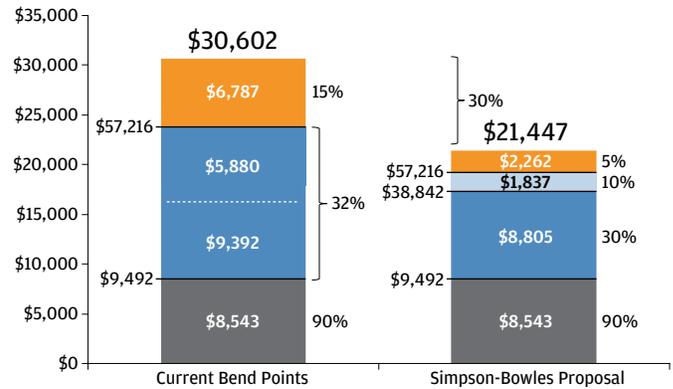
Credits for delayed retirement (“delayed retirement credits”) are another change in the Social Security program. Over time, the calculation of these credits has been revised, with the change similarly impacting younger workers more than the older population. When credit for delayed retirement was first implemented in 1972, there was a 1% increase in benefits after FRA up to age 72. In 1981, it increased to 3%. Amendments in 1983 increased the credit to 3.5% with gradual credits of 0.5% every other year until the credit reached 8% per year for those born in 1943 or later. Senior Citizens’ Freedom to Work Act of 2000 allowed an individual to file for and suspend payment of Social Security retirement benefits at FRA, thus enabling more people to leverage delayed retirement credits.

As a result of these changes, the number of individuals claiming early Social Security retirement benefits steadily increased from roughly the mid-1980s through the 1990s. More recently the pace has slowed as delayed retirement credits became more generous and the shift from defined benefit to defined contribution plans gave workers an incentive to work longer. The decline has been particularly steep over the past 10 years for individuals in excellent, very good and good health.³

³ Source: The Urban Institute, *Social Security Claiming: Trends and Business Cycle Effects*, March 2012.

Social Security means testing and proposals

EXHIBIT 7: COMPARISON OF 2013 BEND POINTS TO SIMPSON-BOWLES PROPOSAL; BASED ON 35-YEAR AVERAGE ANNUALIZED AIME OF \$102,460



Source: Social Security Administration. Assumes new Simpson-Bowles bend point is 61.5% of the way between current bend points 1 and 2 following the method used by the Social Security Office of the Chief Actuary. \$102,460 annualized AIME is the average maximum taxable earnings adjusted by indexing factor for the 35-year period 1978-2012.

Not shown on graph: The Bipartisan Policy Center, Domenici-Rivlin Debt Reduction Task Force Plan 2.0 (Domenici-Rivlin); Dec 2010 suggested replacing the current 15% bend point with a 10% bend point and adding a new 8% bend point, phased in between 2023-2052.

Shown for illustrative purposes only.

The Impact of Immigration

How does immigration affect Social Security, and what might be the impact of a new immigration law?

Currently 1.08 million net new immigrants per year become eligible to pay into Social Security and receive the system’s benefits. Over 25 years they provide about \$500 billion in net added value to the Social Security trust fund; over 75 years, that sum rises to \$4 trillion. (Exhibit 8A)

The immigration bill passed by the Senate, the “Border, Security, Economic Opportunity and Immigration Modernization Act,” anticipates that 6.5 million people will gain legal status and pay Social Security taxes over the next ten years. This would provide increased Social Security revenue of about \$275 billion over the decade; net revenue (revenue minus paid benefits) would amount to \$242 billion.

How does immigration affect Social Security?

EXHIBIT 8A: CURRENT VALUE OF IMMIGRATION

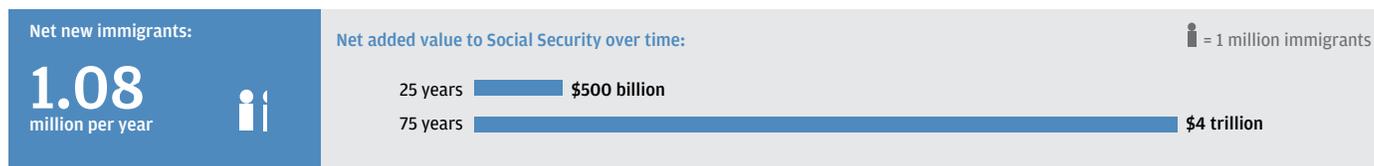


EXHIBIT 8B: POTENTIAL EFFECT OF “BORDER SECURITY, ECONOMIC OPPORTUNITY, AND IMMIGRATION MODERNIZATION ACT”



Source: *Wall Street Journal*, “A \$4.6 Trillion Opportunity,” June 2, 2013. Value is in today’s dollars; Letter from Chief Actuary of the Social Security Administration Stephen Goss to Sen. Marco Rubio, May 8, 2013; “Effects of Unauthorized Immigration on the Actuarial Status of the Social Security Trust Funds,” Social Security Administration, Actuarial Note No. 151, April 2013.

Shown for illustrative purposes only.

How much of the \$2.06 trillion—the amount needed to make Social Security solvent through 2087—might these new taxpayers cover? The \$242 billion in net revenue that they would generate is equivalent to 11.7% of the \$2.06 trillion. Put another way, the new legal immigrants could cover nearly 12% of the deficit that Social Security is expected to face over the next ten years. About the same amount would be raised by a 0.31% increase in the payroll tax. (**Exhibit 8B**)

Conclusion

The problem is clear—and so too is the potential for a meaningful solution for the long term.

Demographic shifts—beginning with the Baby Boomers and continuing with their children, the Millennials—will pressure a range of social programs, including Social Security. Unless action is taken, the reserves are forecasted to be fully depleted by 2033.

More than one path leads to solvency. Various approaches could greatly strengthen the Social Security program. The Disability trust fund requires the most immediate action. By 2016 Congress will need to allocate a higher percentage of payroll tax allocation to this fund to prevent a reduction in benefits to 80% of the promised level.

For Social Security overall, Congress can choose from a substantial roster of bipartisan proposals to make the program sustainable well beyond 2087. The only scenario to affect individuals currently age 50 or over is the migration to Chained CPI—with impact likely to be relatively modest.

To learn more about the Retirement Insights program, please visit us at www.jpmorganfunds.com/RI

Sources: 2013 Old-Age, Survivors and Disability Insurance Trust Funds (OASDI) Report and Social Security Administration, www.ssa.gov, as of September 2013.

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